

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
)	
FACEBOOK, INC.,)	
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

**PLAINTIFF LEADER TECHNOLOGIES, INC.'S OPPOSITION TO DEFENDANT
FACEBOOK, INC.'S RENEWED MOTION FOR JUDGMENT AS A MATTER
OF LAW (JMOL) OF NO DIRECT INFRINGEMENT [MOTION NO. 1]**

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Dated: September 15, 2010

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I. NATURE AND STAGE OF THE PROCEEDINGS

Leader Technologies, Inc. (“Leader”) filed its Complaint against Facebook, Inc. (“Facebook”) on November 19, 2008. The Complaint accused Facebook of infringing U.S. Patent No. 7,139,761 (the “761 Patent”). A jury trial commenced on July 19, 2010, and the jury’s verdict was entered on July 28, 2010. D.I. 610. Facebook moved for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(a) on July 27, 2010. D.I. 606. Facebook filed four separate Renewed Motions for Judgment as a Matter of Law (“JMOL”) pursuant to Fed. R. Civ. P. 50(b) on August 25, 2010. *See* D.I. 628, 629, 630, 631. Leader files this Opposition to Facebook’s Renewed Motion for JMOL of No Direct Infringement [Motion 1 of 4] (“Renewed JMOL Motion No. 1”).

II. SUMMARY OF ARGUMENT

Facebook’s reliance on the standard for *joint* infringement, which asks whether one joint infringer directed or controlled the actions of another joint infringer, is wholly misplaced. This is not a joint infringement case. Contrary to Facebook’s claims, the jury found that *Facebook itself* performed each element of each of the asserted claims, and thus directly infringed the claims *by itself*. Because the actions of Facebook’s users are irrelevant to that basis for liability, it matters not whether Facebook directed or controlled its users’ actions.¹

Leader asserted joint infringement only as an alternative theory of liability, and only with respect to the asserted method claims. Because the jury found Facebook liable for directly infringing all of the claims, including the method claims, Leader’s alternative joint infringement theory is not necessary to support the verdict.

¹ Facebook challenged the jury’s verdict of literal infringement in the second of its four JMOL motions. *See* D.I. 629. Leader’s separate response to that separate motion demonstrates that the jury’s verdict of literal infringement is supported by substantial evidence and that Facebook’s motion should therefore be denied.

Joint infringement principles are completely irrelevant to Leader's system and computer-readable media claims. The joint infringement doctrine *expands* infringement liability for *method* claims by holding a party liable even if it did not perform all of the steps of a claimed method, so long as it directed or controlled another's performance of the remaining steps. That doctrine has no bearing whatsoever on the question of whether Facebook's system infringes the system and computer-readable media claims. Thus, Leader did not advance a joint infringement theory for those claims, this Court did not ask the jury to determine direction or control for purposes of those claims, and the jury did not do so. The jury's actual verdict of direct infringement and the theories that the parties actually tried to the jury flatly refute Facebook's arguments.

Moreover, the language of the claims and the evidence produced at trial also directly refute Facebook's arguments. All of the asserted claims are directed to the back-end *functionality* of the claimed system; no elements must be performed by a user. And by their very nature, the system and computer-readable media claims do not require *anyone* to perform *any* method steps; they are, after all, product rather than method claims. Because Leader presented substantial evidence that Facebook's website and source code satisfied every element of every asserted claim, the jury's verdict of direct infringement must be upheld.

Finally, even if joint infringement were relevant to the validity of the verdict, Leader is entitled to a JMOL of joint infringement, as previously explained in Leader's Memorandum In Support Of Its Motion For Judgment As A Matter Of Law Or A New Trial.²

² Leader filed a motion for JMOL on joint infringement only to preserve joint infringement as an alternative basis for liability in light of Facebook's motion for JMOL as to its own direct infringement.

III. STATEMENT OF FACTS

At trial, Leader asserted that Facebook infringed system claims 1, 4, and 7; method claims 9, 11, and 16; and computer-readable media claim 21; and system claims 23, 25, 31, and 32. Leader presented extensive expert testimony and documentary evidence that Facebook itself directly infringes each of these claims. *See, e.g.*, Tr. 667:2-3; 670:17-22; 674:6-12; 676:20-21; 706:14-17; 716:2-8; 719:13-19; 722:11-16; 736:9-15; 749:4-9; 750:21-751:1; 755:6-13; 759:6-17; 763:12-18; 691:3-695:21; PTX 1, 145, 180, 190, 191, 208, 252, 269, 277, 300, 302, 341, 628, 629, 882, 886, 904, 906, 907, 911, 920, 942, 1000, 1001.³ Leader has provided the Court with a claim chart outlining all of the testimony that supports the jury's finding of direct, literal infringement of each claim. *See Hopkins Decl.*, Ex. 29. Based on that evidence, the jury found direct infringement by Facebook of every asserted claim. D.I. 610 at 1.

Because Facebook asserted that the method claims require joint action by Facebook and a user, Leader also submitted evidence of joint infringement of those claims, as an alternative basis for liability. *See Tr.* 677:12-678:4; 679:8-680:2; 691:3-7.⁴ The jury found that Facebook does not direct or control either its employees or its users in performing the method claims. D.I. 610 at 2. The jury did not, however, render a verdict on direction or control with respect to the system and computer-readable medium claims; this Court limited both the jury instructions on joint infringement and the relevant question on the verdict form to the method claims. D.I. 601 at 28, No. 3.7; D.I. 610 at 2.

³ All documents cited herein, including citations to PTX trial exhibits, DTX trial exhibits, and trial transcripts, are attached to the Declaration of Ryan Hopkins in Support of Plaintiff Leader Technologies, Inc.'s Oppositions to Facebook, Inc.'s Renewed Motions for Judgment as a Matter of Law ("Hopkins Decl.").

⁴ Leader also alleged infringement under induced infringement, contributory infringement, and doctrine-of-equivalents theories. *See, e.g.*, Tr. 691:3-695:21; 666:21-667:7; 706:18-21; 710:18-22; 737:7-10; 740:22-741:7; 751:2-6; 752:24-753:4; 816:8-818:14.

IV. ARGUMENT

A. Standard Of Review

“To prevail on a motion for JMOL, the moving party ‘must show that the jury’s findings, presumed or express are not supported by substantial evidence’” *Cordance Corp. v. Amazon.com, Inc.*, 687 F. Supp. 2d 449, 453 (D. Del. 2010) (citation omitted). “[S]ubstantial evidence is evidence that a reasonable individual might accept as supporting the jury’s decision.” *Id.* at 454 (citation omitted). In assessing the sufficiency of the evidence, the court must give the non-moving party, “as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him.” *Williamson v. Consolidated Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991) (citation omitted). “A determination of infringement is a question of fact, reviewed for substantial evidence when tried to a jury.” *Verizon Servs. Corp. v. Cox Fibernet Va., Inc.*, 602 F.3d 1325, 1340 (Fed. Cir. 2010) (citation omitted).

B. The Jury Found That Facebook Itself Directly Infringed The Asserted Method Claims.

Facebook starts with the mistaken premise that, “[w]ith respect to method claims 9, 11, and 16, Leader’s trial theory of infringement depended entirely on the combined actions of Facebook and its users.” D.I. 632 at 2. To the contrary, the relevant jury instruction states that “Facebook can . . . be liable for direct literal infringement of a method claim . . . if, *by itself* or in combination with a third party, it performs all the steps of the claimed method.” D.I. 601 at 28, No. 3.7 (emphasis added). That instruction made clear that the jury could find direct infringement of the method claims by Facebook alone. And Leader presented evidence that Facebook’s source code performs every step of every asserted method claim. *See, e.g.*, Tr. 667:2-3; 670:17-22; 674:6-12; 676:20-21; 706:14-17; 716:2-8; 719:13-19; 722:11-16; 736:9-15;

749:4-9; 750:21-751:1; 755:6-13; 759:6-17; 763:12-18; *see also* Tr. 677:12-678:4; 679:8-14.

The jury was free to credit that evidence and to find -- as it did -- that Facebook alone directly infringed all of the asserted method claims. D.I. 610 at 1. The jury's separate finding that Facebook does not direct or control its users or employees is relevant only to Leader's alternative joint-infringement theory; it in no way undermines the jury's on-point finding that Facebook itself directly infringed all the claims.

Facebook's remaining arguments are contrary to both the language of the claims and the evidence presented at trial. Method claim 9 (the independent method claim) recites:

9. A computer-implemented method of managing data, comprising computer-executable acts of:

creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents;

dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment;

tracking movement of the user from the user environment of the web-based computing platform to a second user environment of the web-based computing platform; and

dynamically updating the stored metadata with an association of the data, the application, and the second user environment wherein the user employs at least one of the application and the data from the second environment.

PTX 1, '761 Patent at col. 21:38-58. The preamble of that claim makes clear that the method comprises "computer-executable acts." PTX 1, '761 Patent at col. 21:39. In other words, claim 9 is an example of a claim drafted "to focus on one entity" -- the source code, or more specifically, the source code's execution of the back-end components of Facebook's system. *See BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007). Because substantial evidence showed that the source code performs each step of the claimed methods, Facebook is liable for its own direct infringement. User interaction, while perhaps necessary to operate the

software in practice, is immaterial to the more limited back-end process claimed in the '761 Patent. As the Federal Circuit has recognized, "although a user must activate the functions programmed into a piece of software by selecting those options, the user is only activating means that are *already present in the underlying software.*" *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1118 (Fed. Cir. 2002) (emphasis in original). Here, as in *Fantasy Sports*, the method claims cover the systems' functionality, not users' actions.

Facebook points to two steps of claim 9 that it says must be performed by a user: (1) "creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents," (PTX 1, '761 Patent at col. 21:40-43); and (2) "wherein the user employs at least one of the application and the data from the second environment" requires action by a user (PTX 1, '761 Patent at col. 21:55-57); *see also* D.I. 632 at 3.

As to the first step, Leader presented substantial evidence at trial that the *system* creates a data file containing a copy of the data that are being uploaded. *See, e.g.*, Tr. 573:21-575:3 (discussing PTX 882). In fact, the Facebook website creates multiple copies of uploaded photos in an equivalent number of data files for the system's use, without additional action from the user. *See id.* The further phrase "via user interaction with the user environment by a user using an application" does not impose an additional step by a user; it simply defines *when* the system creates the data -- following user interaction -- for storage and manipulation. Facebook claims that Leader's expert, Dr. Vigna, attributed this step to users, but Dr. Vigna explicitly stated that his testimony concerned "the systems, the code that is performing the function and whatever is being used by the users." Tr. 711:19-22. In support of Leader's alternative joint-infringement theory, Dr. Vigna *also* testified, in a statement Facebook relies on, that users take certain actions

and Facebook directs or controls them. *See* Tr. at 561:8-15; 562:15-19; 565:5-7; 565:21-566-3; 570:17-571:6; 717:1-15; 677:12-678:4. But as explained above, that does not detract from Dr. Vigna's testimony that Facebook also directly infringes.

Nor does the other step Facebook challenges require user interaction. The "wherein" clause establishes a condition for when the back-end components "dynamically updat[e] the stored metadata" PTX 1, '761 Patent at col. 21:54. Dr. Vigna pointed to specific Facebook source code that performs the dynamically updating step and satisfies the claim language. *See* Tr. 688:24-690:6. Facebook also asserts that dependent claim 16 requires action by a user, but the relevant language - - "accessing the user environment via a portable wireless device," again refers to a function performed by Facebook code. Dr. Vigna testified that the "Facebook mobile client" performs that function. *See* Tr. 718:23-719:12. In short, the jury was free to find -- and did find -- that Facebook itself directly infringed all of the asserted method claims. D.I. 610 at 1.

C. The Jury's Verdict With Respect To Direction Or Control Is Immaterial To The System And Computer-Readable Media Claims.

Joint infringement principles have no bearing whatsoever on Facebook's infringement of the asserted system and computer-readable media claims. As a procedural matter, this Court submitted the issue of joint infringement to the jury only with respect to the asserted method claims. The jury instruction stated that, "[f]or Facebook to be liable for the acts of third parties, Leader must have proven, by a preponderance of the evidence, that Facebook controls or directs the activity of those parties who perform the steps *of the method claims.*" Tr. 1923:21-1924:2 (emphasis added); *see also* D.I. 601 at 28 (emphasis added). As Facebook admits, the verdict form put the question of direction or control before the jury only for method claims 9, 11, and 16. D.I. 632 at 2; D.I. 610 at 2.

Though Facebook asserts that this clear limit on the verdict form is somehow “no obstacle to applying the jury’s finding” to the system and computer-readable medium claims, Facebook cites no authority to support such a radical proposition. D.I. 632 at 4-5. Nor could it: there is no sense in which a verdict on method claims necessarily means, contrary to this Court’s clear instructions and the verdict form itself, that the jury actually intended to render a verdict on the other claims. Accordingly, the verdict on direction or control applies only to the method claims. *See, e.g., Neely v. Club Med Mgmt. Servs., Inc.*, 63 F.3d 166, 201-03 (3d Cir. 1995) (holding that jury’s finding of contributory fault on one claim could not be applied to another claim); *see also Kinnel v. Mid-Atlantic Mausoleums, Inc.*, 850 F.2d 958, 964-66 (3d Cir. 1988) (holding that jury’s special interrogatory concerning one defendant could not be applied to the other).

Even if the Court were to set the verdict and jury instructions to the side, the direction or control test is simply irrelevant to the asserted system and computer-readable media claims. The Federal Circuit adopted that test in response to the loophole that would otherwise result from the rule that infringement of a “patented process” requires a single entity to perform each and every claimed step. *BMC Res.*, 498 F.3d at 1379. The court held that, “where the actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises ‘control or direction’ over the entire process” *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008) (emphasis added) (citation omitted). The Federal Circuit thereby *expanded* the scope of liability for *method* claims by holding a party liable even if it did not perform all of the method steps, so long as it directed or controlled another’s performance of the remaining steps. *See id.*

That expansion of liability will rarely if ever apply to product claims, and it certainly does not *limit* them. A single actor typically makes a patented product (by completing the product), uses, or sells the product by itself. *See Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 527-29 (1972). Because those actions do not consist of multiple “steps” that different actors could perform, joint infringement has little if anything to do with such claims. In any event, a party is never *required* to proceed on a joint-infringement theory; that is just an additional theory a patentee may choose to pursue, like indirect infringement or the doctrine of equivalents. Requiring patentees to disclaim their traditional direct infringement cases in favor of joint infringement theories, even when a single defendant’s actions meet all of the claim limitations, would be a radical revision of patent law.

Facebook relies on a serious distortion of *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, Nos. 2009-1306, 2009-1396, 2010 WL 3133539 (Fed. Cir. Aug. 9, 2010). In *Golden Hour*, two software companies separately created software programs, neither of which individually infringed, but then sold them as a unit that possessed all of the elements of the patent claims. 2010 WL 3133539, at *3, 11. As the Federal Circuit stressed, the plaintiff attempted to prove infringement of its system claims “only on a joint infringement theory.” *Id.* at *11. Accordingly, the Federal Circuit held that the plaintiff’s failure to prove direction or control was fatal. *Id.* But the Federal Circuit twice made clear that it was *not* holding that, under “proper instructions,” direction or control is necessary to prove infringement of a product claim. *Id.* & n.10. Instead, “the problem” in that case was that the plaintiff there -- unlike Leader here -- had agreed to jury instructions requiring it to prove joint infringement. *Id.* Thus, *Golden Hour* stands only for the proposition that litigants’ decisions have consequences, not that infringement of product claims must be proven in all cases under a joint infringement theory.

Facebook's contention that Leader "presented an infringement theory that relied on the actions of two distinct parties to satisfy the elements of its system claims" is false. D.I. 632 at 5. The evidence at trial, including Facebook's documents, source code, and employee testimony, showed that the Facebook system itself meets each and every element of the system claims. *See, e.g.*, Tr. 587:9-19; 588:2-8; 655:17-656:4; 666:17-667:7; 670:17-22; 674:6-12; 817:10-818:20; 819:1-12; *see also* Hopkins Decl. Ex. 29 at 1-96, 150-322.

As with the method claims, Facebook nonetheless argues that the system and computer-readable media claims require a user to create certain data. D.I. 632 at 6. That contention is wrong with respect to these claims for the same reasons it is wrong with respect to the method claims. The system and computer-readable media claims set forth functional language that describes the functionality of the back-end of the claimed system -- not a step performed by a user. *See, e.g.*, Tr. 561:10-565:4; 569:24-570:16; 572:2-573:12; 722:17-725:8; *see also* Hopkins Decl. Ex. 29. And in any event, Leader presented substantial evidence at trial that Facebook's system satisfies that element. *See* pp. 4-9, *supra*; *see also* Hopkins Decl., Ex. 29.

These arguments are also contrary to the testimony of each of the experts in this case. All of the experts explained their understanding of the claims and rendered an opinion on the issues of infringement or validity. No expert testified that the claims were invalid because they contain both an apparatus and a method. Indeed, Facebook separately filed yet another motion asking this Court to hold the claims invalid for that reason. *See* D.I. 382; *see also* D.I. 631. Facebook's attempt to insert a method step into the system and computer-readable media claims turns fundamental canons of patent law on their head by attempting to manufacture validity (and infringement) issues when none exist. *See, e.g., Rhine v. Casio, Inc.*, 183 F.3d 1342, 1345 (Fed. Cir. 1999) (claims must be construed to preserve their validity).

D. The Evidence At Trial Established That Facebook Directs Or Controls Its Employees and Users.

Insofar as it is relevant, Leader established in its JMOL motion that Facebook directs or controls the actions of both its own employees and its users. *See* D.I. 626 at 18-19; *see also* PTX 145; Tr. 677:7-678:4. This Court's jury instructions stated that the jury "may consider" evidence such as "whether there is a contractual relationship between Facebook and the third parties; whether users of Facebook are agents of Facebook; and whether Facebook supplies the instrumentalities, tools, and the website for the person using the website." D.I. 601 at 28, No. 3.7. Leader proved all of those points. Facebook's employees inherently have a contractual relationship and indeed are agents of the company, and there is no question that Facebook provides the "instrumentalities, tools, and the website" for its own employees to use the infringing website. *See* PTX 145; Tr. 677:7-678:4.

Moreover, the "direction or control" test is satisfied as a matter of law where, as here, "the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method." *Muniauction*, 532 F.3d at 1330 (citations omitted). Facebook infringes the '761 Patent under a joint infringement theory, even under the cases cited in Facebook's brief, because Facebook employees are "contractually bound to visit the website" and are "agents who visit the website within the scope of their agency relationship." D.I. 632 at 8 (citing *Global Patent Holdings, LLC v. Panthers BRHC LLC*, 586 F. Supp. 2d 1331, 1335 (S.D. Fla. 2008)); *see also McKesson Info. Solutions, LLC v. Epic Sys. Corp.*, No. 1:06-CV-2965-JJC, 2009 WL 2915778, at *4 (N.D. Ga. Sept. 8, 2009); *Desenberg v. Google, Inc.*, No. 09 Civ. 10121, 2009 WL 2337122, at *7 (S.D.N.Y. July 30, 2009). Facebook's claim that it does not have a contractual relationship with its employees rings hollow. D.I. 632 at 10. An employer's responsibility for its employees

acting within the scope of their employment is the paradigmatic example of vicarious liability. Restatement (Third) of Agency § 7.07(1). As a matter of law, Facebook directs or controls its employees, and no reasonable jury could find otherwise.

Facebook also directs or controls its end users' use of Facebook. The Statement of Rights and Responsibilities for Facebook "tells the user what they can and cannot do." Tr. 679:13-14 (discussing PTX 1000). Use of the Facebook website requires that a user adhere to Facebook's direction and control pursuant to its Statement of Rights and Responsibilities, or be terminated from its system. *See id.*; PTX 1000 (listing the terms of use and the grounds for termination). Facebook maintains ultimate control of its users' use of the Facebook website. Facebook's contrary position rests on legal arguments this Court rejected when it rejected Facebook's proposed jury instruction on direction or control. There is no reason to revisit that standard now.

V. CONCLUSION

For the foregoing reasons, Leader respectfully requests that the Court deny Facebook's Renewed JMOL Motion No. 1.

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**IN THE UNITED STATES DISTRICT COURT
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I, Philip A. Rovner, hereby certify that on September 15, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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LAW (JMOL) OF NO INDIRECT INFRINGEMENT [MOTION NO. 3]**

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I. NATURE AND STAGE OF THE PROCEEDINGS

Leader Technologies, Inc. (“Leader”) filed its Complaint against Facebook, Inc. (“Facebook”) on November 19, 2008. The Complaint accused Facebook of infringing U.S. Patent No. 7,139,761 (the “761 Patent”). A jury trial commenced on July 19, 2010, and the jury’s verdict was entered on July 28, 2010. D.I. 610. Facebook moved for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(a) on July 27, 2010. D.I. 606. Facebook filed four separate Renewed Motions for Judgment as a Matter of Law (JMOL) pursuant to Fed. R. Civ. P. 50(b) on August 25, 2010. *See* D.I. 628, 629, 630, 631. This Opposition to Facebook’s Renewed Motion for JMOL of No Indirect Infringement [Motion No. 3 of 4] (“Renewed JMOL Motion No. 3”) requests that the motion be denied.

II. SUMMARY OF ARGUMENT

Because the jury issue of indirect infringement was never submitted to the jury, Facebook’s motion for judgment as a matter of law of no indirect infringement is a complete waste of this Court’s and Leader’s time and resources.

III. STATEMENT OF FACTS

Leader’s complaint against Facebook alleged indirect infringement pursuant to 35 U.S.C. § 271(b)-(c). D.I. 1. Leader provided testimony and evidence at trial that third parties directly infringe the ‘761 Patent and that Facebook induces and contributes to that infringement. *See, e.g.,* Tr. 691:3-695:21.¹ However, this Court stated: “I don’t believe there has been evidence from which the jury could find that any third party other than Facebook is the direct infringer, nor do I think there is evidence of Facebook’s knowledge of the ‘761 patent at this trial.” Tr.

¹ All documents cited herein, including citations to PTX trial exhibits, DTX trial exhibits, and trial transcripts, are attached to the Declaration of Ryan Hopkins in Support of Plaintiff Leader Technologies, Inc.’s Oppositions to Defendant Facebook, Inc.’s Renewed Motions for Judgment as a Matter of Law (“Hopkins Decl.”).

1884:19-24. Because the Court rejected a proposed jury instruction on indirect infringement, and did not include a question about indirect infringement in the verdict form, the jury did not render a verdict on this issue. *See* D.I. 610.

Facebook filed its Renewed JMOL Motion No. 3 pursuant to Fed. R. Civ. P. 50(b) on August 25, 2010. D.I. 630. Leader held a meet and confer with Facebook on August 26, 2010 to request that Facebook withdraw three of its Renewed JMOL Motions, including Renewed JMOL Motion No. 3. *See* Aug. 26, 2010 e-mail (Hopkins Decl., Ex. 32). Facebook refused to withdraw the motion.

IV. ARGUMENT

Facebook has repeatedly brought unnecessary issues before this Court and burdened Leader with unwarranted litigation costs.² The present motion is more of the same. Facebook's Renewed Motion No. 3 relates to an issue the Court clearly decided *in Facebook's favor* at trial and never submitted to a jury. *See* D.I. 634; Tr. 1884:12-24; *see also* D.I. 606 at 8. The Court did not instruct the jury on indirect infringement or include a question regarding indirect infringement in the verdict form. *See* D.I. 610. Because the jury did not consider or decide any issue of indirect infringement, there is no verdict on that issue to overturn, and Facebook's Renewed JMOL Motion No. 3 is an improper waste of this Court's and Leader's resources.

Although a JMOL motion is not appropriate on this issue, Leader wishes to make clear that it has not abandoned its indirect infringement claim. The trial record includes sufficient evidence that Facebook indirectly infringes the '761 Patent. *See* Tr. 691:3-703:24. For example, Leader's expert, Dr. Vigna, used Facebook's publicly available wiki and documents to build a third-party application that uses Facebook's application programming interface. Dr. Vigna

² The most egregiously unnecessary motion is Facebook's motion for judgment as a matter of law on claims not even asserted in this case. *See* D.I. 606 at 1.

thereby demonstrated that third-party developers infringe claim 9 of the '761 Patent. *See* Tr. 691:8-693:14. That and other evidence showed that "Facebook is providing the means for third-party application [sic] to perform the steps of the claim." Tr. 703:2-5; *see also* Tr. 695:19-21 ("Facebook allows third party [sic] to actually perform the steps of the claim."). Facebook's motion does not refute Dr. Vigna's testimony.

V. CONCLUSION

Leader respectfully requests that the Court deny Facebook's Renewed JMOL Motion No. 3.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
)	
FACEBOOK, INC.,)	
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

**PLAINTIFF LEADER TECHNOLOGIES, INC.'S OPPOSITION TO
DEFENDANT FACEBOOK, INC.'S RENEWED MOTION FOR
JUDGMENT AS A MATTER OF LAW (JMOL) OF INVALIDITY
[MOTION NO. 4]**

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I. NATURE AND STAGE OF THE PROCEEDINGS

Leader Technologies, Inc. (“Leader”) filed its Complaint against Facebook, Inc. (“Facebook”) on November 19, 2008. The Complaint accused Facebook of infringing U.S. Patent No. 7,139,761 (the “761 Patent”). A jury trial commenced on July 19, 2010, and the jury’s verdict was entered on July 28, 2010. D.I. 610. Facebook moved for judgment as a matter of law pursuant to Fed. R. Civ. P. 50(a) on July 27, 2010. D.I. 606. Facebook filed four separate Renewed Motions for Judgment as a Matter of Law (JMOL) on August 25, 2010. *See* D.I. 628, 629, 630, 631. Leader files this Opposition to Facebook’s Renewed Motion for JMOL of Invalidity [Motion No. 4 of 4] requesting that the motion be denied.

II. SUMMARY OF THE ARGUMENT

Facebook’s Invalidity JMOL should be denied because there was ample evidentiary basis for the jury to reach the conclusion that the claims were valid over the three main references Facebook raised at trial. Each of those references suffered from the same deficiency - no reference to a context or tracking a user as claimed in the patent. At bottom, the question whether the references disclosed those elements boiled down to a battle of the experts, in which the testimony of the parties’ experts covered the better part of two trial days and nearly 500 pages of trial transcript. *See generally*, Tr. 1387-1878.¹ The jury ultimately agreed with Leader’s expert and concluded that the claims were valid over the prior art. D.I. 610 at 4-5. Facebook now requests that this Court wade through those hundreds of pages of testimony and documentary evidence, reweigh that evidence according to its own lights, and overturn the jury’s verdict. There is no reason to invade the province of the jury, however. At a minimum, the jury

¹ All documents cited herein, including citations to PTX trial exhibits, DTX trial exhibits, and trial transcripts, are attached to the Declaration of Ryan Hopkins in Support of Plaintiff Leader Technologies, Inc.’s Oppositions to Facebook, Inc.’s Renewed Motions for Judgment as a Matter of Law (“Hopkins Decl.”).

was entitled to credit Leader's expert's understanding of the asserted references, and judgment as a matter of law is therefore unwarranted.

Facebook's request for a new trial should also be denied. Even if the Court deems it improper that Leader's counsel questioned Facebook's expert about the face of the Swartz and '761 Patent, the harsh remedy of striking the testimony from the record and including a limiting jury instruction is more than adequate to remedy any possible prejudice.

III. STATEMENT OF FACTS

During the seven-day jury trial, Facebook asserted that the claims of the '761 Patent were invalid based on the testimony of its expert Dr. Saul Greenberg. Dr. Greenberg opined that the asserted claims of the '761 Patent were anticipated by three references, the iManage DeskSite 6.0 User Reference Manual ("iManage User Manual"), European Patent Application No. EP 1 087 306A2 ("Hubert"), and U.S. Patent No. 6,236,994 ("Swartz"). Tr. 1571:14-1572:8. Dr. Greenberg further testified that these references, in combination, would have rendered the claims of the '761 Patent obvious. Tr. 1564:16-23. Leader's expert, Dr. James Herbsleb, rebutted Dr. Greenberg's testimony. Dr. Herbsleb testified that the references relied on by Dr. Greenberg did not disclose many of the elements of the claims of the '761 Patent, and in fact, disclosed fundamentally different systems. Tr. 1787:14-1843:14; 1846:15-1848:20. The jury found that none of the asserted claims of the '761 Patent were anticipated or obvious over the prior art references raised by Facebook. D.I. 610 at 4-5. On August 25, 2010, pursuant to Fed. R. Civ. P. 50(b), Facebook moved for JMOL of Invalidity [Motion No. 4 of 4] ("Invalidity JMOL") and requested that the Court overturn the jury's findings regarding the validity of the asserted claims.

IV. ARGUMENT

A. STANDARD OF REVIEW

Judgment as a matter of law is appropriate only if, when viewing the evidence in the light most favorable to the nonmovant, “there is no legally sufficient evidentiary basis for a reasonable jury to find for that party on that issue.” *Bullen v. Chaffinch*, 336 F. Supp. 2d 342, 346 (D. Del. 2004) (quotation and citations omitted). The movant “must show that the jury’s findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury’s verdict cannot in law be supported by those findings.” *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (quoting *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984) (citation omitted)). The Court must give the nonmoving party, “as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him.” *Williamson v. Consolidated Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991) (citation omitted). The Court “may not weigh the evidence, determine the credibility of witnesses, or substitute its version of the facts for the jury’s version.” *Fowler v. UPMC Shadyside*, 578 F.3d 203, 213 n.8 (3d Cir. 2009) (citation omitted).

An issued patent enjoys a presumption of validity. 35 U.S.C. § 282. A party challenging the validity of a patent has the “heavy burden” of overcoming that presumption by “clear and convincing evidence.” *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1145 (Fed. Cir. 2004)(citation omitted). Clear and convincing evidence is evidence that “could place in the ultimate factfinder an abiding conviction that the truth of [the] factual contentions [is] ‘highly probable.’” *IMX, Inc. v. Lendingtree, Inc.*, 469 F. Supp. 2d 203, 215 (D. Del. 2007) (quoting *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984)). The Court must assume that all

factual issues underlying the validity verdict were resolved in favor of the verdict winner. *Honeywell*, 370 F.3d 1131, 1144-45 (citing *Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1325 (Fed. Cir. 2003)).

Anticipation is a question of fact, reviewed for substantial evidence. *Z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007). On a JMOL motion, this Court “reviews a jury’s conclusions on obviousness, a question of law, without deference, and the underlying findings of fact, whether explicit or implicit within the verdict, for substantial evidence.” *Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007) (quoting *LNP Eng’g Plastics, Inc. v. Miller Waste Mills, Inc.*, 275 F.3d 1347, 1353 (Fed. Cir. 2001)). A party seeking a judgment that a patent is obvious “bears the burden of demonstrating by clear and convincing evidence that the teachings of the prior art would have suggested the claimed subject matter to one of ordinary skill in the art.” *Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 308 F.3d 1167, 1187 (Fed. Cir. 2002) (citation omitted).

B. FACEBOOK DID NOT ESTABLISH ANTICIPATION BY CLEAR AND CONVINCING EVIDENCE.

The validity issues presented in Facebook’s Invalidation JMOL center on “a classic battle of the experts.” *Telcordia Techs., Inc. v. Lucent Techs., Inc.*, 514 F. Supp. 2d 598, 608 (D. Del. 2007). Facebook’s expert, Dr. Greenberg, testified regarding his understanding of the asserted prior art, and Leader’s expert Dr. Herbsleb provided an element-by-element analysis that rebutted Dr. Greenberg’s testimony. Tr. 1787:14-1838:23. Key passages of Dr. Herbsleb’s testimony are quoted in this memorandum, but for the Court’s convenience, full excerpts of Dr. Herbsleb’s element-by-element testimony are provided in Exhibit 31 to the Hopkins Declaration filed concurrently herewith. That competing testimony raised a quintessential jury issue regarding which expert to credit and how to weigh the evidence. The jury found that Facebook

did not prove by clear and convincing evidence that any of its prior art references invalidated the '761 Patent. D.I. 610 at 4-5.

Substantial evidence supports the verdict because Facebook's references lack key elements of the claims. The Federal Circuit has long held that "[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (citation omitted). As Dr. Herbsleb testified, however, not one of Facebook's asserted references discloses a "context" or tracking a user as required by every asserted claim. *See, e.g.*, PTX 1, '761 Patent at col. 21:1 ("a first context") and col. 21:8 ("tracking a change of the user"); *see also infra* at 6, 8, 10-11, 12-14. Dr. Herbsleb's element-by-element analysis highlighted the fundamental differences between the asserted claims and those references—namely, that Facebook's references are *document*-centric. Tr. 1790:6-21; 1793:10-1838:23. The claims of the '761 Patent, however, are fundamentally user-centric. PTX 1; *see also* Tr. 1790:22-1792:1. The jury was free to rely on that fundamental difference and to credit that testimony. As a result, Facebook's references cannot invalidate the '761 Patent either singly or in combination with one another. Furthermore, with respect to the iManage User Manual, Facebook failed even to establish that the reference qualified as prior art.

The Court may not reweigh the jury's factual determinations on a JMOL motion, yet that is exactly what Facebook requests. Indeed, Facebook buries its expert's testimony in a claim chart appendix and asks the Court itself to piece together the anticipation case. D.I. 635, Appendix A. The jury, however, has already weighed the evidence, gauged the credibility of witnesses, determined the scope of each reference's disclosure, and concluded that the references do not disclose each and every element. Especially given its heavy clear and convincing burden

of proof, Facebook's conclusory statements do not provide any basis for this Court to overturn that verdict.

1. Facebook Failed To Show By Clear And Convincing Evidence That iManage Anticipates The '761 Patent.

a) Facebook did not prove that the iManage User Manual is enabling prior art.

Facebook's invalidity defense with respect to iManage fails at the threshold because it did not establish that the iManage User Manual is prior art. To qualify as prior art, the iManage User Manual must have both been publicly available before the priority date of the '761 Patent and enabling. *See* 35 U.S.C. § 102(a); *see also Impax Labs., Inc. v. Aventis Pharms., Inc.*, 545 F.3d 1312, 1314-15 (Fed. Cir. 2008). Facebook did not present clear and convincing evidence that would allow a jury to reach either of these conclusions.

First, the iManage User Manual is not an enabling reference. The iManage User Manual instructs the user on how to interact with the iManage DeskSite 6.0 client.² DTX 1010 at 11. The Manual does not describe how DeskSite itself operates. For example, the iManage User Manual does not include any source code and does not include any description of the operation of "backend" components. *See* Tr. 1793:6-9 ("It doesn't say anything about how it's designed, what the structure looks like. It simply tells us how to use it once it's there."). Dr. Herbsleb testified that the iManage User Manual would not allow a person of ordinary skill in the art to build the system disclosed in the manual. Tr. 1792:11-1793:9. That testimony provided substantial evidence for the jury to conclude that the iManage User Manual was not an enabling reference and was therefore not prior art.

² In its Invalidity JMOL, Facebook continues to contend that it relied on the iManage User Manual and iManage Product. D.I. 635 at 7. The product was not before the jury, and in fact Dr. Greenberg stated that he has never used the product. Greenberg Dep. Tr. at 192:11-12 (Hopkins Decl., Ex. 33).

Second, Facebook did not prove that the iManage User Manual was publicly available before the priority date of the '761 Patent. The exhibit entered into evidence by Facebook at trial was marked "Confidential" on every page and was originally produced during discovery by a third party as a confidential document. DTX 1010; Nov. 20, 2009 Letter re: Autonomy document production (Hopkins Decl., Ex. 34). There is no evidence that the iManage User Manual was ever available to the public, let alone that it was available prior to the '761 Patent's critical date.³ Even Facebook's expert had no knowledge of whether the iManage User Manual at issue was publicly available anytime before it was provided to him by Facebook's counsel. Tr. 1674:12-1675:22. The jury was free to conclude that the reference was not publicly available before the priority date of the '761 Patent. That alone means that iManage cannot support a judgment as a matter of law.

b) The iManage User Manual does not disclose each and every element of the asserted claims.

In all events, the iManage User Manual does not disclose each and every element of the asserted claims. The DeskSite 6.0 client described in the iManage User Manual is the frontend of a traditional document management system used to keep a history of documents stored in a central repository. DTX 1010 at 12. In describing how to use that document management client, the iManage User Manual describes an inherently document-centric system focused on the history of individual documents. DTX 1010 at 12; Tr. 1796:11-18. Noticeably absent from the iManage User Manual is any description of an environment or workspace as described in the asserted claims of the '761 Patent or the tracking of the user's movement.

³ The jury found that the '761 Patent is not entitled to the priority date of provisional patent application No. 60/432255 and, therefore, that the '761 Patent claims priority to its filing date, December 10, 2003. D.I. 610 at 3. Leader argued that this Court should grant judgment as a matter of law reversing that finding and establishing the priority date as December 11, 2002. D.I. 626 at 17-18. Nevertheless, there is no evidence that the confidential iManage Manual was publicly available before either priority date.

The iManage User Manual cannot anticipate the asserted claims at least because it does not disclose tracking a user's movement from contexts or environments. Tr. 1798:6-1799:13; 1799:14-1800:6. As stated by Dr. Herbsleb, the iManage User Manual discloses a system that keeps a document history, meaning "for some particular document, these are the things that happen to that document." Tr. 1796:8-10. Dr. Herbsleb elaborated that "[t]here's no view shots anywhere in the manual where you can sort of pull up some user and see what a user has done." Tr. 1797:8-10.

Facebook's expert, Dr. Greenberg, relied exclusively on Figure 3.26 as supposedly disclosing this element, but the figure does not show or even suggest the tracking of the user. Tr. 1512:9-22; 1513:11-13. Dr. Herbsleb specifically addressed Figure 3.26 and stated that "as you can see here, these are all entries [sic] of documents. So it doesn't track users at all." Tr. 1797:12-14; DTX 1010 at 83, Fig. 3.26. Dr. Herbsleb testified that the figure simply shows a history of a particular document and that only changes to the document are tracked. Tr. 1797:3-20. The Figure itself confirms Dr. Herbsleb's testimony. Figure 3.26 depicts the history of a document, which includes information stored about a document, such as who has checked out a document, if the document has been modified, and the different versions of the document created—thus clearly showing the history of a particular document ("History - Document: 2_2.DOC"), and not a user. DTX 1010 at 83, Fig. 3.26. Accordingly, the jury was entitled to credit Dr. Herbsleb's understanding of the manual and find no anticipation.

The jury also had substantial evidence upon which to conclude that the iManage User Manual did not disclose the concept of a context, user environment, or workspace. *See* Tr. 1798:6-1799:13. Dr. Herbsleb testified that iManage "does not have workspaces as part of the technology. It doesn't provide . . . environments places for people to do work with their tools

and allow people to move from one workspace to another. There is none of that in the technology.” Tr. 1797:24-1798:5. In reference to claim 1, he elaborated that “we have to be very careful what we mean by context here because that’s a word that gets used in many different ways. And . . . we have to use the construction that’s in the claim construction order, which says that context means environment. Okay. So the software to provide a context and have a context component has to provide an environment for a workspace for the user. And the technology described, iManage Manual just does not do that. So it does not have a context component, period.” Tr. 1798:7-1799:13. Dr. Greenberg stated only that these elements were met but did not provide an explanation with which a jury could conclude that these elements were disclosed. For example, Dr. Greenberg stated that the iManage User Manual discloses a context because it refers to a “Manage32” system. Tr. 1500:17-1502:2. However, this cannot be relied upon because the iManage User Manual never even states what the Manage32 system is. Dr. Greenberg simply guesses that “[t]his would probably be an iManage document, the repository system itself.” Tr. 1500:18-19. The testimony of Dr. Herbsleb therefore provided substantial evidence for the jury to find that the iManage User Manual does not disclose a context or user environment.

Furthermore, Facebook did not even attempt to discuss how iManage disclosed each claim on an element-by-element basis for any of the independent claims besides claim 1. Dr. Greenberg only briefly discussed a few chosen elements for claims 9, 21, and 23 and often ignored the clear differences in language between those claims and claim 1. For example, Dr. Greenberg in support of his conclusion that the iManage User Manual discloses a “user workspace,” as in claim 21, stated without support or explanation that “[w]e talked about this before. The only difference is that it’s a user workspace. iManage gives a place for people to do

their work, so by definition it gives them a user workspace, so that's covered." Tr. 1528:2-6.

For this reason and many others, Facebook failed to provide clear and convincing evidence for a jury to conclude that claims 9, 21, and 23, and the claims depending there from were invalid.

Thus, for the reasons discussed above, the Court should deny Facebook's motion.

2. Facebook Failed To Show By Clear And Convincing Evidence That Hubert Anticipates The '761 Patent.

Facebook also relied on the Hubert patent application at trial. Hubert discloses a "meta-document" that keeps track of the actions performed on the document as well as its location.

DTX 922, ¶ 0011. The meta-document is just that—a document. Accordingly, Hubert, just like the iManage User Manual, is also document-centric. Hubert's meta-documents include the data portion of a typical document (*e.g.*, a text document) with added metadata and processing information regarding the location of the document at any particular point in time. *Id.* The purpose of the meta-document is to retain a record of the voyage of a document. *Id.*, ¶¶ 0010-0011. The meta-document is simply a document that records a history of where it has been and the actions that have been performed on it. *Id.*, ¶ 0011.

Hubert does not disclose tracking a user as required by the claims. *See, e.g.*, PTX 1, '761 Patent at col. 21:3 (claim 1). Dr. Herbsleb testified that Hubert is devoid of user movement altogether. Tr. 1814:1-5. Furthermore, Facebook's own expert *agreed* that Hubert does not disclose tracking a user. Dr. Greenberg instead testified that the element is met because Hubert discloses tracking the movement of a *document*. Tr. 1548:12-16 ("And it says a record of the fact that the meta-document 20 was received at Source 32 is stored as processing information and processing information is part of the metadata. So this is tracking the movement."). Likewise, the only evidence presented by Facebook was a figure from Hubert showing *the meta-document* being transferred from one user (source) to another over the Internet. DTX 922, Fig.

2. As Dr. Herbsleb explained, nothing in the figure demonstrates a user moving, let alone tracking this movement: “it’s just a document being sent from one user to the next.” Tr. 1813:23-24. Hubert itself specifically states that the record it creates is a history of the *meta-document*, not the user. DTX 922, ¶ 0011 (“The processing information is recorded on the meta-document each time the meta-document is processed in some manner.”). As a result, a jury could reasonably find, and in fact heard no evidence to the contrary, that Hubert does not disclose tracking a user.

Dr. Herbsleb also testified that Hubert does not disclose a context (*i.e.*, environment), user environment, or user workspace as in the claims of the ‘761 Patent because Hubert discloses only “meta-documents,” and not a platform or system at all. Tr. 1807:24-1808:20; 1814:14-22. Specifically, Dr. Herbsleb testified that “[t]here’s absolutely nothing about a context, or environment or moving from one context to another, tracking users. I mean, it’s just not centered around users. It’s centered around these meta-documents.” Tr. 1811:7-11. Dr. Greenberg only stated that these elements were met by Hubert but gave no further explanation—certainly nothing upon which a jury could conclude that these elements were disclosed. Tr. 1547:17-1549:11. For example, Dr. Greenberg stated that Hubert discloses a context because “it says Source 32 includes a processing program, if we can highlight that, and which processes the document information by copying the document text and storing it in a new document.” Tr. 1548:5-9. Dr. Greenberg never explained why this “Source” is a context/environment, let alone how this is a user environment or user workspace. Dr. Herbsleb’s testimony was more than enough for a reasonable jury to find that Hubert does not disclose the claimed context.

In addition, Hubert does not anticipate the asserted claims because it does not disclose a “network” or “web-based” system as required by all of the asserted claims. *See* Tr. 1815:8-10

(“It’s also not a network-based system. It’s just a document.”). Hubert discloses only a “meta-document”—a normal data document with some further information recorded. A document by itself is not a component of a network-based system just by virtue of being able to be emailed. *See* Tr. 1814:16-22. Facebook did not even address this glaring absence in its Invalidity JMOL, and the jury could have reasonably concluded that Hubert does not disclose a network or web-based system, platform, or server.

Again, Facebook did not even attempt to discuss how Hubert disclosed each claim on an element-by-element basis for any of the independent claims besides claim 1. Dr. Greenberg only briefly discussed a few chosen elements for claims 9, 21, and 23 and often ignored the clear differences in language between those claims and claim 1. For example, and similar to his analysis of the iManage User Manual, Dr. Greenberg concluded that Hubert discloses the claim 21 element of a “user workspace,” without support or explanation, stating “[t]his is a place where people are supposed to do their work. So, by definition, this is a user workspace.” Tr. 1555:21-23. Again, a reasonable jury could have concluded that Facebook did not present clear and convincing evidence that claims 9, 21, and 23, and the claims depending there from were invalid.

3. Facebook Failed To Show By Clear And Convincing Evidence That Swartz Anticipates The ‘761 Patent.

The Swartz patent discloses a system of “middleware” that sits in-between two programs used for clinical studies. DTX 919, Col. 9:5-8. Used for regulatory compliance, this middleware program records steps taken in the flow of information from source documentation to a finished report. *Id.*, Col 3:61-4:58. The Swartz system stores the data and the analysis and plugs it into an audit trail. *Id.*, Col. 9:5-43. Information in the audit trail includes the author of a document, who signed off on a change, or who reviewed the requirements of the regulations, and this system takes the results and integrates them into an audit trail. *Id.* As a result, when the report is

completed, there is not only a report, but it can also be established where the data supporting the report came from. *Id.*, Col. 6:17-26. The system is related to the flow of data into a report, and is not concerned with the users. Again, nothing in the Swartz reference discloses a context, as construed by the Court, or tracking the movement of a user.

Dr. Herbsleb testified that Swartz does not disclose tracking user movement. Dr. Herbsleb contrasted tracking steps going into creating a report, as disclosed by Swartz, and testified that Swartz discloses that the system “keeps track of all those steps that go into the creation of this report documenting exactly how they were taken, so that you can prove at the end that you track them the right way. It doesn’t care about users. There’s no workspace. There’s no moving of a user from one workspace to another workspace. It doesn’t care about users.” Tr. 1824:23-1825:8. The jury was free to credit and rely on that testimony.

Dr. Greenberg supported his opinion by relying on portions of Swartz directed to tracking the steps taken to create a clinical report. Tr. 1452:9-1459:22. For example, Swartz states that “knowledge integration middleware is preferably employed to identify (including tracking, monitoring, analyzing) the context in which information is employed.” DTX 919, col. 6:22-25. This excerpt does not disclose tracking of the user movement but instead discusses tracking *the information*. Dr. Herbsleb specifically addressed that language, testifying that “[Swartz is] talking about tracking what’s going on in this regulatory compliance scheme, what’s being done to the documents, what’s being done to the data. There’s no sense at all of it tracking people, or tracking users or having even workspaces for users. So this is a completely different type of thing.” Tr. 1829:16-23. Any additional sections of Swartz relied on by Facebook are equally clear in that they are not discussing tracking user movement, but recording the history of the

report. *See* Tr. 1452:9-1459:22. Thus, Facebook failed to demonstrate that Hubert discloses tracking the movement of a user.

Swartz also does not disclose the concept of a context, user environment, or user workspace. Dr. Herbsleb stated that, when the term “context” is used in Swartz, it “is the context in this regulatory compliance scheme. . . It’s talking about tracking what’s going on in this regulatory compliance scheme, what’s being done to the documents, what’s being done to the data. There’s no sense at all of it tracking people, or tracking users or having even workspaces for users.” Tr. 1829:8-21. Dr. Greenberg stated only that these elements were met by Swartz but did not provide any further explanation. Tr. 1450:13-1491:11. He stated that because Swartz uses the term “context” it includes the concept of a context. However, he completely glossed over how this is the same as an environment (as context was construed), user environment or user workspace. *Id.* In fact, Swartz uses “context” in a very different manner than the ‘761 Patent. Dr. Greenberg glossed over any distinction stating in a conclusory manner that these elements are met because “Swartz is describing all the stuff people are doing in a system, so that’s their environment for doing their work” Tr. 1477:2-5. Because Swartz does not disclose this key concept of the claims, a jury could reasonably conclude that the asserted claims were not disclosed by Swartz.

Furthermore, Facebook did not even attempt to discuss how Swartz disclosed each claim on an element-by-element basis for any of the independent claims besides claim 1. Dr. Greenberg only briefly discussed a few chosen elements for claims 9, 21, and 23 and often ignored the clear differences in language between the claims and claim 1. For completely different independent claims he would often refer back to his previous analysis, making statements such as “[t]his is very much the same with some minor differences. I know it seems

tedious.” Tr. 1485:6-8. For example, in reference to claim 23, Dr. Greenberg simply ignored the limitation that the system is “for defining a first user workspace” and stated that “we saw how we can access this system via the web, so this would give it the functionality of a web-based server for defining, first, user work space” Tr. 1485:19-22. For this reason alone, Facebook failed to provide sufficient evidence for a jury to conclude that claims 9, 21, and 23, and the claims depending there from were invalid.

C. FACEBOOK DID NOT ESTABLISH OBVIOUSNESS BY CLEAR AND CONVINCING EVIDENCE.

At trial, Facebook put up only a token effort to establish that the references relied upon, if insufficient to anticipate, would still somehow render the claims obvious. *See* Tr. 1564:16-23. The jury found as a factual matter that none of the references anticipate the claims of the ‘761 Patent. Thus, because the references all suffer from similar deficiencies, the *combination* of those same references *a fortiori* could not render the claims obvious.

Dr. Herbsleb also explained that these references could not be combined together in any form at will. Tr. 1838:24-1841:22. Facebook did not provide an element-by-element explanation of which elements would be combined from which reference, and instead resorted to broad statements. Tr. 1564:16-23. As a result, Facebook presented insufficient evidence to establish that any of the asserted claims of the ‘761 Patent were invalid as a result of some hypothetical and undisclosed combination of the references.

Leader’s evidence of secondary considerations of non-obviousness further demonstrate support for the jury’s verdict. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966). Dr. Herbsleb testified that the asserted claims of the ‘761 Patent addressed a long-felt need in the industry and that others taught away from the solution presented in the claims of the ‘761 Patent. Tr. 1847:4-1848:20. Furthermore, Facebook stipulated an additional secondary

consideration by agreeing that the Facebook website, which was found by the jury to be an embodiment of the '761 Patent, was commercially successful. D.I. 601 at 47, No. 4.10. Thus, the jury had sufficient evidence to find that Facebook failed to offer clear and convincing evidence that the claims of the '761 Patent would have been obvious.

Facebook attempted to cure any lapse in these references in regard to claim 16 by adding U.S. Patent No. 6,434,403 ("Ausems"). However, Facebook provided no reason to combine this reference with iManage, Hubert, or Swartz. Tr. 1566:5-1567:10; 1568:8-1570:15. Dr. Greenberg merely stated in a conclusory fashion that Ausems would be obvious to combine with the other references because "if you had an end user who was just using their wireless computer at the time, they would just do that as a matter of consequence of using a wireless computer." Tr. 1567:3-7. The jury could have also reasonably concluded that Ausems could not be combined with any of the other references in light of the secondary considerations of non-obviousness, as discussed above.

D. A NEW TRIAL IS NOT WARRANTED AS A RESULT OF SHOWING THE FACE OF SWARTZ AND THE '761 PATENT TO THE JURY.

Facebook's request for a new trial should be denied. During his direct examination, Dr. Greenberg was directed several times by Facebook's counsel to the references listed on the face of the '761 Patent. *See* Tr. 1491:16-21; 1536:1-11; 1561:24-1562:8; 1571:2-13. In fact, Facebook's counsel enlarged on a projector the patent's face to underscore the references not relied upon by the examiner. Once Facebook opened the door by its line of questioning and by providing the jury with an unredacted copy of Swartz, Leader was within its rights to cross-examine Dr. Greenberg. Accordingly, Leader was free to direct the jury to the fact that the same examiner appears on both the '761 Patent and Swartz. *See* PTX 1; DTX 919; *see also* Tr. 1581:13-1583:12.

Even if the questioning by Leader's counsel was improper, Facebook was not prejudiced. A new trial is warranted only if it was "reasonably probable" that the verdict was influenced by improper statements. *Draper v. Airco, Inc.*, 580 F.2d 91, 96-97 (3d Cir. 1978). An isolated improper remark will not support the grant of a new trial. *Salas v. Wang*, 846 F.2d 897, 908 (3d Cir. 1988). It is not "reasonably probable" that the jury considered this in their verdict because the Court took harsh measures to make sure that the jury disregarded the comments. Tr. 1648:8-15. The Court struck that testimony (Tr. 1583:13-14) and gave a stern limiting instruction. D.I. 601 at 33, No. 4.2. Those remedies more than adequately apprised the jury that they were not to consider this information.

In light of these measures, Facebook's statement that the questions were "highly prejudicial false statements" falls flat. D.I. 635 at 18. Furthermore, it was *Facebook's* questioning that took unfair advantage of the Court's ruling limiting arguments on what was considered by the Examiner by highlighting the information on the front of the '761 Patent. The only party prejudiced by the situation was Leader because it was unable to discuss the undisputed facts on the cover of the '761 Patent and Swartz and put in issue by Facebook. Counsel simply directed Dr. Greenberg to the name of the examiner on the face of the patent and asked if it would be reasonable to conclude that the examiner was aware of both patents. Tr. 1581:13-1583:12. It is clear that not only was this a question and not a statement, but that it was accurate given that the same examiner examined the applications for both patents. Under the circumstances, it was appropriate for Leader to point out information that was *on the face* of both Swartz and the '761 Patent. Therefore, a new trial on Swartz is completely inappropriate.

The Court's remedial measures here were fully sufficient to protect Facebook. Indeed, the Court also used a limiting instruction to address improper statements by Facebook's counsel

in opening statements regarding the possibility of an injunction. Tr. 244:2-6; D.I. 601 at 50, No. 4.12. A limiting instruction was sufficient to enforce the Court's order not to raise the potential for an injunction against the Facebook Website. *Id.* The same reasoning holds true here. Facebook cannot be heard to complain that a different remedy is needed for Leader's cross-examination of Dr. Greenberg.⁴

E. CLAIMS 1, 4, 7, 21, 23, 25, 31, AND 32 ARE NOT INVALID AS INDEFINITE.

Facebook also reprises its pending summary judgment motion and argues that claims 1, 4, 7, 21, 23, 25, 31, and 32 are invalid as indefinite. D.I. 635 at 16-17 (citing *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed. Cir. 2005)). Leader will demonstrate why that argument is wrong when it responds to these arguments on September 20, 2010 as set by the Court's post-trial briefing schedule. D.I. 613. In short, the system and computer-readable media claims do not include method steps to be performed by a user. Rather, those claims set forth functional language that describes the functionality of the claimed system. Furthermore, there is no ambiguity in the claims because both parties' experts understood the scope of the claims in forming and providing their opinions at trial. Accordingly, Facebook's motion should also be denied with respect to indefiniteness.

V. CONCLUSION

For the foregoing reasons, Leader respectfully requests that the Court deny Facebook's JMOL Motion for Invalidity and for a new trial.

⁴ Swartz is no longer at issue in the pending reexamination of the '761 Patent. In its first office action, the USPTO has declined to adopt the rejection based on Swartz suggested by Facebook. USPTO May 21, 2010 Office Action (Hopkins Decl., Ex. 35). The USPTO's action also undermines Facebook's rationale for a new trial.

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**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 15, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
)	
FACEBOOK, INC.,)	
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

DECLARATION OF YURIDIA CAIRE IN SUPPORT OF PLAINTIFF LEADER TECHNOLOGIES, INC.'S OPPOSITION TO DEFENDANT FACEBOOK, INC.'S MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF CLAIMS 1, 4, 7, 21, 23, 25, 31 AND 32 OF U.S. PATENT NO. 7,139,761

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Dated: September 20, 2010

I, Yuridia Caire, hereby declare as follows:

1. I am an attorney with the law firm King & Spalding LLP, counsel for Plaintiff Leader Technologies, Inc. I have personal knowledge of the facts set forth in this declaration and can testify competently to those facts. I make this declaration in support of Plaintiff Leader Technologies, Inc.'s Opposition to Defendant Facebook, Inc.'s Motion for Summary Judgment of Invalidity of Claims 1, 4, 7, 21, 23, 25, 31, and 32.

2. Attached hereto as Exhibit A is a true and correct copy of U.S. Patent No. 7,139,761 ("761 Patent").

3. Attached hereto as Exhibit B is a true and correct copy of the Notice of Allowability from the prosecution history of the '761 Patent, dated August 15, 2006.

4. Attached hereto as Exhibit C is a true and correct copy of pages 14-16 from the Expert Report of Saul Greenberg, served on April 8, 2010.


5. Attached hereto as Exhibit D is a true and correct copy of pages 5-15 from the Expert Report of Michael Kearns, served on April 22, 2010.

6. Attached hereto as Exhibit E is a true and correct copy of pages 6-7 from the Expert Report of Giovanni Vigna, served on April 8, 2010.

7. Attached hereto as Exhibit F is a true and correct copy of pages 4-5 from the Expert Report of James Herbsleb, served on April 8, 2010.

8. Attached hereto as Exhibit G is a true and correct copy of pages 299-305, 541-42, 720, 741-42, 991, 1404-06, 1579-81, 1613-14, 1752-53, 1776-79 from the Transcripts of Trial Proceedings.

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on September 20, 2010 in Redwood Shores, California.



Yuridia Caire

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 20, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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EXHIBIT A



US007139761B2

(12) **United States Patent**
McKibben et al.

(10) **Patent No.:** US 7,139,761 B2
(45) **Date of Patent:** Nov. 21, 2006

- (54) **DYNAMIC ASSOCIATION OF ELECTRONICALLY STORED INFORMATION WITH ITERATIVE WORKFLOW CHANGES**
- (75) Inventors: **Michael T. McKibben**, Columbus, OH (US); **Jeffrey R. Lamb**, Westerville, OH (US)
- (73) Assignee: **Leader Technologies, Inc.**, Westerville, OH (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Primary Examiner—Diane Mizrahi

(21) Appl. No.: **10/732,744**

(22) Filed: **Dec. 10, 2003**

(65) **Prior Publication Data**
US 2004/0122835 A1 Jun. 24, 2004

Related U.S. Application Data

(60) Provisional application No. 60/432,255, filed on Dec. 11, 2002.

(51) **Int. Cl.**
G06F 17/30 (2006.01)

(52) **U.S. Cl.** 707/10

(58) **Field of Classification Search** 707/1-10, 707/100-104.1; 379/202.01; 715/753; 725/87, 725/112; 709/202, 204, 205
See application file for complete search history.

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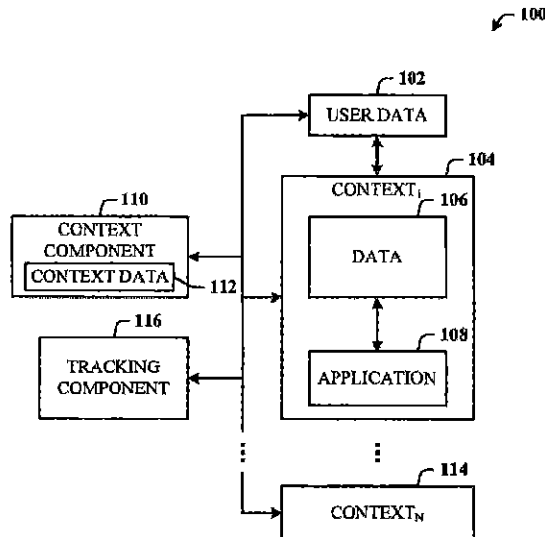
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(57) **ABSTRACT**

A data management tool. The tool is a unified, horizontal system for communications, organization, information processing, and data storage. The tool operates seamlessly with existing platforms, and is a common workflow layer that is automated with a scalable, relational database. The tool uses one or both of a relational and object database engine that facilitates at least many-to-many relationships among data elements. The highest contextual assumption is that there exists an entity that consists of one or more users. The data storage model first assumes that files are associated with the user. Thus, data generated by applications is associated with an individual, group of individuals, and topical content and not simply with a folder, as in traditional systems.

35 Claims, 18 Drawing Sheets



Plaintiff's Trial Exhibit
PTX-1
Case No. 08-CV-00862

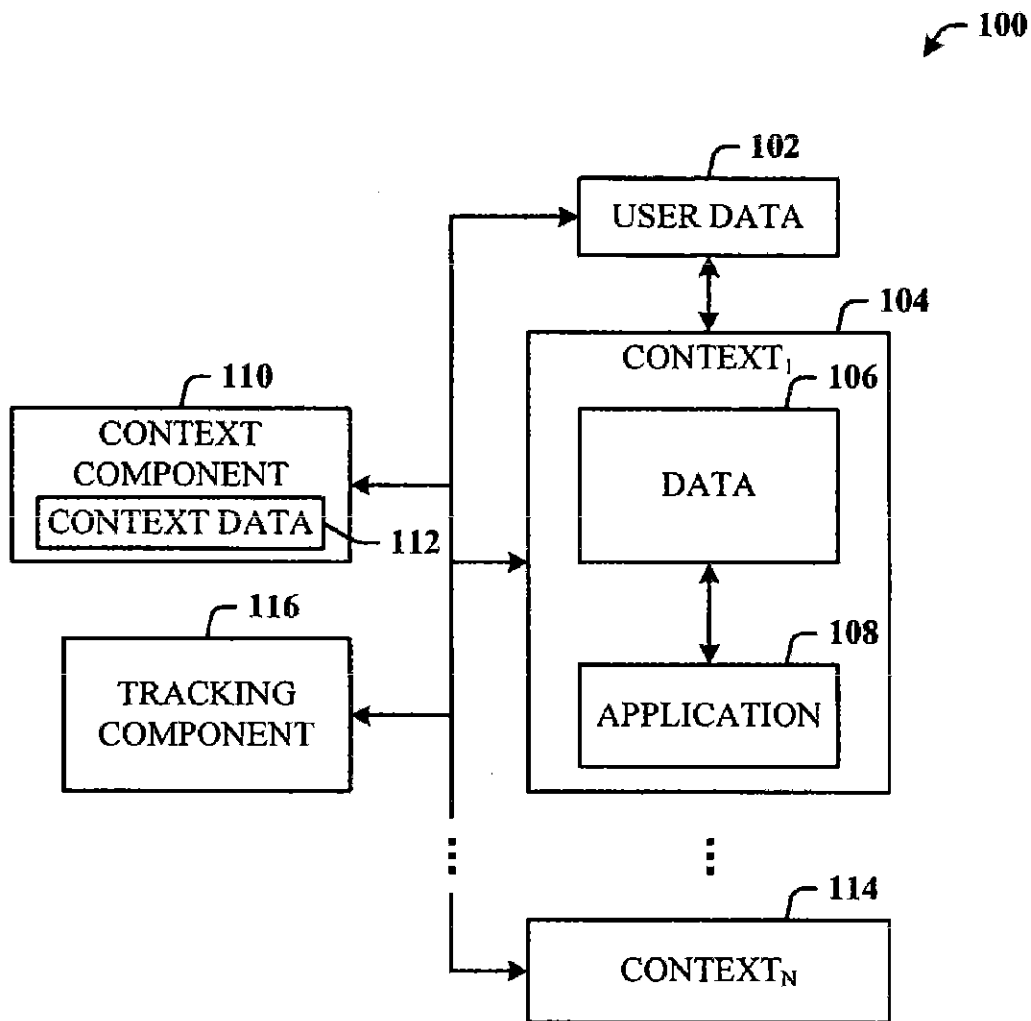


FIG. 1

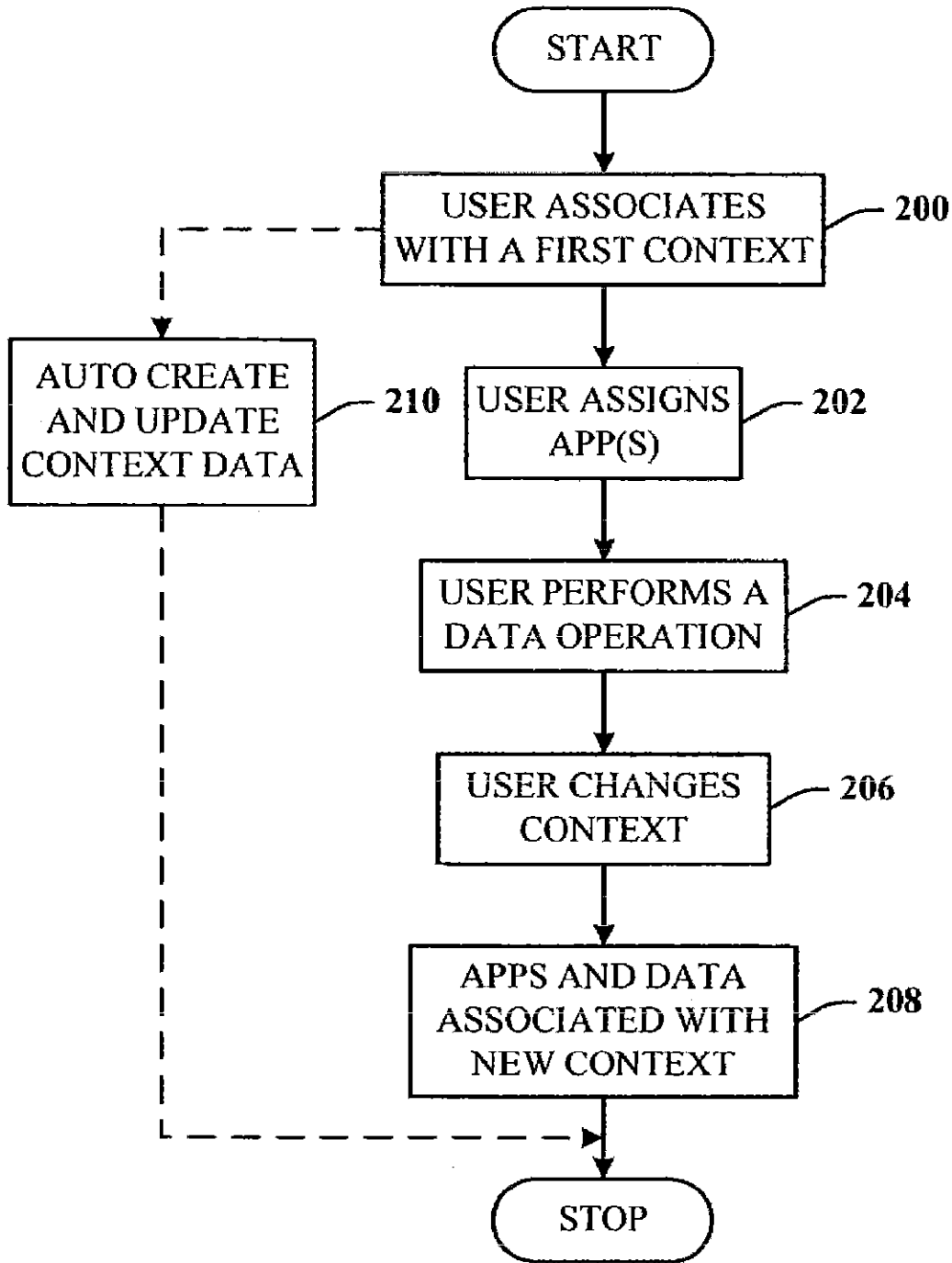


FIG. 2

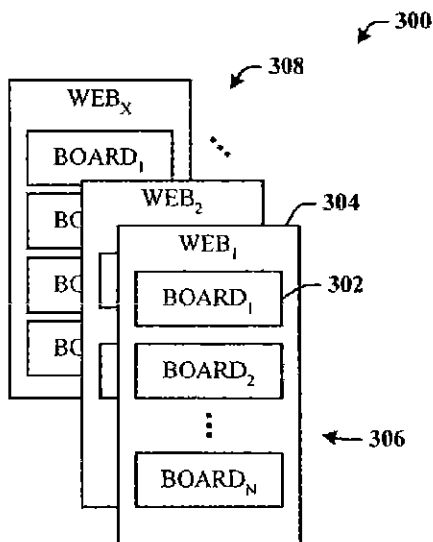


FIG. 3

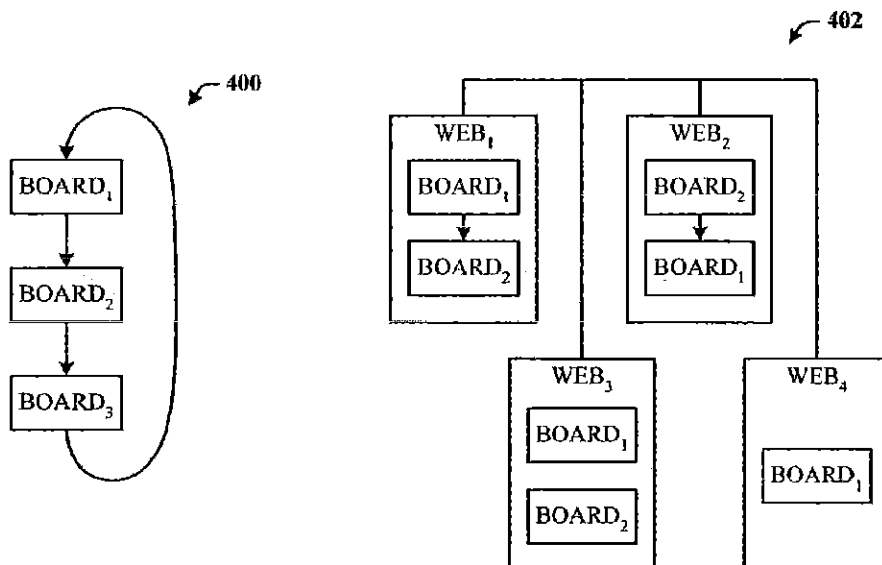


FIG. 4A

FIG. 4B

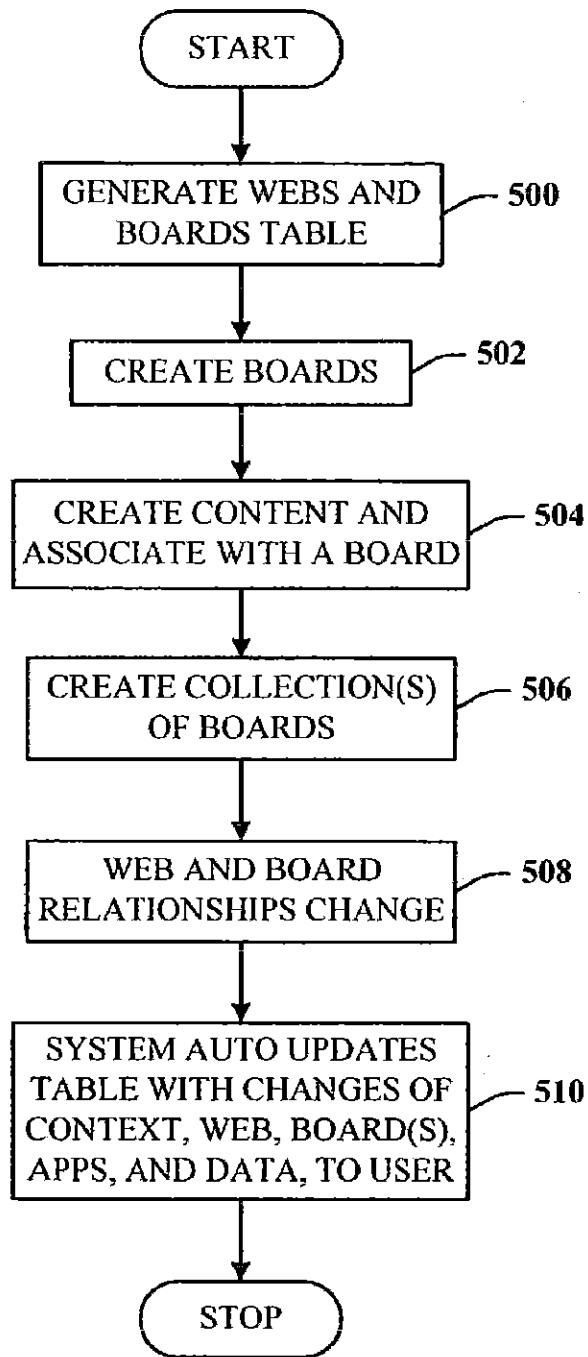


FIG. 5

600

WEBS AND BOARDS TABLE			
USER(S)	WEB(S)	BOARD(S)	BOARD(S) P/C RELATION
1,2,3	W1	B11, B12, B14	B11: B12; B14
6	W2	B23, B25	NA
7,8	W1,W3	B36,B37	B36:B37;B36

FIG. 6

700

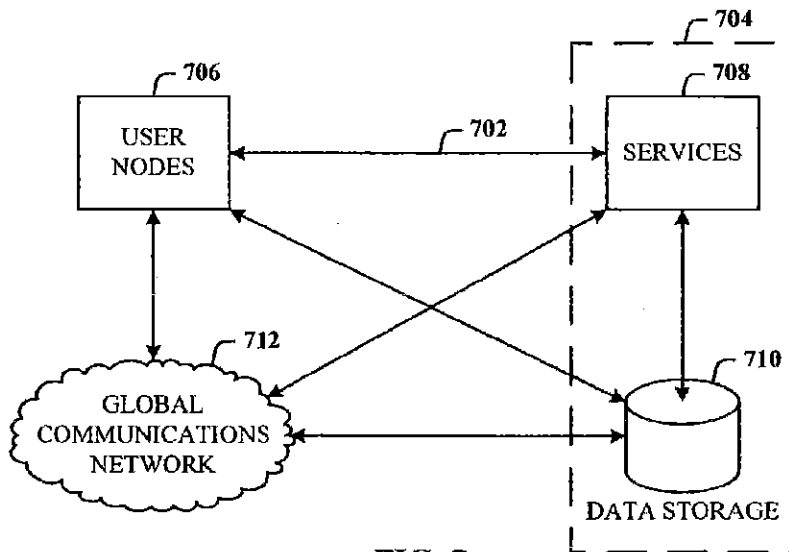


FIG. 7

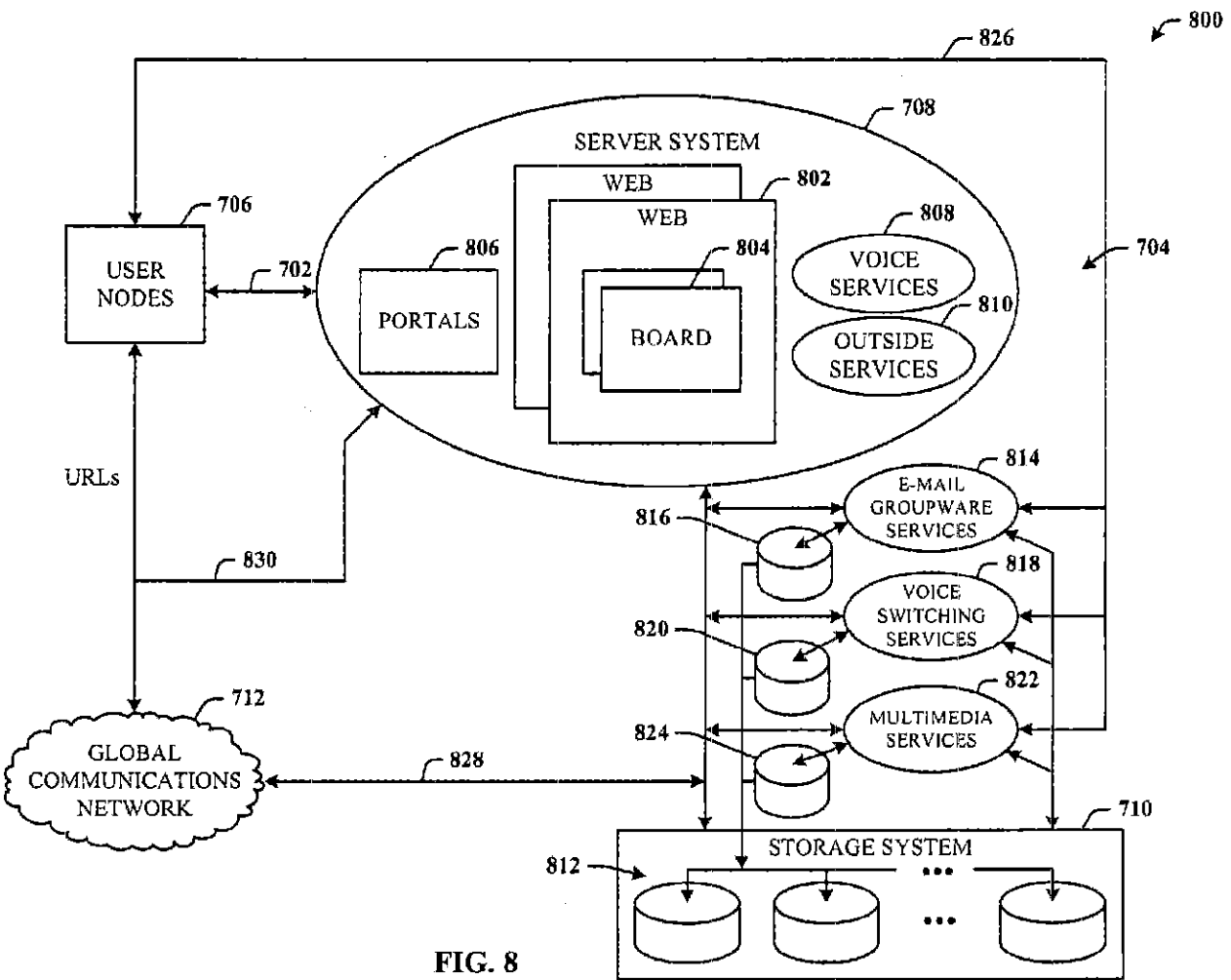


FIG. 8

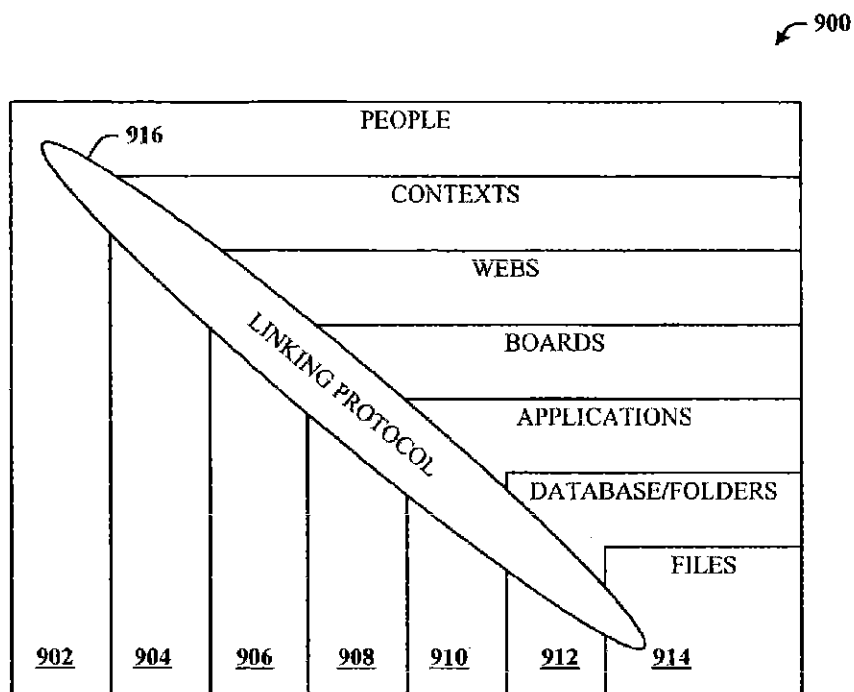


FIG. 9

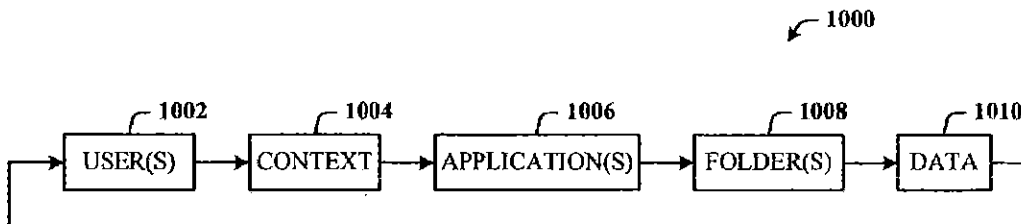


FIG. 10

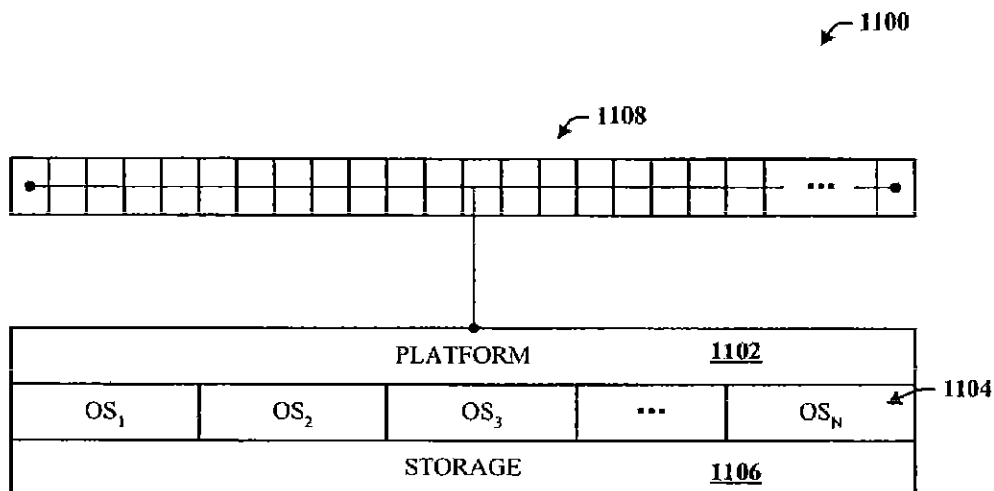


FIG. 11

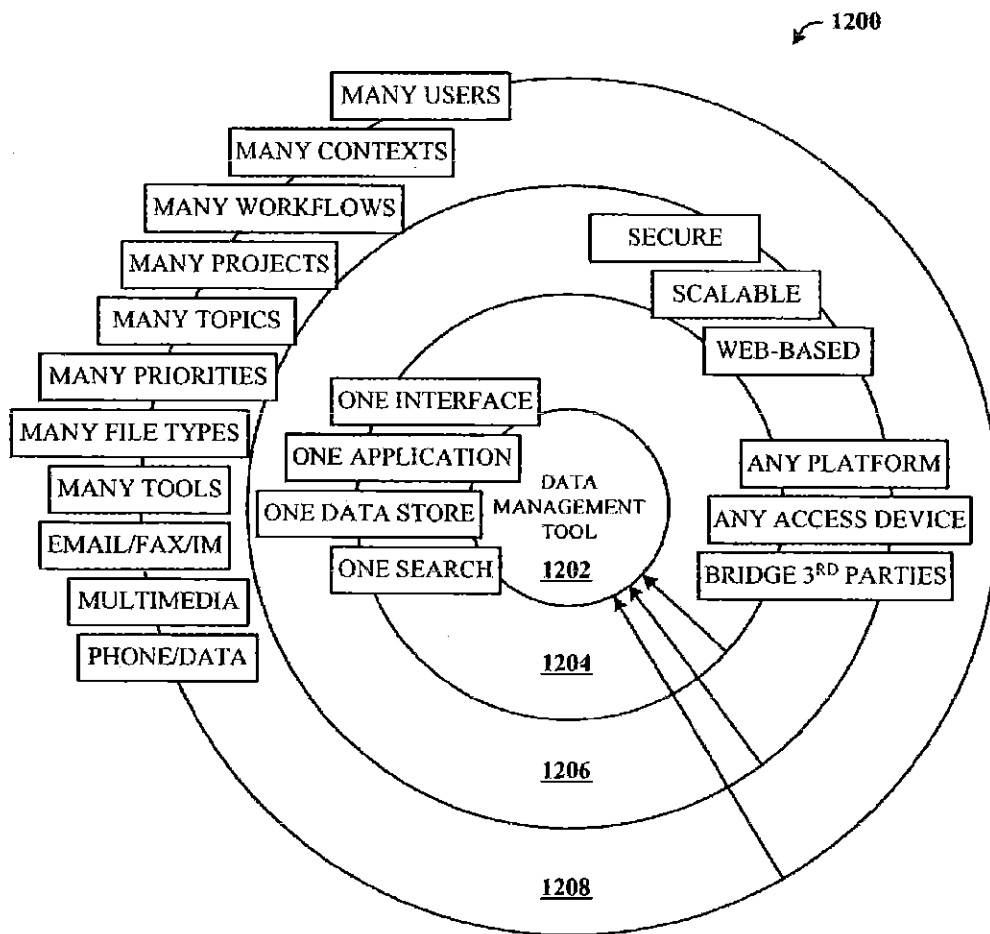


FIG. 12

1300

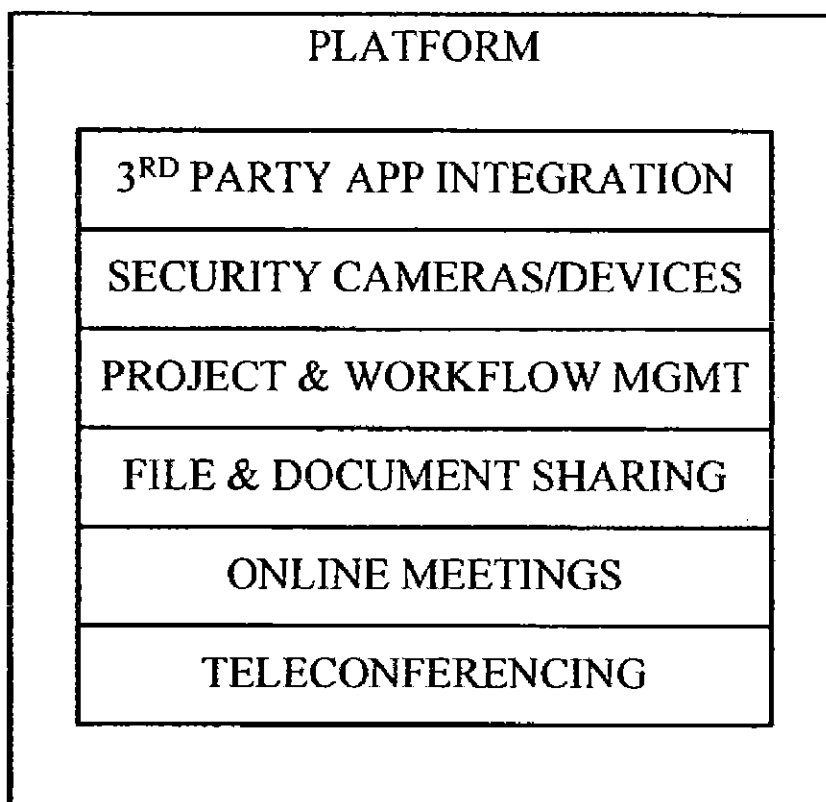


FIG. 13

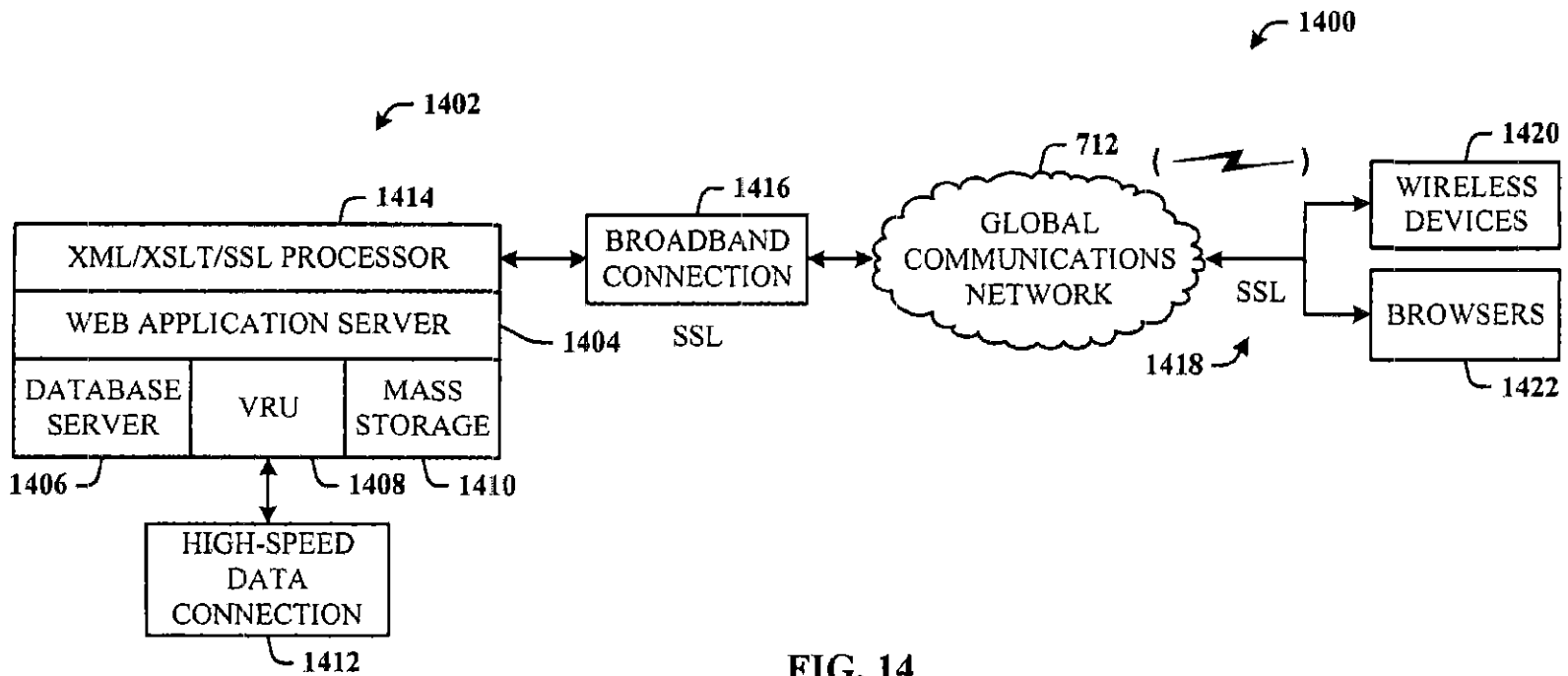


FIG. 14

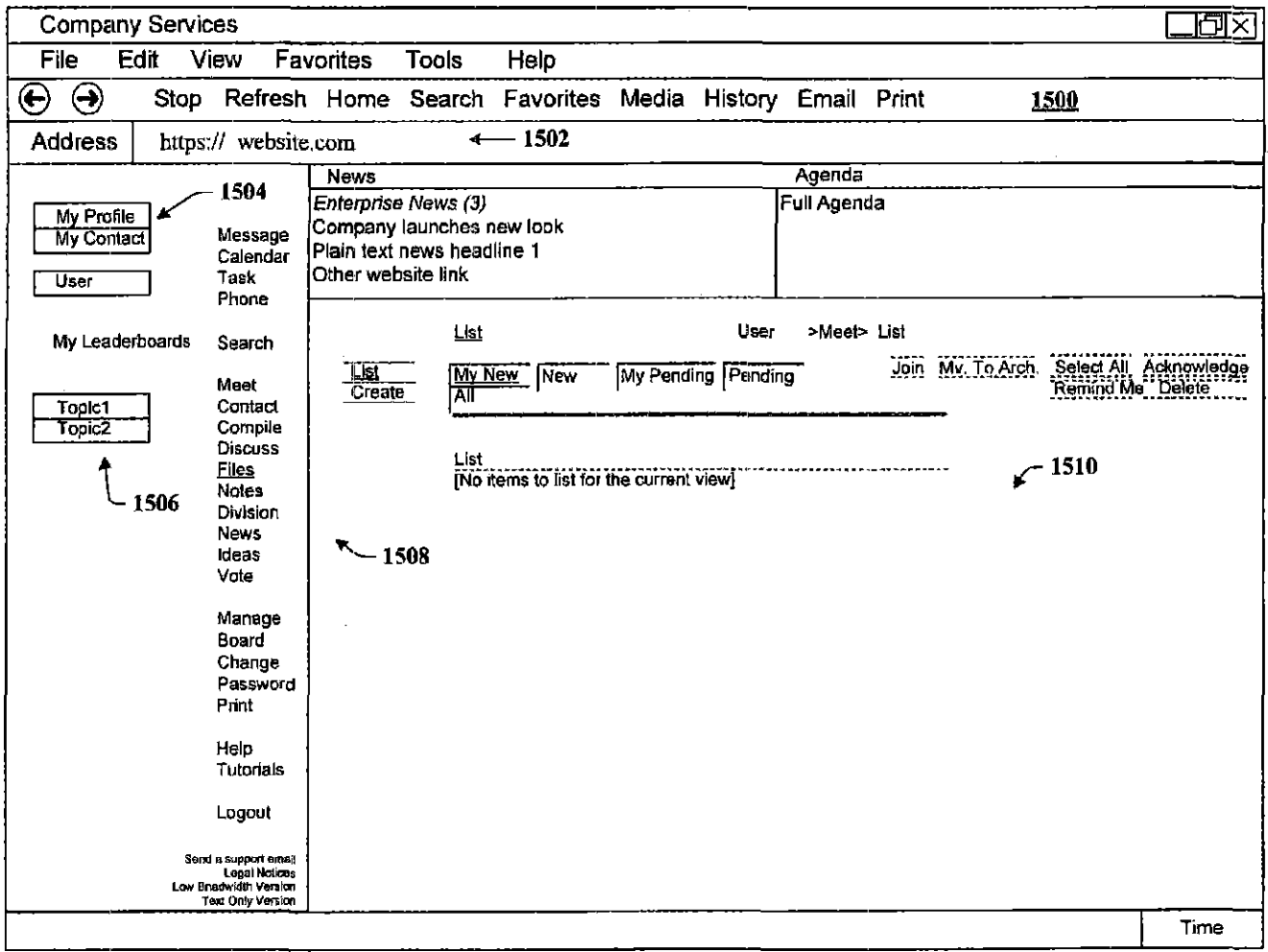


FIG. 15

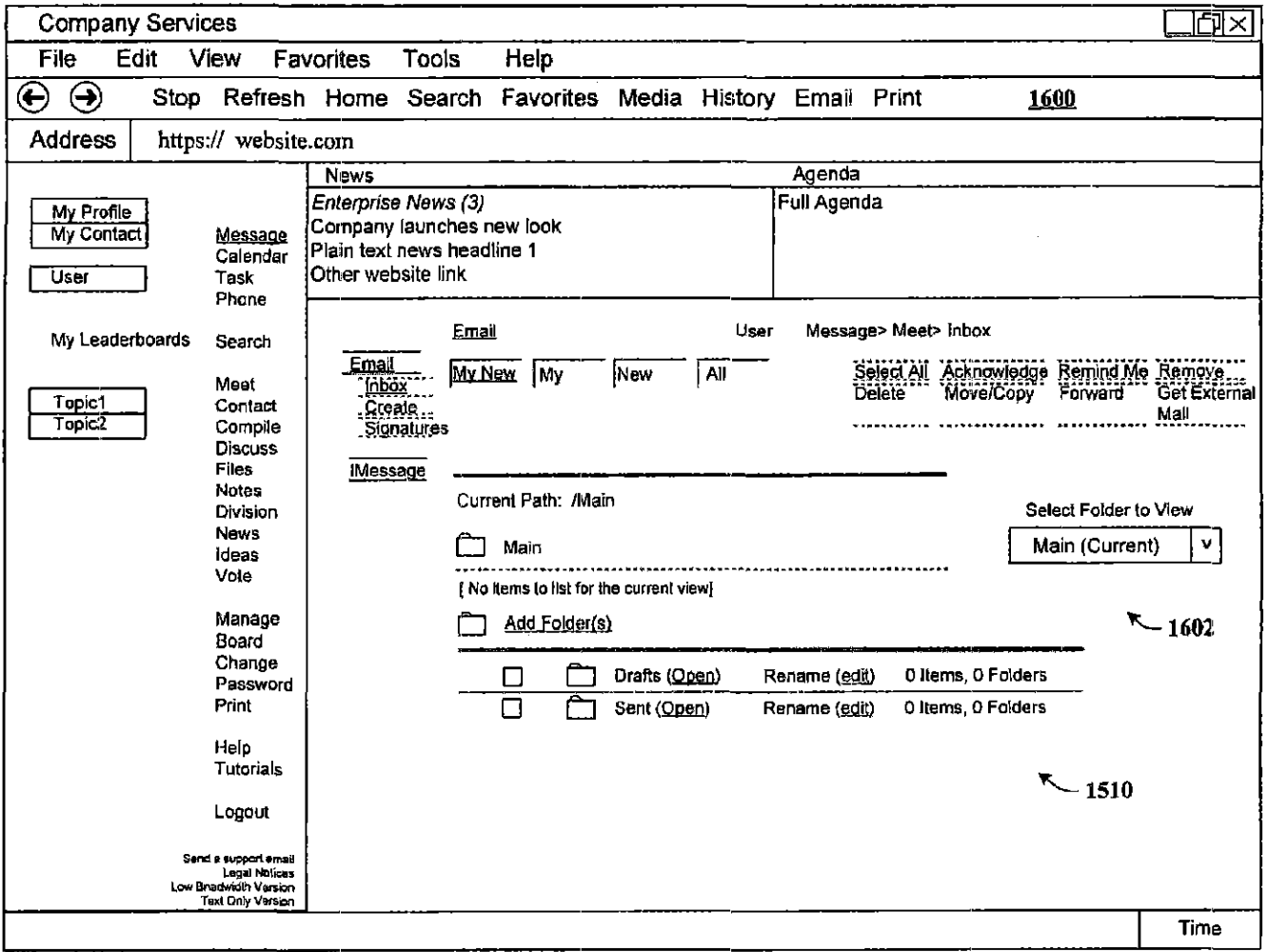


FIG. 16

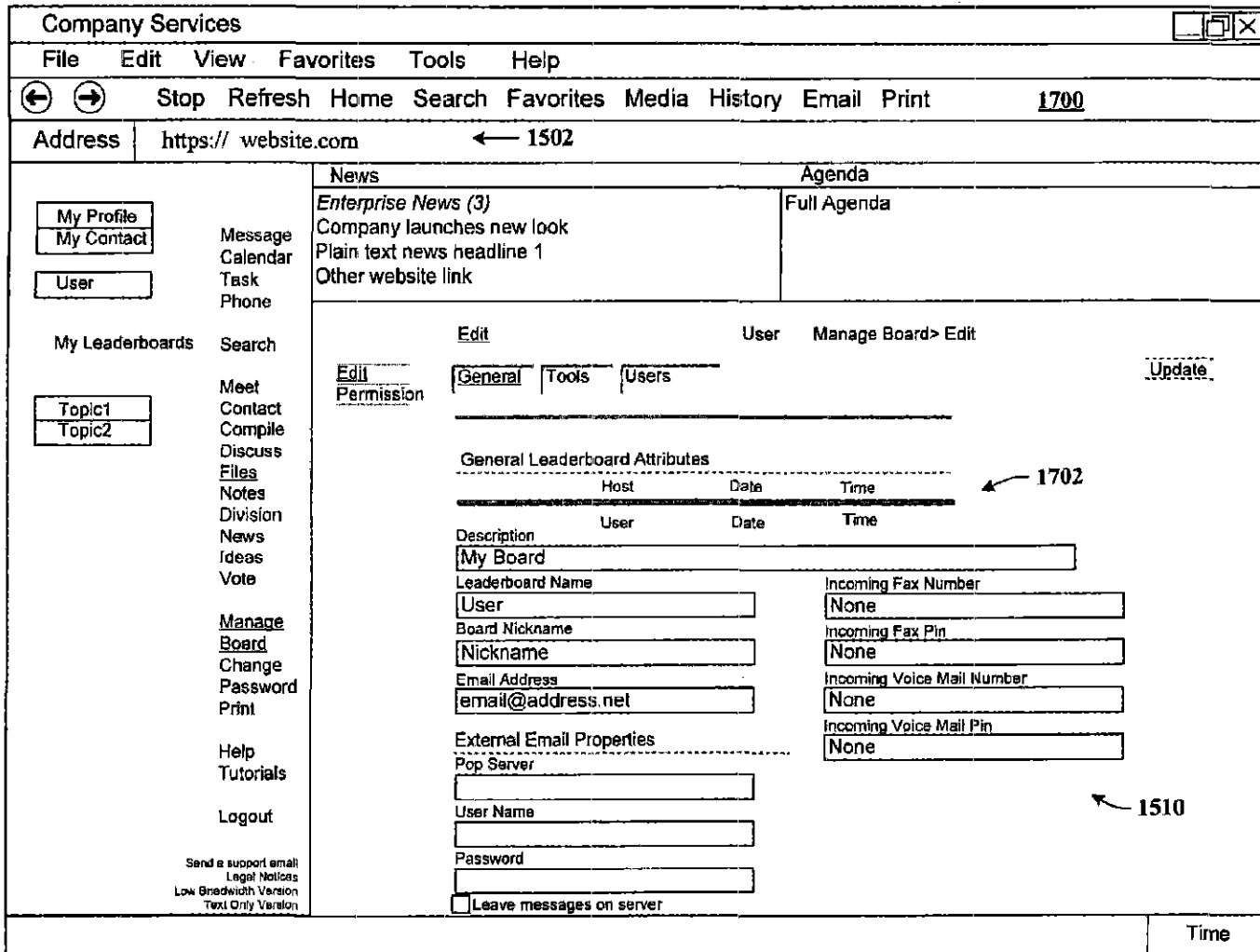


FIG. 17

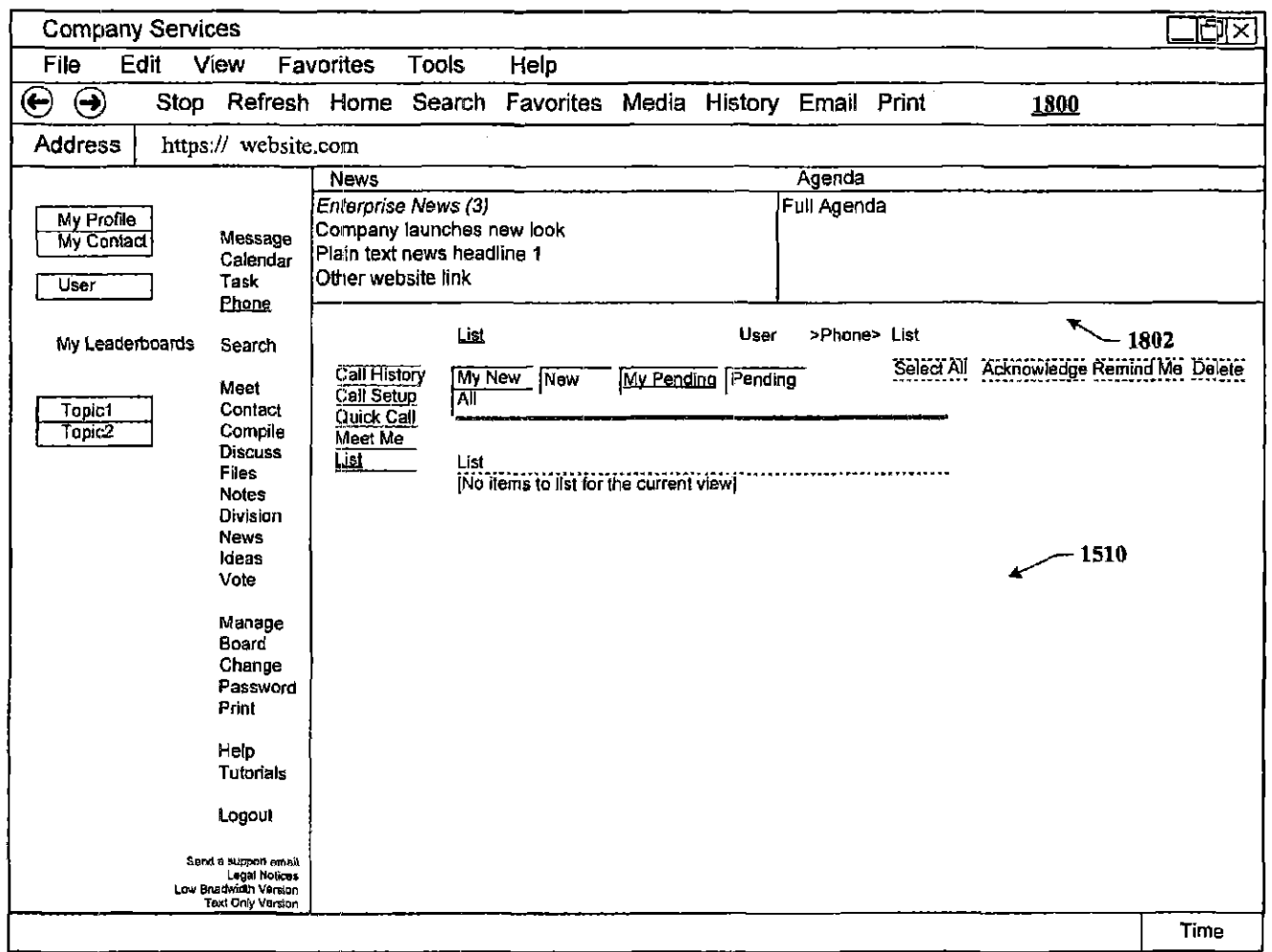


FIG. 18

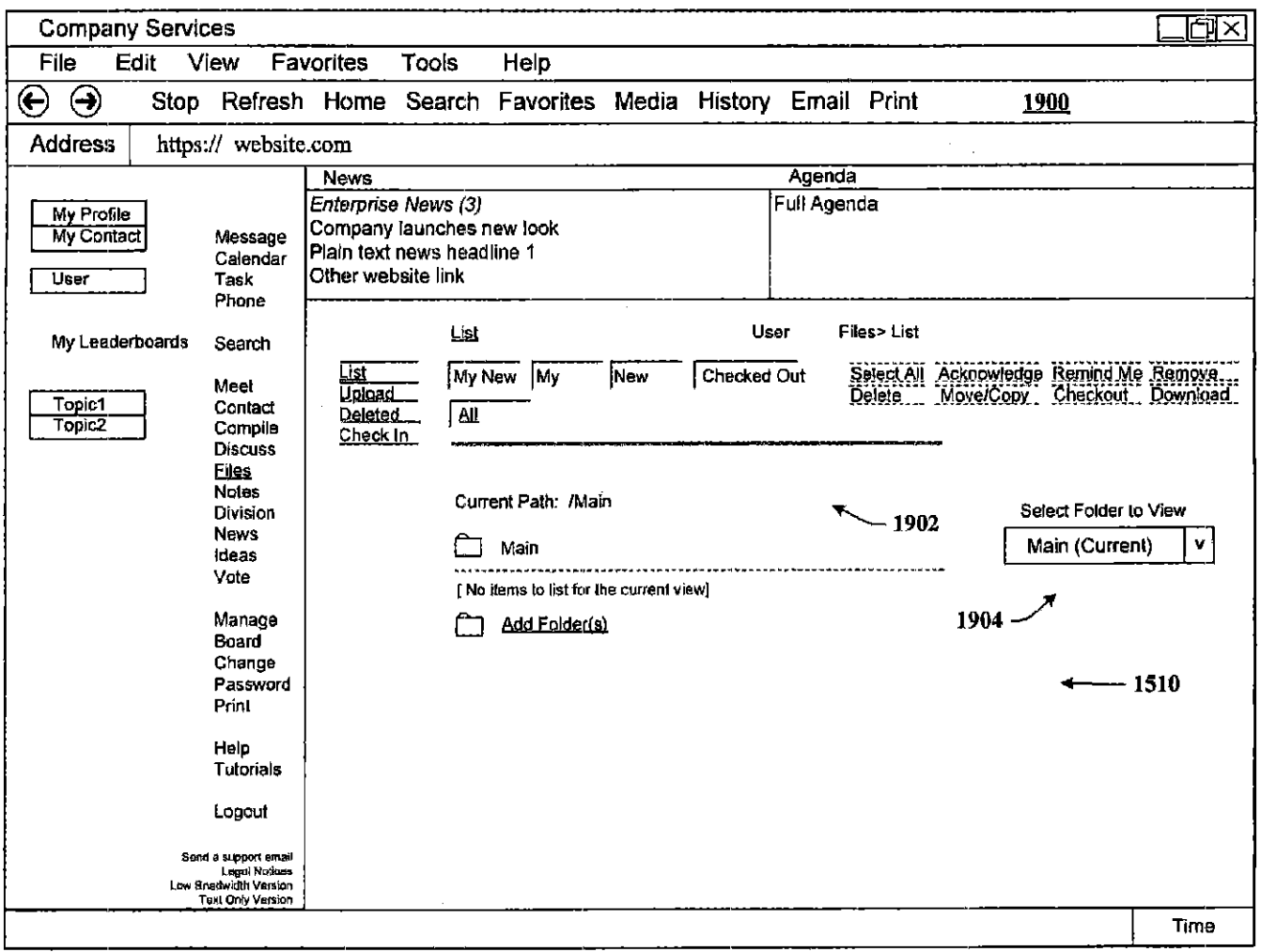


FIG. 19

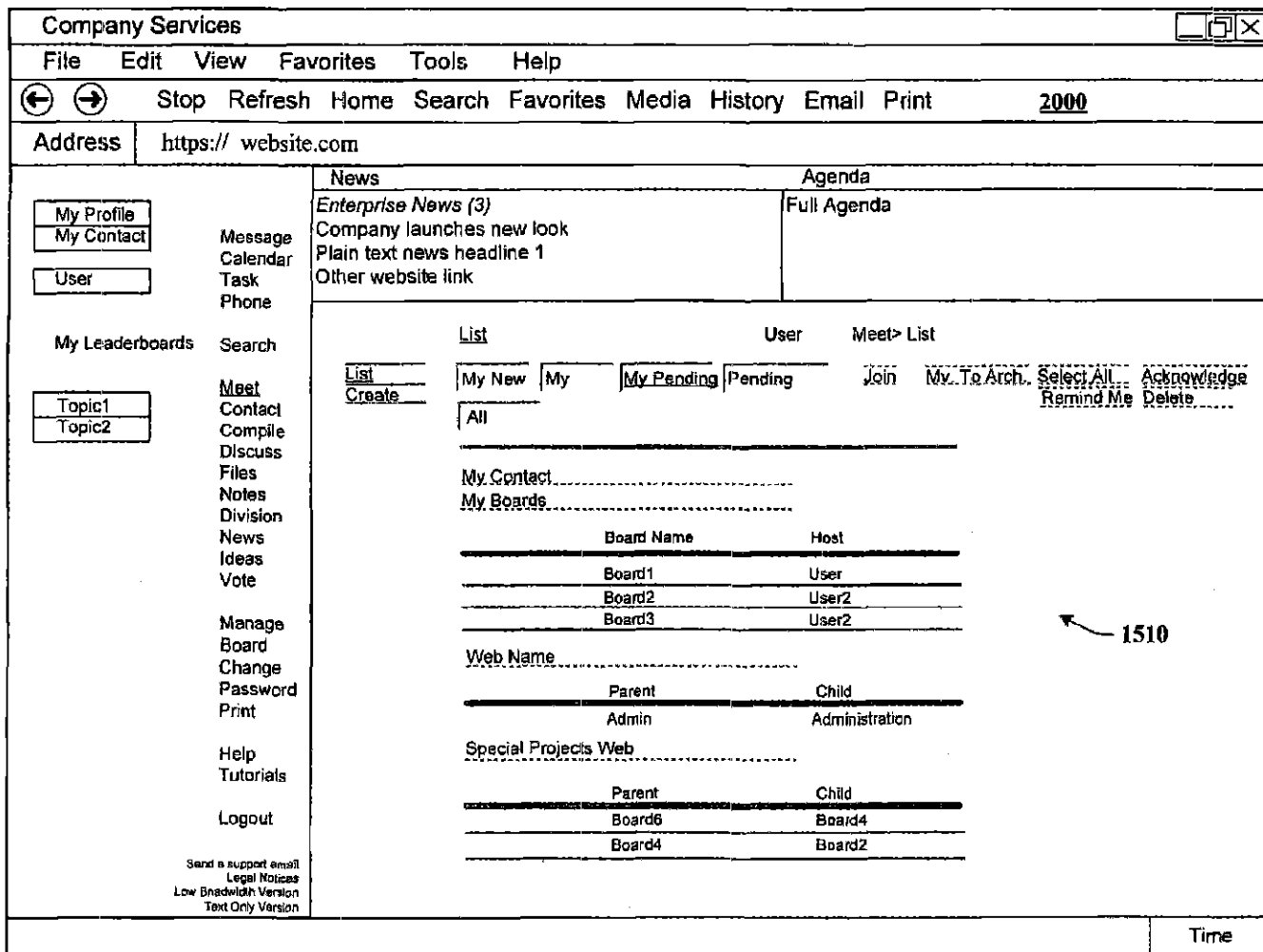


FIG. 20

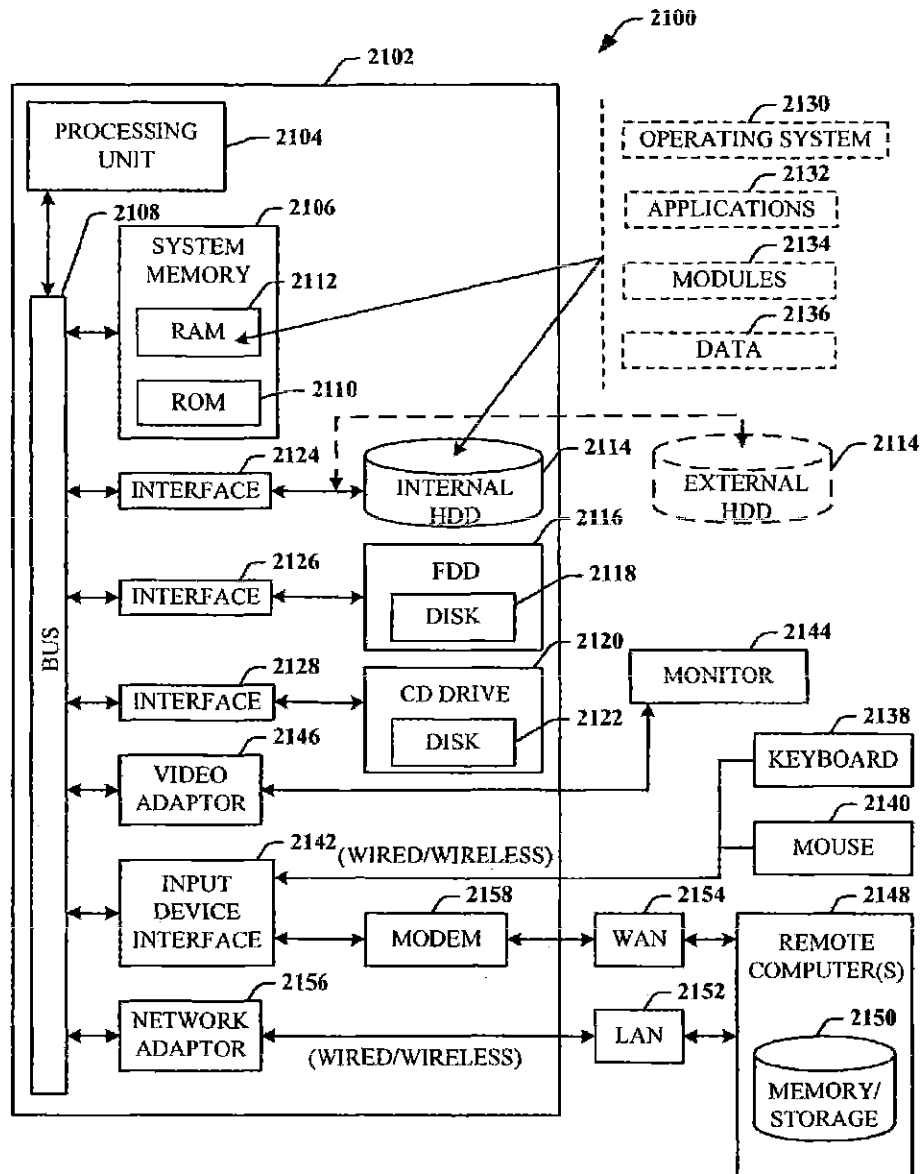


FIG. 21

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**DYNAMIC ASSOCIATION OF
ELECTRONICALLY STORED
INFORMATION WITH ITERATIVE
WORKFLOW CHANGES**

**CROSS-REFERENCE TO RELATED
APPLICATIONS**

This application claims the benefit of U.S. Provisional Patent application Ser. No. 60/432,255 entitled "METHOD FOR DYNAMIC ASSOCIATION OF ELECTRONICALLY STORED INFORMATION WITH ITERATIVE WORKFLOW CHANGES", filed Dec. 11, 2002; and is related to U.S. patent application Ser. No. 10/731,906 entitled "CONTEXT INSTANTIATED APPLICATION PROTOCOL" filed on Dec 10, 2003.

TECHNICAL FIELD

This invention is related to management and storage of electronic information. More particularly, this invention relates to new structures and methods for creating relationships between users, applications, files, and folders.

BACKGROUND OF THE INVENTION

Digital communications presently supply solutions to users in ways that are completely divorced from their business context. A particular item of communication provides little or no inherent understanding of how that communication furthers the purpose and intent of the group or enterprise. In other words, an email (electronic mail) inbox collects email messages about all topics, both business and personal. The email application itself is not discerning about topic, priority, or context beyond perhaps rudimentary "message filters" that will look for certain key words or people, and then place those items in target folders. Generally, the application simply presents a sequential list of messages received. Similarly, a fax machine receives fax pages in sequence. The fax machine is not discerning about topic, priority, or context, and simply outputs fax pages. Once received, it remains the task of the recipient to sort, categorize, and organize these items of communication in ways most meaningful to that person. The organization part of the task generally occurs outside the context of the particular communications tool itself.

Typical methods for organization of communications are limited and fragmented. For example, for an email, the recipient may either leave all the email in the inbox or move it to another electronic folder. For a fax, the recipient is likely to place that received fax in a file folder that is identified by project name or name of recipient. These typical methods of organizing communications are wholly inadequate for a number of reasons. The recipient must do all the work of organization and categorization of the communications rather than the system itself do that work. Automation of the organization of communications is non-existent. The linkage between business strategy and an individual act of communication, a leadership priority, is non-existent. With respect to categorization, the items themselves rarely apply to only one topic of interest. As such, under current systems, the items would need to be manually stored in multiple locations (either electronic or "brick and mortar" folders). For example, a letter faxed to a sales manager may contain information about contact addresses, market intelligence data, specific product requests, and financial accounting.

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Data items often relate to organizational issues for which one or more work groups need access; access that is denied when the recipient "buries" that item in his/her personal filing system, electronic or otherwise. Thus, the sharing of knowledge in this context is prohibitive.

Prior art communications tools do not know the business and/or personal context(s) within which files are created and used. For example, a person may create three files in a word processor, one relating to sales, the second relating to operations, and the third relating to a son's football team. However, the word processor itself has no way of knowing to automatically store those three files in at least three different places. Insofar as security and privacy are concerned, the applications and associated file storage methods are generally insecure, not conforming to a single, dependable security model.

Known software applications create and store files outside of a contextual framework. For example, when a user creates a word processing file using a conventional word processor application, the user typically must select a single folder within which to store that file. The file may be stored in an existing folder or the user may create a new folder to receive the file. This file management method is known as Lightweight Directory Application Protocol (LDAP). LDAP borrowed the physical world paper file management scheme where a machine/application creates files, stores those files in individual folders, and stores those folders in cabinets. Under this scheme, context is completely independent of the application. File context is limited to the decision made by the user about the folder in which the file should be stored. The user decision does not adequately represent or reflect the true context of the file given that the file may contain information that could reasonable be stored in multiple folders.

LDAP systems are suited for smaller one-to-many and many-to-one relationships. For example, an e-mail message to ten recipients is a one-to-many relationship, while ten customers sending orders to a single vendor exemplifies a many-to-one relationship. In the case of the former, the e-mail is stored in an Outbox, and the ten recipients store the received message in their respective folders, called an Inbox. In the latter case, the ten received orders are placed in an Orders folder for the associated the product.

Conventional systems are designed to allow multiple users to access the same file for collaboration purposes; however, this feature does not change the basic one-to-many and many-to-one storage paradigm. Conventional systems only attempt to optimize it.

Another limitation of LDAP is that little or no information is contained within the file about the user and, the context and circumstances of the user at the time the file was created. The people elements of an organization are simply too multi-dimensional for the limitations of conventional systems. Current processes designed to add context to files, such as a metadata tagging approach, involve having a knowledge officer view files after they have been stored and create metadata tags with additional key words associated with the file for search purposes.

The best that existing technology has done is to respond to niche requirements where automation made sense: telephone switching, voice mail, e-mail, file transfer, paging, and file storage, for example. The trend is toward a convergence of the technologies, but convergence becomes an enormous problem with these legacy systems that are now encumbered by outdated data handling and storage models that are mainframe and/or hierarchical in nature.

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Notwithstanding the usefulness of the above-described methods, a need still exists for a communications tool that associates files generated by applications with individuals, groups, and topical context automatically.

SUMMARY OF THE INVENTION

The following presents a simplified summary of the invention in order to provide a basic understanding of some aspects of the invention. This summary is not an extensive overview of the invention. It is not intended to identify key/critical elements of the invention or to delineate the scope of the invention. Its sole purpose is to present some concepts of the invention in a simplified form as a prelude to the more detailed description that is presented later.

The present invention disclosed and claimed herein, in one aspect thereof, is a data management tool that is a unified, horizontal system for communications, organization, information processing, and data storage. The tool installs on existing platforms, and is a common workflow layer that is automated with a scalable, relational database. The tool includes a relational database engine that facilitates many-to-many relationships among data elements, in addition to, one-to-many and many-to-many relationships.

The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity that consists of one or more users. The data storage model first assumes that files are associated with the user. Thus, data generated by applications is associated with an individual, group of individuals, and topical content, and not simply with a folder, as in traditional systems.

When a user logs in to the system that employs the tool, the user enters into a personal workspace environment. This workspace is called a board, and is associated with a user context. From within this board, the tool makes accessible to the user a suite of applications for creating and manipulating data. Any user operating within any board has access to the suite of applications associated with that board, and can obtain access to any data in any form (e.g., documents and files) created by the applications and to which he or she has permission. Moreover, thereafter, the user can then move to shared workspaces (or boards), and access the same data or other data.

Data created within the board is immediately associated with the user, the user's permission level, the current workspace, any other desired workspace that the user designates, and the application. This association is captured in a form of metadata and tagged to the data being created. The metadata automatically captures the context in which the data was created as the data is being created. Additionally, the data content is indexed to facilitate searching for the content in a number of different ways in the future by the user or other users. This tagging process is universal, in that, the data model allows for any binary data (e.g., files), as well as any set of definable data to be accepted into the system. The system is not restricted to processing e-mail, faxes, calendar events, meetings, phone calls, etc., that are included in the bundled system, but can also accommodate whatever data the user chooses to use. The system is also universal insofar as its user interaction can be through a browser that is pervasively employed for use with conventional operating systems.

In that the tool supports multiple users, there can be multiple boards. Two or more boards (or workspace environments) can be grouped as a collection of boards, also called a web. Boards can exist in any number of different webs. The association of webs and boards is stored in a table.

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As a user creates a context, or moves from one context to at least one other context, the data created and applications used previously by the user automatically follows the user to the next context. The change in user context is captured dynamically. All files and groups of files can be associated with any other file in the system, allowing a system user the flexibility in determining dynamic associations.

In addition to the macro view provided by webs and boards, the user can also create the more familiar hierarchical folders within any board. These are virtual folders, and nothing is physically stored in these folders.

In another aspect of the present invention, the tool provides the seamless facilitation, collection, compilation, and distribution of data.

In yet another aspect of the present invention, the tool provides links to enterprise leadership priorities.

In still another aspect of the present invention, the tool performs communications tasks while simultaneously reminding the user of his/her individual work priorities.

In another aspect thereof, the tool automatically stores contextual information relating to an item of communication and utilizes that contextual information in performance of communication tasks.

In yet another aspect thereof, the tool integrates two or more different applications such as telephony, unified messaging, decision support, document management, portals, chat, collaboration, search, vote, relationship management, calendar, personal information management, profiling, directory management, executive information systems, dashboards, cockpits, tasking, meeting, conferencing, etc., into a common application.

In another aspect thereof, the tool provides a structure for defining relationships between complex collections of data.

In still another aspect of the present invention, the tool provides a process for automating workflow between multiple entities.

To the accomplishment of the foregoing and related ends, certain illustrative aspects of the invention are described herein in connection with the following description and the annexed drawings. These aspects are indicative, however, of but a few of the various ways in which the principles of the invention may be employed and the present invention is intended to include all such aspects and their equivalents. Other advantages and novel features of the invention may become apparent from the following detailed description of the invention when considered in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a block diagram of a system that facilitates the management of data in accordance with the present invention.

FIG. 2 illustrates a flow chart of a process of the present invention.

FIG. 3 illustrates a system employing a board and a web in accordance with the present invention.

FIG. 4A illustrates a diagram of board relationships.

FIG. 4B illustrates board/web relationship diagram.

FIG. 5 illustrates a flow chart of a process for board and web generation in accordance with the present invention.

FIG. 6 illustrates a sample webs-and-boards table used in accordance with the present invention.

FIG. 7 illustrates a block diagram of system in accordance with the present invention.

FIG. 8 illustrates a more detailed block diagram of a system of the present invention.

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FIG. 9 illustrates a diagram of a general structure of the management tool system.

FIG. 10 illustrates a level flow diagram of the hierarchy of the present invention for associating one or more users, context, applications, and folders with data.

FIG. 11 illustrates a system operational in accordance with the present invention.

FIG. 12 illustrates a design integration chart of the disclosed invention.

FIG. 13 illustrates one implementation of a platform system accordance with the present invention.

FIG. 14 illustrates a general system configuration of the present invention.

FIG. 15 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with meeting information in accordance with the present invention.

FIG. 16 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with e-mail information in accordance with the present invention.

FIG. 17 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a board management option in accordance with the present invention.

FIG. 18 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a phone option in accordance with the present invention.

FIG. 19 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a files option in accordance with the present invention.

FIG. 20 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a user context in accordance with the present invention.

FIG. 21 illustrates a block diagram of a computer operable to execute the disclosed architecture.

DETAILED DESCRIPTION OF THE INVENTION

The present invention is now described with reference to the drawings, wherein like reference numerals are used to refer to like elements throughout. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It may be evident, however, that the present invention may be practiced without these specific details. In other instances, well-known structures and devices are shown in block diagram form in order to facilitate describing the present invention.

As used in this application, the terms "component" and "system" are intended to refer to a computer-related entity, either hardware, a combination of hardware and software, software, or software in execution. For example, a component may be, but is not limited to being, a process running on a processor, a processor, an object, an executable, a thread of execution, a program, and/or a computer. By way of illustration, both an application running on a server and the server can be a component. One or more components may reside within a process and/or thread of execution and a component may be localized on one computer and/or distributed between two or more computers.

As used herein, the term "inference" refers generally to the process of reasoning about or inferring states of the

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system, environment, and/or user from a set of observations as captured via events and/or data. Inference can be employed to identify a specific context or action, or can generate a probability distribution over states, for example. The inference can be probabilistic—that is, the computation of a probability distribution over states of interest based on a consideration of data and events. Inference can also refer to techniques employed for composing higher-level events from a set of events and/or data. Such inference results in the construction of new events or actions from a set of observed events and/or stored event data, whether or not the events are correlated in close temporal proximity, and whether the events and data come from one or several event and data sources.

Referring now to FIG. 1, there is illustrated a block diagram of a system 100 that facilitates the management of data in accordance with the present invention. The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity that consists of one or more users. The data management and storage model first assumes that data is associated with the user. Thus, data generated by an application employed by the user is associated with the user, groups of users, and topical content; and not simply with a folder, as in traditional systems.

In support thereof, when a user logs-in to the system 100, user data 102 is generated and associated with at least the user and the login process. The user automatically enters into a user workspace or a first context 104 (also denoted $CONTEXT_1$) or environment. This environment can be a default user workspace, or workspace environment pre-designated by the user or an administrator after login, for example. After login, the user can perform data operations (e.g., create and manipulate) on a data 106 in any number of ways, including, but not limited to, viewing, editing, copying, moving, and deleting the data. Such data operations can be performed using at least one application 108. For example, where the data 106 is text data, a text editing or word processing application can be employed. Many different text editor and/or word processing applications exist that can be used to create, view, edit, copy, and move the data 106, to name just a few of the operations. Where the data 106 is program code, the application 108 is one that is suitable for providing user access and interaction therewith. Where the data 106 is a voice file, the application 108 can be an application suitable for playing the voice file. This all occurs in association with the first context 104.

The system 100 also includes a context component 110 in association with the first context 104 to monitor and generate context data 112 associated with data operations of the user in the first context 104. The context data 112 includes at least data representative of the user (e.g., some or all of the user data 102), data representative of the first context 104, data representative of the data 106, and data representative of the application 108. The context data 112 can be stored in the form of a table (or any other suitable data structure) for access and processing, and at any location, as desired.

The system 100 can include a plurality of the contexts, denoted as $CONTEXT_1, \dots, CONTEXT_N$. Thus, in addition to the first context 104, there is at least a second context 114 with which the context component 110 is associated. This is because the user of the first context 104 can move to the second context 114, and perform many different data operations therein which will then be associated with that user in that second context 114. The data operations performed in the second context 114 are also

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associated with the user and stored automatically. Such user activities and data operations in the one or more contexts of the system 100 and movement of the user between contexts are tracked using a tracking component 116. Thus, data generated by applications is associated with an individual, group of individuals, and topical content; and not simply with a folder, as in traditional systems.

Referring now to FIG. 2, there is illustrated a flow chart of a process of the present invention. While, for purposes of simplicity of explanation, the one or more methodologies shown herein, e.g., in the form of a flow chart, are shown and described as a series of acts, it is to be understood and appreciated that the present invention is not limited by the order of acts, as some acts may, in accordance with the present invention, occur in a different order and/or concurrently with other acts from that shown and described herein. For example, those skilled in the art will understand and appreciate that a methodology could alternatively be represented as a series of interrelated states or events, such as in a state diagram. Moreover, not all illustrated acts may be required to implement a methodology in accordance with the present invention.

At 200, a user is associated with a first context. This can occur by the user logging in to a system and automatically entering a user workspace, which workspace is associated with the first context. At 202, the user assigns applications for use in the user context. This can occur explicitly by the user manually selecting the application(s) for association with the context, or implicitly by the user launching an application and performing data operations within the context. At 204, the user performs a data operation. At 206, the user changes context from the first context to a second context. At 208, the data and application(s) are then automatically associated with the second context. The process then reaches a Stop block.

As the user performs data operations in the first and second contexts, the system automatically creates and updates context data, as indicated at 210. This occurs transparently to the user, as indicated by the dashed line.

Referring now to FIG. 3, there is illustrated a system 300 employing a board 302 and a web 304 in accordance with the present invention. In the past, intuitive, dynamic, and changeable workflow processes have proved to be too dynamic and expensive for automation. Boards and webs are used to automate workflow processes and define relationships between data and applications. As users create and change their contexts, the data (e.g., files) and applications automatically follow, the shifts in context being captured dynamically in the context data. As used herein, a "board" is defined as a collection of data and application functionality related to a user-defined topic. For example, a user-defined topic may be a department of a company or a project that involves the company. In the case of a project, the board preferably includes all of the data relating to that project including email, tasks, calendar events, ideas, discussions, meetings, phone calls, files, contact records, people, etc. Data and applications may be grouped in a board based on the identity of the tag. As used herein, the term "web" refers to a collection of interrelated boards.

As implemented, the web 304 of the system 300 can include a plurality 306 of the boards 302 (also denoted as BOARD₁, BOARD₂, . . . BOARD_x). The plurality of boards 306 can each be associated with a single user, one with a single user, and others with multiples users, including or not including the user. The system 300 can also employ a plurality of webs 308 (also denoted WEB₁, WEB₂, . . . , WEB_x). The many boards 306 can be grouped in different

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combinations as webs. For example, BOARD₁, and BOARD₂ can be grouped as WEB₂. Thus, where WEB₁ includes three boards all related to a single project, the boards 306 can include finance, accounting, and resources, for example.

Referring now to FIG. 4A, there is illustrated a diagram 400 of board relationships. Boards in a web may have, for example, a parent-child relationship, although this is not required. A given board can have more than one parent and more than one child. A board cannot be its own child or its own parent. However, boards can have various relationships to each other. For example, a board may be part of a circular relationship of any complexity. Illustrated herein, a first board, BOARD₁, is parent to a second board, BOARD₂. The second board, BOARD₂, is parent to a third board, BOARD₃, and BOARD₃ is parent to the first board, BOARD₁.

Referring now to FIG. 4B, there is illustrated board/web relationship diagram 402. Boards can exist in any number of webs. Many boards will exist in more than one web. The web represents a certain view of the relationships among boards. That is, the view can be hierarchical, or the view can be in the form of a work-flow. Additionally, the relationship between two boards on one web is independent of the relationship between those same two boards on other webs. As shown, in a first web, WEB₁, BOARD₁ is a parent to BOARD₂. Yet, in a second web, WEB₂, BOARD₁ is a child to BOARD₂. In a third web, WEB₃, BOARD₁ and BOARD₂ have no relationship, but exist independent of one another. In a fourth web, WEB₄, BOARD₁ exists, but BOARD₂ does not. These are but a few examples of the web/board relationships that can exist in accordance with the present invention.

In accordance with the invention, webs may be used to maintain the location of content within a complex and changing set of boards and support automation of a workflow process. One example of automation of a changing workflow process can be illustrated where the workflow process to be automated initially is represented by A→B→C, and ultimately changed to A→B/C→D. Three different groups of people are assigned to each item, where the resulting distribution is A(1, 2, 3)+B(4, 5, 6)+C(7, 8, 9).

In the known LDAP environment, it is necessary for the automation sequence to predetermine how work data flows from A to B and C. Then the automation module for inputs to D must be spelled out and rewritten to consolidate the split inputs from B and C. As such, the automation support for this workflow change will always lag behind the ability of the people involved to start working with the new workflow assumptions.

In contrast, and in accordance with the present invention, webs and boards are the context for applications, files, and folders. Hence, the workflow process may be readily reorganized by making a change to one or more of the webs and boards. By simply adding the board D and rearranging some of the relationships of A, B, and C, the workflow is quickly reorganized and implemented.

The disclosed system has associated therewith a routing algorithm, referred to herein as a "webslice." A webslice is a relationship rule that defines a relationship between a web and one or more boards of that web. If the web changes (e.g., a board is added), and meets the criteria of the rule, the content will be on the new board as well. For example, the rule can include a web ID, a starting board ID, and "transversal" data (i.e., the relationship rule), in the following format:

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webslice (target board)=<webID; starting board ID; transversal data>.

Thus, if a system includes two webs, W1 and W2, where web W1 includes five boards: A (the starting board), B, C, D, and E, with each subsequent board a child to the previous board (i.e., B is child of A, C is child of B, etc.), the webslice data "slicing" to board E will be similar to the following:

webslice (board E)=<W1; board A; A→B→C→D→E>.

It is to be appreciated that where a child board has at least two parent boards, the webslice data can include at least two paths. For example, consider that A is the parent to both B and C, with B and C the parents to D. A webslice to D can be obtained in one of two ways:

webslice (board D)=<W1; board A; A→B→D>, or

webslice (board D)=<W1; board A; A→C→D>.

Moreover, since the webslice to a given board of a web can take at least two different paths, one path can be longer than the other to the desired board. Consider that A is the parent to both B and C, with B the parent to D, and C the parent to E, and E the parent to D. A webslice to D can be obtained in one of two ways:

webslice (board D)=<W1; board A; A→B→D>, or

webslice (board D)=<W1; board A; A→C→E→D>.

These examples are only but a few of the relationships that can be extracted using a webslice. The webslice can also take the forms of the following: "Just the board I started from" (a default); "All child boards"; "All sibling boards"; and, "All descendant boards", for example.

Thus, by using at least these three basic entities for the webslice (i.e., the web ID, the starting board ID, and the transversal data), the boards associated with a given content can be ascertained. Since content is associated with context, and the board is used in part to define the context, the system knows the content associations whereupon a change of web structure, the system knows with which board(s) the content is associated, both before and after the structure change. In keeping with one aspect of the invention, the location of the content may be determined dynamically at runtime using the webslice. Alternatively, the associated location of content may be determined by detecting changes in structure, detecting the temporary location of the content on the boards in the routing algorithm before and after the change, and adjusting the location of the affected content as part of the change in structure. Of course, the webslice data is not limited to the three aspects indicated hereinabove, but may include further information, such as at least one application ID and user ID (that uniquely identifies the creator of the content), for example.

Data created while the user is in the board is immediately associated with the user, the current workspace, any other desired workspace that the user designates, and the application. This association is captured in a form of metadata and tagged to the data being created. The metadata automatically captures the context in which the data was created as the data is being created. Additionally, the data content is indexed to facilitate searching for the content in number of different ways in the future by the user or other users. This tagging process is universal, in that, the data model allows for any binary data (e.g., files), as well as any set of definable data to be accepted into the system. The system is not restricted to processing e-mail, faxes, calendar events, meetings, phone calls, etc., that are included in the bundled system, but can also accommodate whatever data the user chooses to define. The system is also universal insofar as user interaction can be through a browser that is pervasively employed for use with conventional operating systems.

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Referring now to FIG. 5, there is illustrated a flow chart of a process for board and web generation in accordance with the present invention. At 500, a webs-and-boards table is created to track the relationship of said aspects. At 502, a user creates a board. This can be via an administrator initially configuring a person's user workspace, or thereafter, a user creating another workspace, for example, a shared workspace. At 504, the user performs data operations while in the board. The data and applications employed to operate on the data are then included as content associated with the user in this particular context. Given that there can be multiple users, there can be a corresponding one or more webs associated with the one or more users. A BOARD(S) column lists the number of boards, and select numbers of the boards can now be grouped in collections or webs, as indicated at 506, to facilitate workflow, for example. For any number of reasons, the web and board relationships can be changed, as indicated at 508. At 510, the webs-and-boards table is automatically updated as these changes occur. The process then reaches a Stop block.

Referring now to FIG. 6, there is illustrated a sample webs-and-boards table 600 used in accordance with the present invention. The table 600 includes a user information column related to a number of users (1-3 and 6-8), under the heading of USER(S). This is because the novel invention first begins by associating all aspects with the user. The table 600 also includes a WEB(S) column that associates one or more webs (W1, W2, and W3) with the one or more users. A BOARD(S) column lists the lists the boards (e.g., B11, B12, and B14) with a given web. Here the users 1, 2 and 3 are associated with a web W1 that comprises a collection boards B11, B12, and B14 (where the first digit is the associated web number, and the second digit is the board number). The table 600 also includes a parent/child relationships column (denoted as BOARD(S) P/C RELATION). Here, board B11 is the parent, and board B12 is a child, and a parent to board B14. The table 600 is not limited to the columns provided, but can include more information, as desired.

Referring now to FIG. 7, there is illustrated a block diagram of system 700 in accordance with the present invention. Generally, the system 700 includes an internal network 702 on which is disposed a services system 704 and one or more users 706 seeking use of the services system 704. The services system 704 further includes a services component 708 and an associated data storage system 710 for storing data and programs. The services system 704 includes the data management tool of the present invention.

A user at one of the user nodes 706 can access the services system 704 via a browser over a wired/wireless communication link. Given that a browser is a principal means for access, the user node can be any type of computing device and operating system that supports a browser, whether the browser is a full-blown program typically used on a desktop computing system, or a modified or slimmed down browser interface employed in a portable computing device, e.g., a personal data assistant (PDA), wireless computing tablet, and cellular/digital telephone. As illustrated, the user nodes 706 also have direct access to the data storage system 710.

The user nodes 706 can also access a global communications network 712, e.g., the Internet, using conventional communication means, thereby providing a second path for accessing the services system 704, that further facilitates direct access to the services 708 and/or the storage system 710. This second path is most important, since a user can access the system 704 from essentially anywhere.

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The services system 704 can be utilized internal to a corporate environment operating on, for example, an intranet, and providing such services only to corporate users. In another implementation, the system 704 can be disposed external to the corporate environment such that the company subscribes to the system services via a vendor.

Referring now to FIG. 8, there is illustrated a more detailed block diagram of a system 800 of the present invention. The system 800 includes the internal network 702 on which is disposed the services system 704 and the one or more users 706 seeking use of the services of the services component 708 provided thereby. The services of the services component 708 facilitate the use of the data management tool, which employs one or more webs 802 and boards 804. The tool further provides portal services 806 for accessing the services from various internal and external network locations using the TCP/IP suite of protocols. Other services provided include, but are not limited to, voice services 808 and outside services 810. Outside services 810 facilitate including non-employees and the use of third-party applications in specific projects in the system by providing various levels of access to any number of data locations and services. Read/write permissions can be granularized to the file level, if desired.

The data storage system 710 includes a number of storage methodologies 812 for handling and processing data. For example, one methodology enables large numbers of users to organize files and documents around many projects simultaneously. Data of any kind and size can be uploaded to a common shared workspace or board. Varying levels of access can be provided to the uploaded data. Other methodologies are associated with storing the data, archiving the data, data warehousing, library data, and an idea registry for tracking that aspect of the companies intellectual capital. The storage system 710 facilitates the storage and access of metadata libraries that link hierarchical and non-hierarchical LDAP folders.

As indicated hereinabove, the management tool operates seamlessly with existing computing system applications, and existing system services. For example, the conventional system services can include at least the following: e-mail, collaboration and groupware services 814 having an associated e-mail, collaboration and groupware storage system 816, voice switching services 818 (e.g., telephone and paging functions) having an associated voice data storage system 820; and multimedia services 822 having an associated multimedia storage system 824. The storage systems 816, 820, and 824 can connect to the storage system 710 to facilitate data transfer and storage in accordance with the various methodologies of the storage system 710.

A user of the users node 706 can also access the e-mail/collaboration/groupware services 814, voice switching services 818, and multimedia services 822 indirectly through the services system 704 using a multi-user data manipulation engine, e.g., OLAP (On-Line Analytical Processing). Alternatively, the user can access these services 814, 818, and 822 directly over the network 702, but shown separately as a communication link 826, and through the services 708 without using the multi-user engine.

The user can also access the services 704, other services 814, 818, and 822, and data storage system 710 over the global communications network 712 via a link 828. This is facilitated through the user browser by directing the browser to a website using a URL (Uniform Resource Locator) or through an alternative Link 830.

The management tool is browser-based and incorporates a strong-encryption scheme (e.g., using 128-bit SSL (secure

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socket layer) protocol). This means that data transmitted between the user computer and the services server is substantially secure. Furthermore, data shall not be cached, which means that there is no information footprint left on the user computer after the user logs off. The user can access data securely from virtually any network node using any type of browser. The data is stored encrypted on the storage system 710.

Referring now to FIG. 9, there is illustrated a diagram of a general structure of the management tool system 900. The structure starts at a high level with the user at a user level 902. The user level 902 is next associated with a context level 904 that defines all contexts in which the user can be included. Under the context level 904 is a web level 906 that associates one or more of the webs with one or more of the contexts of the context level 904. A boards level 908 underlies the webs level 906 and provides associations of the many boards with one or more of the webs. An applications level 910 facilitates associating one or more applications with a board designated at the board level 908. A database/folders level 912 underlies the applications level 910, and facilitates storing at least data, tables, and context information generated from the upper levels in folders, in the form of, e.g., files, at an associated underlying file level 914. A linking protocol 916 provides cross-level communication for facilitating all aspects of data processing and communication at all levels of the data management system 900.

Referring now to FIG. 10, there is a level flow diagram 1000 illustrating the hierarchy of the present invention for associating one or more users 1002, context 1004, applications 1006, and folders 1008 with data 1010. The approach is for file storage pointers of an application to be dynamic, governed initially by the folder within which the application is launched. Additionally, the file storage pointers are then accessible and acted upon by the same application from any folder in the system. This is a dynamic non-linear implementation.

Traditional collaborative technologies, like groupware, allow groups of users to take action on the same file substantially simultaneously. However, in preparation for such capabilities, all users must have compatible versions of the same application that is to be used for working with the file. The context for any folder is limited to a one-to-many and many-to-one relationship. Essentially, the folder possesses a singular context to the directory tree in which it resides.

In contrast, the disclosed architecture assumes that the highest contextual level is that of an entity consisting of a group of users forming a many-to-many architecture. The users create and use the files within the context of the workspaces or boards of one or more users, which may or may not have web relationships. In this implementation, the board is similar in function to a folder in conventional LDAP systems.

The user then uses a suite of applications within a board, with any file created being immediately associated with the user, that board, any other board desired, and the application. In other words, by the person doing simply his/her work, an enormous amount of metadata about the context(s) for that work is captured automatically. Additionally, the system indexes the content to facilitate the other ways in which the users of the system might want to search on that file in the future—ways and future contexts which are not and cannot be known by the users in advance and certainly are not facilitated by conventional systems.

The system facilitates the use of an array of applications that act independently of the boards from which they were

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launched, and those boards are capable of being ordered in a myriad of collections of relationships (i.e., webs). The applications can traverse the webs to the boards associated with the information.

In addition to a macro view obtained by webs and boards, the user can also create familiar hierarchical folders within any board. These are virtual folders, in that their storage is governed by the process described above. No data is physically stored in these folders. Finally, any file or group of files can be associated with any other file in the system, allowing the users of the system infinite flexibility in determining dynamic associations among the macro/micro components of the system.

Referring now to FIG. 11, there is illustrated a system 1100 operational in accordance with the present invention. The system 1100 includes a data management platform 1102 suitable for accommodating any number conventional operating systems (OS) 1104 (also denoted OS₁, OS₂, OS₃, . . . , OS_N). The system 1100 also facilitates the use of a single data storage system 1106 suitable for use with any of the operating systems 1104, whereas conventionally, a given OS may require a certain data storage file structure. The platform 1102 is OS-independent, and provides a single point of contact for multiple users and resources 1108.

Referring now to FIG. 12, there is illustrated a design integration chart 1200 of the disclosed invention. At the core of the system is a data management tool 1202 that facilitates all of the outlying features and capabilities. The tool 1202 facilitates, at a second layer 1204, one interface (via a browser), one application (the tool itself), one data store (associate with the management tool), and one search mechanism for finding any data element of the data store. Of course, any third party applications typically have their own search tool to search for files and folders that may also be used. At a third layer 1206, the system 1200 facilitates a secure operating environment, a scalable environment, and web-based. Moreover, the system 1200 can be implemented on any software and/or hardware platform, accommodate access from any device, and bridge to third party applications and devices. At an outer layer 1208, the system 1200 facilitates one or more instances of the following: users, contexts, workflows, projects, user-defined topics, priorities, file types, and tools. The system 1200 also is suitable for use with e-mail, facsimile, and instant messaging subsystems, multimedia services, and voice systems (e.g., phone and paging data).

The system 1200 captures and catalogs data automatically. Users, projects, permissions and communication tools can be readily configured, along with the exchange of voice information, data, and video data, seamlessly. As users collaborate, the system 1200 captures context information, and automatically records when and how data is shared, who updated the data, how often the data was accessed, what additional information the data was linked to, etc. Meeting information can be stored automatically, including, but not limited to, who attended, the documents shared, instant messages captured, handouts used, slides presented, etc. A later search can retrieve this information along with the context(s) within which the data was generated and used.

The system 1200 enables larger numbers of users to organize communications around many projects substantially simultaneously. It can relate those projects to one another using whatever workflow model(s) are required, and dynamically assign modular communications tools (e.g., e-mail, voice mail, fax, teleconferencing, document sharing, etc.) to those many projects as desired. The system 1200 automatically indexes that information within the context(s)

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in which it is received and used. This way, when a user searches the system 1200 for information, the user not only gets the information sought, but also can see how the information is currently being used by other users and project groups in the whole system. Traditionally, if a document was to be associated with seven different projects, for example, the document would be stored in seven different file locations and version control could be a significant problem. In accordance with the present invention, the document is seamlessly linked to all seven projects. Thus, only one version exists, and version control is much easier to address.

The disclosed system architecture is suited to relational and object database structures for use on a large scale. The data management tool uses both relational and object storage approaches to facilitate at least Internet-based data communications.

Referring now to FIG. 13, there is illustrated one implementation of a platform system 1300 in accordance with the present invention. The platform system 1300 includes the capability of third-party application integration, security cameras and other devices for data input, project and workflow management and, file and document sharing. The platform system 1300 also accommodates online meetings between logged-in users, and teleconferencing between the users, if desired. The teleconferencing can be initiated using the platform system 1300.

Referring now to FIG. 14, there is illustrated a general system configuration 1400 of the present invention. The system 1400 includes a platform 1402 that hosts at least the data management tool, here called a web application server 1404. The server 1404 provides a common layer to underlying services that include a database server 1406, a VRU (voice response unit) 1408 (also called an interactive VRU or IVRU) and mass storage system 1410. The VRU 1408 facilitates interactive calling features for a user via remote touchtone signals and to voice data to the caller such that the caller can make choices in response to predetermined options presented by the system.

The platform 1402 can utilize at least one multi-channel data communication connection 1412 (e.g., T1, DS3) into the VRU subsystem 1408 for communicating voice information and interacting with features of the platform 1402. As indicated previously, the invention can accommodate user communication from virtually any accessible network node. To facilitate such an interface, the platform 1402 can include a processor 1414 suitable for XML (eXtensible Markup Language), XSLT (XML Stylesheet Language: Transformations), and SSL processing. The processor 1414 can also access web-based services utilizing SOAP (Simple Object Access Protocol). SOAP employs XML syntax to send text commands across the network using HTTP (HyperText Transport Protocol). Thus, there is a high-speed connection 1416 (e.g., broadband) that interfaces to the processor layer 1414 for use with multiple communication exchanges with remote users disposed on the global communication network 712. The remote users can access the platform system 1402 via a SSL connection 1418 using portable wired/wireless devices 1420, and by way of the associated browsers 1422.

Referring now to FIG. 15, there is illustrated a screenshot of a management tool window 1500 of a browser (e.g., Internet Explorer by Microsoft Corporation) used as a user interface to facilitate user interaction with meeting information in accordance with the present invention. The window 1500 includes an address field 1502 that indicates the default protocol and URL address for accessing the data manage-

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ment system of the present invention. Here, HTTP is used to access the server via network. The "https:" indicates the connection will be to a secure port instead of a default web port. The window 1500 also includes a user area 1504 that indicates the name of the user logged into the system. There is also provided a topic area 1506 that lists the various boards associated with the user-defined topics. Here, the user has defined two topics: a Topic 1 and a Topic 2.

The window 1500 also includes an application (or services) area 1508 that lists many applications selectable by the user while in this particulate window 1500. The applications presented to the user from this window 1500 include but are not limited to the following: Message, Calendar, Task, Phone, Search, Meet, Contact, Compile, Discuss, Files, Notes, Division, News, Ideas, Vote, Manage Board, Change, Password, Print, Help, Tutorial, and Logout. Depending on the user permissions provided by an administrator, the user may see more or fewer applications.

Here, the Meet application option is selected to allow user interaction with setting up a meeting related to projects of the user. The Meet application option further includes List and Create sub-options. When the List sub-option is selected, a center viewing area 1510 is used to present board, context, web address and other information so that the user can review the existing board and context information related to setting up a meeting. Selection the Create sub-option allows the user to create a meeting in association with one or more of the boards and make changes to existing board relationships and contexts. Other user-selectable options are provided such that the user can Join in a session with one or more other users, Move data to Archive, Select all objects, set a Reminder for himself or herself, and Delete boards.

The Messaging option allows the user to give out an e-mail address of a project work area, enabling senders to send the messages to right place. Thus, the user no longer needs to manually move the messages to the appropriate folders once received in a personal message inbox. Additionally, incoming faxes are routed to the appropriate board for storage and review. Keywords and phrases in the fax are automatically indexed. Later retrieval is accommodated simply by performing a search for the keywords or phrases. Moreover, a given board can be assigned a fax number. Thus, all faxes coming in can be routed to that number, and on to the associated board.

The Vote option allows the company and organizations to communicate and gather opinions by way of voting. A question can be entered, and the users selected to whom the question(s) should be posed.

Referring now to FIG. 16, there is illustrated a screenshot of a management tool window 1600 of a browser used as a user interface to facilitate user interaction with unified messaging, including e-mail, voice mail and fax information in accordance with the present invention. The window 1600 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the Message option is selected to allow user interaction with various forms of messaging support by the disclosed management architecture. The Message option further includes an instant messaging (IMessage) sub-option, in this particular implementation.

When the Email-Inbox sub-option is selected, the center viewing area 1510 is used to present the user's messaging inbox folders. The user can then open these folders to view the e-mail, voice mail and fax messages stored therein. The center viewing area 1510 also includes a drop-down menu

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1602 that allows the user to select from a variety of different folders (e.g., Main, Drafts) of the e-mail system. The user can also create and sign messages with a digital signature.

As before, other user-selectable options are provided such that the user can manipulate messaging information, including, but not limited to, Select All, Delete, Acknowledge, Remind Me, Remove, Move/Copy, Forward, and Get External Mail.

There is also provided a News link that allows the user to link to the latest corporate and/or division news.

Referring now to FIG. 17, there is illustrated a screenshot of a management tool window 1700 of a browser used as a user interface to facilitate user interaction with a board management option in accordance with the present invention. The window 1700 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the Manage Board option is selected to allow user interaction with various forms of user management of boards. The associated sub-options allow the user to Edit the board attributes, and set permission levels thereto, in this particular implementation. Of course, many different additional or different options can be provided (in this window and other windows), at the discretion of the administrator. The system allows for new attributes to be added to this option as the need arises.

The center viewing area 1510 presents general board attributes 1702 of the user (e.g., user name, data, and time), and several fields for entering user information, including in this implementation, but not limited to, board description, board name, board nickname, board e-mail address, external e-mail properties (e.g., POP server, user name, and password), fax information (e.g., incoming fax number for the board and incoming fax PIN), and voice mail information (e.g., incoming voice mail number and incoming voice mail PIN).

Referring now to FIG. 18, there is illustrated a screenshot of a management tool window 1800 of a browser used as a user interface to facilitate user interaction with a phone option in accordance with the present invention. The window 1800 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). The sub-options include Call History, Call Setup, Quick Call, Meet Me, and List. The central viewing area 1510 for this window 1800 simply includes a listing of phone-related events for the given user.

As before, other user-selectable options are provided such that the user can manipulate phone information, including, but not limited to, Select All, Delete, Acknowledge, and Remind Me. In addition, as with the other windows, there is include an Agenda area 1802 for presenting any agenda information of a meeting or upcoming event.

Referring now to FIG. 19, there is illustrated a screenshot of a management tool window 1900 of a browser used as a user interface to facilitate user interaction with a files option in accordance with the present invention. The window 1900 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the sub-options include List, Upload, Deleted, and Check In. Thus, data can at least be listed, uploaded to the system and/or a board, deleted from the system and/or board, and checked in from a previous checkout process.

The window 1900 includes the central viewing area 1510 for viewing information requested or selected for presentation. There is also a user control area 1902 that facilitates

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listing user documents that are checked out of the system or board. There is also provided a dropdown menu 1904 for selecting from a number of folder viewing options.

Other user-selectable options are provided such that the user can manipulate documents, including, but not limited to, Select All, Delete, Acknowledge, Remind Me, Remove, Move/Copy, Check Out and Download.

Referring now to FIG. 20, there is illustrated a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a user context in accordance with the present invention. Here, the My Context option was selected while in the Meet application option. Thus, the context information of the user is posted within the meeting space. The window 2000 also includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the sub-options associated with Meet include List and Create. Thus, data can at least be listed and created in accordance with the associated need. Note that other data can also be accessed and presented within an application option, for example, My Profile will show the user profile data.

The window 2000 includes the central viewing area 1510 for viewing information requested or selected for presentation. Here, the user has selected the presentation of the user context information, which also includes board information and relationships. For example, board names Board1, Board2, and Board3 are listed, along with the hosts, User (the current user) for Board1, and User2 for both boards Board2 and Board3. The web name is also listed for the collection of these three boards.

There is a Special Projects Web listed, and the associated parent/child relationships of the associated boards. For example, Board6 is a parent to Board4, and Board4 is also a parent to Board2.

Other user-selectable options are provided for the Meet option, such as Join, Move to Archive, Select All, Delete, Acknowledge, and Remind Me.

These are but only a few of the numerous windows employed to facilitate user interaction, input, and control of the management tool system. Many other windows are provided to support, for example, printing, user help, communications security, presenting user documents to other users, metering user performance, dialog and discovery forums, calendar functions, task functions, leadership tools, file system management, user context, telephone services, e-mail, voicemail, faxes, video conferencing, web conferencing, security video, reverse 911, voice broadcasting, first response unified messaging capabilities, specialized APIs, software development kit, conduct and store meetings, organizing personal contact information, enterprise webs, chat sessions, intellectual notes and ideas, workflows, compilations, user profiles, news, searching, user alerts, integration of third-party users and resources, multimedia information, user permissions, system configuration, and wireless portable device interfaces, just to name a few.

Referring now to FIG. 21, there is illustrated a block diagram of a computer operable to execute the disclosed architecture. In order to provide additional context for various aspects of the present invention, FIG. 21 and the following discussion are intended to provide a brief, general description of a suitable computing environment 2100 in which the various aspects of the present invention may be implemented. While the invention has been described above in the general context of computer-executable instructions that may run on one or more computers, those skilled in the art will recognize that the invention also may be imple-

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mented in combination with other program modules and/or as a combination of hardware and software.

Generally, program modules include routines, programs, components, data structures, etc., that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the inventive methods may be practiced with other computer system configurations, including single-processor or multiprocessor computer systems, minicomputers, mainframe computers, as well as personal computers, hand-held computing devices, microprocessor-based or programmable consumer electronics, and the like, each of which may be operatively coupled to one or more associated devices.

The illustrated aspects of the invention may also be practiced in distributed computing environments where certain tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

A computer typically includes a variety of computer-readable media. Computer-readable media can be any available media that can be accessed by the computer and includes both volatile and nonvolatile media, removable and non-removable media. By way of example, and not limitation, computer readable media can comprise computer storage media and communication media. Computer storage media includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital video disk (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by the computer.

With reference again to FIG. 21, there is illustrated an exemplary environment 2100 for implementing various aspects of the invention that includes a computer 2102, the computer 2102 including a processing unit 2104, a system memory 2106 and a system bus 2108. The system bus 2108 couples system components including, but not limited to, the system memory 2106 to the processing unit 2104. The processing unit 2104 may be any of various commercially available processors. Dual microprocessors and other multiprocessor architectures may also be employed as the processing unit 2104.

The system bus 2108 can be any of several types of bus structure that may further interconnect to a memory bus (with or without a memory controller), a peripheral bus, and a local bus using any of a variety of commercially available bus architectures. The system memory 2106 includes read only memory (ROM) 2110 and random access memory (RAM) 2112. A basic input/output system (BIOS) is stored in a non-volatile memory 2110 such as ROM, EPROM, EEPROM, which BIOS contains the basic routines that help to transfer information between elements within the computer 2102, such as during start-up. The RAM 2112 can also include a high-speed RAM such as static RAM for caching data.

The computer 2102 further includes an internal hard disk drive (HDD) 2114 (e.g., EIDE, SATA), which internal hard disk drive 2114 may also be configured for external use in a suitable chassis (not shown), a magnetic floppy disk drive (FDD) 2116, (e.g., to read from or write to a removable diskette 2118) and an optical disk drive 2120, (e.g., reading

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a CD-ROM disk 2122 or, to read from or write to other high capacity optical media such as the DVD). The hard disk drive 2114, magnetic disk drive 2116 and optical disk drive 2120 can be connected to the system bus 2108 by a hard disk drive interface 2124, a magnetic disk drive interface 2126 and an optical drive interface 2128, respectively. The interface 2124 for external drive implementations includes at least one or both of Universal Serial Bus (USB) and IEEE 1394 interface technologies.

The drives and their associated computer-readable media provide nonvolatile storage of data, data structures, computer-executable instructions, and so forth. For the computer 2102, the drives and media accommodate the storage of any data in a suitable digital format. Although the description of computer-readable media above refers to a HDD, a removable magnetic diskette, and a removable optical media such as a CD or DVD, it should be appreciated by those skilled in the art that other types of media which are readable by a computer, such as zip drives, magnetic cassettes, flash memory cards, cartridges, and the like, may also be used in the exemplary operating environment, and further, that any such media may contain computer-executable instructions for performing the methods of the present invention.

A number of program modules can be stored in the drives and RAM 2112, including an operating system 2130, one or more application programs 2132, other program modules 2134 and program data 2136. All or portions of the operating system, applications, modules, and/or data can also be cached in the RAM 2112.

It is appreciated that the present invention can be implemented with various commercially available operating systems or combinations of operating systems.

A user can enter commands and information into the computer 2102 through one or more wired/wireless input devices, e.g., a keyboard 2138 and a pointing device, such as a mouse 2140. Other input devices (not shown) may include a microphone, an IR remote control, a joystick, a game pad, a stylus pen, touch screen, or the like. These and other input devices are often connected to the processing unit 2104 through an input device interface 2142 that is coupled to the system bus 2108, but may be connected by other interfaces, such as a parallel port, an IEEE 1394 serial port, a game port, a USB port, an IR interface, etc.

A monitor 2144 or other type of display device is also connected to the system bus 2108 via an interface, such as a video adapter 2146. In addition to the monitor 2144, a computer typically includes other peripheral output devices (not shown), such as speakers, printers, etc.

The computer 2102 may operate in a networked environment using logical connections via wired and/or wireless communications to one or more remote computers, such as a remote computer(s) 2148. The remote computer(s) 2148 may be a workstation, a server computer, a router, a personal computer, portable computer, microprocessor-based entertainment appliance, a peer device or other common network node, and typically includes many or all of the elements described relative to the computer 2102, although, for purposes of brevity, only a memory storage device 2150 is illustrated. The logical connections depicted include wired/wireless connectivity to a local area network (LAN) 2152 and/or larger networks, e.g., a wide area network (WAN) 2154. Such LAN and WAN networking environments are commonplace in offices, and companies, and facilitate enterprise-wide computer networks, such as intranets, all of which may connect to a global communication network, e.g., the Internet.

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When used in a LAN networking environment, the computer 2102 is connected to the local network 2152 through a wired and/or wireless communication network interface or adapter 2156. The adapter 2156 may facilitate wired or wireless communication to the LAN 2152, which may also include a wireless access point disposed thereon for communicating with the wireless adaptor 2156. When used in a WAN networking environment, the computer 2102 can include a modem 2158, or is connected to a communications server on the LAN, or has other means for establishing communications over the WAN 2154, such as by way of the Internet. The modem 2158, which may be internal or external and a wired or wireless device, is connected to the system bus 2108 via the serial port interface 2142. In a networked environment, program modules depicted relative to the computer 2102, or portions thereof, may be stored in the remote memory/storage device 2150. It will be appreciated that the network connections shown are exemplary and other means of establishing a communications link between the computers may be used.

The computer 2102 is operable to communicate with any wireless devices or entities operably disposed in wireless communication, e.g., a printer, scanner, desktop and/or portable computer, portable data assistant, communications satellite, any piece of equipment or location associated with a wirelessly detectable tag (e.g., a kiosk, news stand, restroom), and telephone. This includes at least Wi-Fi and Bluetooth™ wireless technologies. Thus, the communication may be a predefined structure as with conventional network or simply an ad hoc communication between at least two devices.

Wi-Fi or Wireless Fidelity, allows connection to the Internet from a couch at home, a bed in a hotel room or a conference room at work, without wires. Wi-Fi is a wireless technology like a cell phone that enables such devices, e.g., computers, to send and receive data indoors and out, and anywhere within the range of a base station. Wi-Fi networks use radio technologies called IEEE 802.11 (a, b, g, etc.) to provide secure, reliable, fast wireless connectivity. A Wi-Fi network can be used to connect computers to each other, to the Internet, and to wired networks (which use IEEE 802.3 or Ethernet). Wi-Fi networks operate in the unlicensed 2.4 and 5 GHz radio bands, with an 11 Mbps (802.11a) or 54 Mbps (802.11b) data rate or with products that contain both bands (dual band), so the networks can provide real-world performance similar to the basic 10BaseT wired Ethernet networks used in many offices.

What has been described above includes examples of the present invention. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the present invention, but one of ordinary skill in the art may recognize that many further combinations and permutations of the present invention are possible. Accordingly, the present invention is intended to embrace all such alterations, modifications and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

What is claimed is:

1. A computer-implemented network-based system that facilitates management of data, comprising:
 - a computer-implemented context component of the network-based system for capturing context information associated with user-defined data created by user inter-

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- action of a user in a first context of the network-based system, the context component dynamically storing the context information in metadata associated with the user-defined data, the user-defined data and metadata stored on a storage component of the network-based system; and
- a computer-implemented tracking component of the network-based system for tracking a change of the user from the first context to a second context of the network-based system and dynamically updating the stored metadata based on the change, wherein the user accesses the data from the second context.
2. The system of claim 1, the context component is associated with a workspace, which is a collection of data and application functionality related to the user-defined data.
3. The system of claim 1, the context component is associated with a web, which web is a collection of interrelated workspaces, the web maintains a location of data of the respective interrelated workspaces when one or more of the interrelated workspaces are moved into a different workspace interrelationship.
4. The system of claim 1, the context information includes a relationship between the user and at least one of an application, application data, and user environment.
5. The system of claim 1, the context component captures context information of the first context and context information related to at least one other context.
6. The system of claim 5, the context information of the at least one other context is at least one of stipulated by the user and suggested automatically by the system based upon search and association criteria set by the user.
7. The system of claim 1, wherein data created in the first context is associated with data created in the second context.
8. The system of claim 1, the context information is tagged to the user-defined data via the metadata when the user-defined data is created.
9. A computer-implemented method of managing data, comprising computer-executable acts of:
- creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents;
 - dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment;
 - tracking movement of the user from the user environment of the web-based computing platform to a second user environment of the web-based computing platform; and
 - dynamically updating the stored metadata with an association of the data, the application, and the second user environment wherein the user employs at least one of the application and the data from the second environment.
10. The method of claim 9, further comprising capturing context information of the user.
11. The method of claim 9, further comprising indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments.
12. The method of claim 9, the least one of the data and the application is associated automatically with the second user environment.

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13. The method of claim 9, further comprising accessing the user environment and the second user environment using a browser.
14. The method of claim 9, further comprising communicating with the user environment using a TCP/IP communication protocol.
15. The method of claim 9, further comprising locating the user environment from a remote location using a URL address.
16. The method of claim 9, further comprising accessing the user environment via a portable wireless device.
17. A computer-implemented method of managing data, comprising computer-executable acts of:
- generating a plurality of user environments in a web-based system;
 - ordering two or more of the plurality of user environments according to different arrangements of the user environments;
 - providing a plurality of applications for generating and processing data in the user environments, data of a user environment is dynamically associated with the user environment in metadata that corresponds to the data;
 - creating an association of the data with a second user environment when the data is accessed from the second user environment;
 - dynamically storing the association of the data and the second user environment in the metadata;
 - storing in a storage component ordering information related to the ordering of the two or more of the plurality of user environments; and
 - traversing the different arrangements of the user environments with one or more of the applications based on the ordering information to locate the data associated with the user environments.
18. The method of claim 17, the act of traversing is performed using a webslice that includes traversal information for locating the data associated with a given user environment.
19. The method of claim 18, the traversal information includes at least a collection ID, a user environment ID, and a routing path to the location of the environment data.
20. The method of claim 17, the different arrangements, user environments, and associated data carry both hierarchical and non-hierarchical associations simultaneously within the plurality of applications.
21. A computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:
- creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;
 - dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform, the metadata includes information related to the user of the user workspace, to the data, to the application and to the user workspace;
 - tracking movement of the user from the user workspace to a second user workspace of the web-based computing platform;
 - dynamically associating the data and the application with the second user workspace in the metadata such that the user employs the application and data from the second user workspace; and
 - indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces.

US 7,139,761 B2

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22. A computer-implemented system that facilitates management of data, comprising:

computer-implemented means for creating data by interaction of a user within a user workspace of a server using an application;

computer-implemented means for associating metadata with the data, the metadata stored in association with the data on storage means of the server, the metadata includes information related to a user of the user workspace, to the data, to the application and to the user workspace;

computer-implemented means for tracking movement of the user from the user workspace to a second user workspace of the server; and

computer-implemented means for dynamically associating the data and the application with the second user workspace in the metadata such that the user can employ the application and data from the second user workspace.

23. A computer-implemented system that facilitates management of data, comprising:

a computer-implemented context component of a web-based server for defining a first user workspace of the web-based server, assigning one or more applications to the first user workspace, capturing context data associated with user interaction of a user while in the first user workspace, and for dynamically storing the context data as metadata on a storage component of the web-based server, which metadata is dynamically associated with data created in the first user workspace; and

a computer-implemented tracking component of the web-based server for tracking change information associated with a change in access of the user from the first user workspace to a second user workspace, and dynamically storing the change information on the storage component as part of the metadata, wherein the user accesses the data from the second user workspace.

24. The system of claim 23, wherein the tracking component automatically creates the metadata when the user accesses the first user workspace.

25. The system of claim 23, wherein the context component captures relationship data associated with a relationship between the first user workspace and at least one other user workspace.

26. The system of claim 23, wherein an application associated with the first user workspace is automatically

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accessible via the second user workspace when the user moves from the first user workspace to the second user workspace.

27. The system of claim 23, wherein context data relating to an item of communication is automatically stored and used in performance of communication tasks.

28. The system of claim 23, wherein the context component captures data and application functionality related to a user-defined topic of the first user workspace, and includes the data and application functionality in the metadata.

29. The system of claim 23, wherein when the data created in the first user workspace is accessed from the second user workspace, in response to which the context component adds information to the metadata about the second user workspace.

30. The system of claim 23, wherein the first user workspace is associated with a plurality of different applications, the plurality of different applications comprising telephony, unified messaging, decision support, document management, portals, chat, collaboration, search, vote, relationship management, calendar, personal information management, profiling, directory management, executive information systems, dashboards, cockpits, tasking, meeting and, web and video conferencing.

31. The system of claim 23, wherein the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology.

32. The system of claim 23, wherein storing of the metadata in the storage component in association with data facilitates many-to-many functionality of the data via the metadata.

33. The system of claim 23, wherein the first user workspace provides access to at least one communications tool, which includes e-mail, voicemail, fax, teleconferencing, instant message, chat, contacts, calendar, task, notes, news, ideas, vote, web and video conferencing, and document sharing functionality.

34. The system of claim 23, wherein one or more applications include file storage pointers that are dynamic and associated with the first user workspace.

35. The system of claim 23, wherein the context component facilitates encryption of the data generated in the first user workspace.

* * * * *

EXHIBIT B

Notice of Allowability	Application No.	Applicant(s)	
	10/732,744	MCKIBBEN ET AL.	
	Examiner	Art Unit	
	DIANE D. MIZRAHI	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 8-15-06.
2. The allowed claim(s) is/are 18-26,28,29,31-41,45-49,51-57 and 59.
3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some* c) None of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No./Mail Date _____.
 - (b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>8-15-06</u>. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|--|--|

DIANE MIZRAHI
PRIMARY EXAMINER

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Claims 18-26, 28, 29, 31-41, 45-49, 51-57 and 59 are currently pending. Claims 1-17, 27, 30, 42-44, 50 and 58 have been cancelled.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Eric D. Jorgenson on August 15, 2006.

The application has been amended as follows:

Amendment to the Specification:

Delete paragraph (page 28) lines 1-9.

Amendment to the Claims:

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Claims 1-17 (Cancelled)

18. (Currently Amended) A computer-implemented network-based system that facilitates management of data, comprising:

a computer-implemented context component of the network-based system for capturing context information associated with user-defined data created by user interaction of a user in a first context of the network-based system, the context component dynamically storing the context information in metadata associated with the user-defined data, the user-defined data and metadata stored on a storage component of the network-based system; and

a computer-implemented tracking component of the network-based system for tracking a change of the user from the first context to a second context of the network-based system and dynamically ~~automatically~~ updating the stored metadata based on the change, wherein the user accesses the data from the second context.

19. (Previously presented) The system of claim 18, the context component is associated with a workspace, which is a collection of data and application functionality related to the user-defined data.

20. (Previously Presented) The system of claim 18, the context component is associated with a web, which web is a collection of interrelated workspaces, the web maintains a location of data of the respective interrelated workspaces when

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one or more of the interrelated workspaces are moved into a different workspace interrelationship.

21. (Previously Presented) The system of claim 18, the context information includes a relationship between the user and at least one of an application, application data, and user environment.

22. (Previously Presented) The system of claim 18, the context component captures context information of the first context and context information related to at least one other context.

23. (Previously Presented) The system of claim 22, the context information of the at least one other context is at least one of stipulated by the user and suggested automatically by the system based upon search and association criteria set by the user.

24. (Previously Presented) The system of claim 18, wherein data created in the first context is associated with data created in the second context.

25. (Previously presented) The system of claim 18, the context information is tagged to the user-defined data via the metadata when the user-defined data is created.

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26. (Currently Amended) A computer-implemented method of managing data, comprising computer-executable acts of:

creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents;

dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment;

tracking movement of the user from the user environment of the web-based computing platform to a second user environment of the web-based computing platform; and

dynamically updating the stored metadata with an association of the data, the application, and the second user environment wherein at least one of the data and the application with the second user environment such that the user employs the at least one of the application and the data from the second environment.

27. (Canceled)

28. (Original) The method of claim 26, further comprising capturing context information of the user.

29. (Previously Presented) The method of claim 26, further comprising indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments.

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30. (Canceled)

31. (Original) The method of claim 26, the least one of the data and the application is associated automatically with the second user environment.

32. (Previously Presented) The method of claim 26, further comprising accessing the user environment and the second user environment using a browser.

33. (Original) The method of claim 26, further comprising communicating with the user environment using a TCP/IP communication protocol.

34. (Original) The method of claim 26, further comprising locating the user environment from a remote location using a URL address.

35. (Original) The method of claim 26, further comprising accessing the user environment via a portable wireless device.

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36. (Currently Amended) A computer-implemented method of managing data, comprising computer-executable acts of:

generating a plurality of user environments in a web-based system;

ordering two or more of the plurality of user environments according to different arrangements of the user environments;

providing a plurality of applications for generating and processing data in the user environments, the data of a user environment is dynamically associated with the user environment in metadata that corresponds to the data;

creating an association of the data with a second user environment when the data is accessed from the second user environment;

dynamically storing the association of the data and the second user environment in the metadata;

storing in a storage component ordering information related to the ordering of the two or more of the plurality of user environments; and

traversing the different arrangements of the user environments with one or more of the applications based on the ordering information to locate the data associated with the user environments therewith.

37. (Previously presented) The method of claim 36, the act of traversing is performed using a webslice that includes traversal information for locating the data associated with a given user environment.

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38. (Original) The method of claim 37, the traversal information includes at least a collection ID, a user environment ID, and a routing path to the location of the environment data.

39. (Previously presented) The method of claim 36, the different arrangements, user environments, and associated data carry both hierarchical and non-hierarchical associations simultaneously within the plurality of applications.

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40. (Previously presented) A computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:

creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;

dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform, the metadata includes information related to the user of the user workspace, to the data, to the application and to the user workspace;

tracking movement of the user from the user workspace to a second user workspace of the web-based computing platform;

dynamically associating the data and the application with the second user workspace in the metadata such that the user employs the application and data from the second user workspace; and

indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces.

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41. (Currently Amended) A computer-implemented system that facilitates management of data, comprising:

computer-implemented means for creating data by interaction of a user within a user workspace of a server using an application;

computer-implemented means for associating metadata with the data, the metadata stored in association with the data on storage means of the server, the metadata includes information related to a user of the user workspace, to the data, to the application and to the user workspace;

computer-implemented means for tracking movement of the user from the user workspace to a second user workspace of the server; and

computer-implemented means for dynamically associating the data and the application with the second user workspace in the metadata such that the user can employ the application and data from the second user workspace.

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Claims 42-44 (Cancelled)

45. (Currently Amended) A computer-implemented system that facilitates management of data, comprising:

a computer-implemented context component of a web-based server for defining a first user workspace of the web-based server, assigning one or more applications to the first user workspace, capturing context data associated with user interaction of a user while in the first user workspace, and for dynamically storing the context data as metadata on a storage component of the web-based server, which metadata is dynamically associated with data created in the first user workspace; and

a computer-implemented tracking component of the web-based server for tracking change information associated with a change in access of the user from the first user workspace to a second user workspace, and dynamically storing the change information on the storage component as part of the metadata, wherein the user accesses the data from the second user workspace.

46. (Previously Presented) The system of claim 45, wherein the tracking component automatically creates the metadata when the user accesses the first user workspace.

47. (Previously Presented) The system of claim 45, wherein the context component captures relationship data associated with a relationship between the first user workspace and at least one other user workspace.

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48. (Previously Presented) The system of claim 45, wherein an application associated with the first user workspace is automatically accessible via the second user workspace when the user moves from the first user workspace to the second user workspace.

49. (Previously Presented) The system of claim 45, wherein context data relating to an item of communication is automatically stored and used in performance of communication tasks.

50. (Canceled)

51. (Previously Presented) The system of claim 45, wherein the context component captures data and application functionality related to a user-defined topic of the first user workspace, and includes the data and application functionality in the metadata.

52. (Currently Amended) The system of claim 45, wherein when the data created in the first user workspace is accessed from [[a]] the second user workspace, in response to which the context component adds information to the metadata about the second user workspace.

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53. (Previously Presented) The system of claim 45, wherein the first user workspace is associated with a plurality of different applications, the plurality of different applications comprising telephony, unified messaging, decision support, document management, portals, chat, collaboration, search, vote, relationship management, calendar, personal information management, profiling, directory management, executive information systems, dashboards, cockpits, tasking, meeting and, web and video conferencing.

54. (Previously presented) The system of claim 45, wherein the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology.

55. (Previously presented) The system of claim 45, wherein storing of the metadata in the storage component in association with data facilitates many-to-many functionality of the data via the metadata.

56. (Previously Presented) The system of claim 45, wherein the first user workspace provides access to at least one communications tool, which includes e-mail, voicemail, fax, teleconferencing, instant message, chat, contacts, calendar, task, notes, news, ideas, vote, web and video conferencing, and document sharing functionality.

57. (Previously Presented) The system of claim 45, wherein one or more applications include file storage pointers that are dynamic and associated with the first user workspace.

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58. (Canceled)

59. (Previously Presented) The system of claim 45, wherein the context component facilitates encryption of the data generated in the first user workspace.

Comments

The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. In no case may an applicant reply outside the SIX (6) MONTH statutory period or obtain an extension for more than FIVE (5) MONTHS beyond the date for reply set forth in an Office action. A fully responsive reply must be timely filed to avoid abandonment of this application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

As allowable subject matter has been indicated, Applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP section 707.07(a).

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Allowable Subject Matter

Claims 18-26, 28, 29, 31-41, 45-49, 51-57 and 59 are allowed over the prior art made of record.

Other Prior Art Made of Record

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. U.S. patents and U.S. patent application publications will not be supplied with Office actions. Examiners advises the Applicant that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. For the use of the Office's PAIR system, Applicants may refer to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diane D. Mizrahi whose telephone number is 571-272-4079. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone numbers for the organization where this application or proceeding is assigned

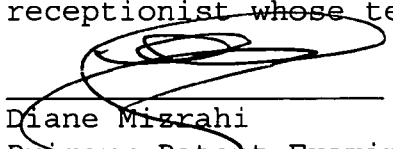
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are (703) 872-9306 for regular communications and (703) 305-3900 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Diane Mizrahi
Primary Patent Examiner
Technology Center 2100

August 15, 2006

EXHIBIT C

**IN THE UNITED STATES COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC., a Delaware corporation,)	
	)	CIVIL ACTION
)	
Plaintiff and Counterdefendant,	)	No. 1:08-cv-00862-JJF
)	
v.)	
)	
FACEBOOK, INC., a Delaware corporation,)	
)	
)	
Defendant and Counterclaimant.)	
)	

EXPERT REPORT OF SAUL GREENBERG, PH.D

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 3000 El Camino Real
 5 Palo Alto square, 4th floor
 Palo Alto, CA 94306

Dated: April 8, 2010

have neglected to list any materials on Exhibit B that I have reviewed, they are identified in this Report.

24. To the extent a term was not construed by the Court in the Order issued on March 9, 2010, or for which the Court indicated that no separate construction was necessary, I have applied a meaning that one of ordinary skill in the art could give to that term. Otherwise, I have applied the terms in my analysis as set forth in the Order.

VIII. OVERVIEW OF THE '761 PATENT

25. The '761 patent, entitled "Dynamic Association of Electronically Stored Information With Iterative Workflow Changes," states that its field of invention "relates to management and storage of electronic information. More particularly, this invention relates to new structures and methods for creating relationships between users, applications, files, and folders." ['761 Patent, Col. 1:20]¹. In filing the application for the '761 patent, the applicants stated in the Background that prior art systems were limited because they did not know the "context" in which files were created or used:

"Prior art communications tools do not know the business and/or personal context(s) within which files are created and used. For example, a person may create three files in a word processor, one relating to sales, the second relating to operations, and the third relating to a son's football team. However, the word processor itself has no way of knowing to automatically store those three files in at least three different places." ['761 Patent, Col. 2:6]

The Background of the '761 patent goes on to emphasize how the prior art is limited as it creates and stores files outside of a contextual framework, e.g., within a conventional file/folder system:

¹ Throughout my Report, I quote from columns and lines of certain U.S. or foreign patent references, specifically the '761 patent and the prior art references. My citations following such quotations will generally conform to the following format: [xxx Patent, Col. a:b], where "a" and "b" identify the column and line, respectively, where the quotation may be found in the cited document.

“Known software applications create and store files outside of a contextual framework. For example, when a user creates a word processing file using a conventional word processor application, the user typically must select a single folder within which to store that file. The file may be stored in an existing folder or the user may create a new folder to receive the file.... Under this scheme, context is completely independent of the application. File context is limited to the decision made by the user about the folder in which the file should be stored. The user decision does not adequately represent or reflect the true context of the file given that the file may contain information that could reasonable be stored in multiple folders.” [‘761 Patent, Col. 2:17].

26. The ‘761 patent then summarizes the perceived need for a tool that automatically associates application files with various contexts:

“Notwithstanding the usefulness of the above-described methods, a need still exists for a communications tool that associates files generated by applications with individuals, groups, and topical context automatically.” [‘761 Patent, Col. 3:1].

27. The ‘761 patent then describes a computer-implemented system or computer-implemented method that supposedly meets this need. Independent claim 1, reproduced below, is illustrative of the applicants’ approach.

1. A computer-implemented network-based system that facilitates management of data, comprising:

a computer-implemented context component of the network-based system for capturing context information associated with user-defined data created by user interaction of a user in a first context of the network-based system, the context component dynamically storing the context information in metadata associated with the user-defined data, the user-defined data and metadata stored on a storage component of the network-based system; and

a computer-implemented tracking component of the network-based system for tracking a change of the user from the first context to a second context of the network-based system and dynamically updating the stored metadata based on the change, wherein the user accesses the data from the second context.

The process outlined in claim 1 above can be paraphrased as a three-step computer-implemented process running on a network-based system. First, as a user interacts within a “first context” to define/create some data, a *context component* captures *context information* associated with the

data, and *dynamically stores* that information as *metadata* associated with that data. Second, when the user changes from the “first context” to a “second context,” a *tracking component* tracks that change and *dynamically updates* the stored *metadata* based on that change. Third, the user accesses the data from the second context into which the user has moved.

28. The other independent claims asserted in this litigation (i.e. claims 9, 21 and 23) are, generally speaking, variations on claim 1 with similar requirements but using somewhat different terminology. To the extent the differences between claim 1 and the other asserted independent claims are significant to the invalidity analysis presented in this Report, such differences are reflected in my more detailed analysis below.

IX. OVERVIEW OF BACKGROUND ART

29. One of the concepts appearing in the claims of the '761 patent is the capture and storage of contextual information as metadata associated with user data, and tracking actions by users over time. These concepts were basic and well-known in computer science long before the '761 patent was filed. The paragraphs below provide a partial list of this background art.

A. Audit Trails

30. One common technology of capturing data associated with user data and tracking actions over time is the audit trail. *Microsoft Computer Dictionary* (a popular dictionary for computer science terms), for example, defines an audit trail as follows:

Audit trail. *n.* In reference to computing, a means of tracing all activities affecting a piece of information, such as a data record, from the time it is entered into a system to the time it is removed. An audit trail makes it possible to document, for example, who made changes to a particular record and when. [*Microsoft Computer Dictionary*, 3d Ed. (1997) at 36].

Executed this 3rd day of April 2010.

I declare that to the best of my knowledge the foregoing is true and correct as to the facts stated and my opinions as expressed.

By:

A handwritten signature in blue ink that reads "Saul Greenberg". The signature is written in a cursive style with a prominent horizontal stroke at the end.

Saul Greenberg, Ph.D.

CERTIFICATE OF SERVICE

STATE OF CALIFORNIA, COUNTY OF SANTA CLARA

I am employed in the County of Santa Clara, State of California. I am over the age of 18 and not a party to the within action. My business address is 3000 El Camino Real, Five Palo Alto Square, Palo Alto, CA 94306.

On April 8, 2010, I served the following document:

EXPERT REPORT OF SAUL GREENBERG, PH.D

on the interested parties in this action follows:

<p><u>BY E-MAIL:</u></p> <p>Paul J. Andre, Esq. Lisa Kobialka, Esq. James Hannah, Esq. King & Spalding 333 Twin Dolphin Drive, Suite 400 Redwood Shores, CA 94065</p> <p>pandre@kslaw.com lkobialka@kslaw.com jhannah@kslaw.com</p>	<p><u>BY E-MAIL:</u></p> <p>Philip A. Rovner, Esq. Potter Anderson & Corroon LLP P.O. Box 951 Wilmington, DE 19899-0951</p> <p>provner@potteranderson.com</p>
--	--

[XX] BY ELECTRONIC MAIL: I am personally and readily familiar with the business practice of Cooley Godward Kronish LLP for the preparation and processing of documents in portable document format (PDF) for e-mailing, and I caused said documents to be prepared in PDF and then served by electronic mail to the parties listed above.

[XX] BY OVERNIGHT MAIL: I served the exhibits to the Report the the above parties by Federal Express. I am personally and readily familiar with the business practice of Cooley Godward Kronish LLP for collection and processing of correspondence for overnight delivery, and I caused such documents described herein to be deposited for delivery to a facility regularly maintained by Federal Express for overnight delivery.

I declare that I am employed in the office of a member of the bar of this Court at whose directions the service was made. I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on April 8, 2010 at Palo Alto, California.

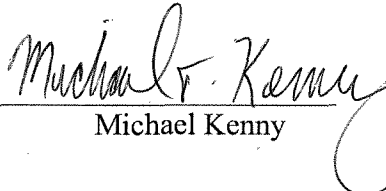

Michael Kenny

EXHIBIT D

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

)
)
LEADER TECHNOLOGIES, INC.,)
)
 Plaintiff,)
)
v.) Case No. 08-cv-862 JJF (LPS)
)
FACEBOOK, INC.)
)
 Defendant.)
)

EXPERT REPORT OF MICHAEL KEARNS, PH.D

**HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY – SOURCE CODE
(SUBJECT TO PROTECTIVE ORDER)**

EXPERT REPORT OF MICHAEL KEARNS, PH.D
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IV. Background of the '761 Patent

11. The '761 patent, entitled “Dynamic Association of Electronically Stored Information with Iterative Workflow Changes,” relates generally to the storage and management of information. The '761 patent disclosure contains 18 figures and nearly 20 columns of textual description, but as shown below, only a few paragraphs of the textual description of the patent and only a couple of its figures directly address the specific systems and methods set forth in the claims of the '761 patent that have been asserted in this case. In providing the following general tutorial of the patent disclosure (which I also intend to present at trial), therefore, I will focus on those aspects of the '761 patent that are most pertinent to the specific systems and methods described in the asserted claims.

12. The '761 patent purports to describe systems and methods for facilitating the management of data. In the Background of the Invention, the patent criticizes certain prior art methods of organizing data and electronic communications because they are perceived to be “limited and fragmented” and “wholly inadequate” because “[a]utomation of organization of communications is non-existent.” Col. 1:47-58. The patent asserts that, in the context of electronic communications, “[t]he recipient must do all the work of organization and categorization of the communications rather than the system itself do [sic] that work.” Col. 1:54-56. The Background concludes by stating that “a need still exists for a communications tool that associates files generated by applications with individuals, groups, and topical context automatically.” Col. 3:2-4.

13. The patent attempts to address these perceived deficiencies by describing a system that includes three specific features, which are incorporated into each asserted claim of the '761 patent: (1) data or information created by a user is created within a particular “context,” “user environment,” or “workspace,” and (2) that data is linked and associated to that user (in “metadata”) such that (3) when the user moves to a second context, user environment or workspace, the metadata associated with the data is

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automatically updated and the data automatically follows that user to the new context, environment or workspace. The system therefore purports to allow users to automatically access and manage their data across more than one context, user environment or user workspace, without manual action by the user.

14. As explained in the Summary of the Invention: “The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity that consists of one or more users. The data storage model first assumes that files are associated with the user. Thus, data generated by applications is associated with an individual, group of individuals, and topical content, and not simply with a folder, as in traditional systems.” Col. 3:25-31. The next paragraph of the Summary of the Invention sets forth an example system in which this concept of association or linking is further described:

When a user logs in to the system that employs the tool, the user enters into a personal workspace environment. This workspace is called a board, and is associated with a user context. From within this board, the tool makes accessible to the user a suite of applications for creating and manipulating data. Any user operating within any board has access to the suite of applications associated with that board, and can obtain access to any data in any form (e.g., documents and files) created by the applications and to which he or she has permission. Moreover, thereafter, the user can then move to shared workspaces (or boards), and access the same data or other data.

Data created within the board is immediately associated with the user, the user's permission level, the current workspace, any other desired workspace that the user designates, and the application. This association is captured in a form of metadata and tagged to the data being created. The metadata automatically captures the context in which the data was created as the data is being created. Additionally, the data content is indexed to facilitate searching for the content in a number of different ways in the future by the user or other users. This tagging process is universal, in that, the data model allows for any binary data (e.g., files), as well as any set of definable data

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to be accepted into the system. The system is not restricted to processing e-mail, faxes, calendar events, meetings, phone calls, etc., that are included in the bundled system, but can also accommodate whatever data the user chooses to use. The system is also universal insofar as its user interaction can be through a browser that is pervasively employed for use with conventional operating systems.

In that the tool supports multiple users, there can be multiple boards. Two or more boards (or workspace environments) can be grouped as a collection of boards, also called a web. Boards can exist in any number of different webs. The association of webs and boards is stored in a table. *As a user creates a context, or moves from one context to at least one other context, the data created and applications used previously by the user automatically follows the user to the next context. The change in user context is captured dynamically.* All files and groups of files can be associated with any other file in the system, allowing a system user the flexibility in determining dynamic associations. Col. 3:32-4:7.

15. This basic system is embodied in every asserted claim of the '761 patent, as explained below. The system is further described in two figures of the '761 patent (Figs. 1 and 2) and two columns (columns 6 and 7) under the section entitled "Detailed Description of the Invention." Figure 1 (which is also reproduced on the face of the patent) shows the basic system components:

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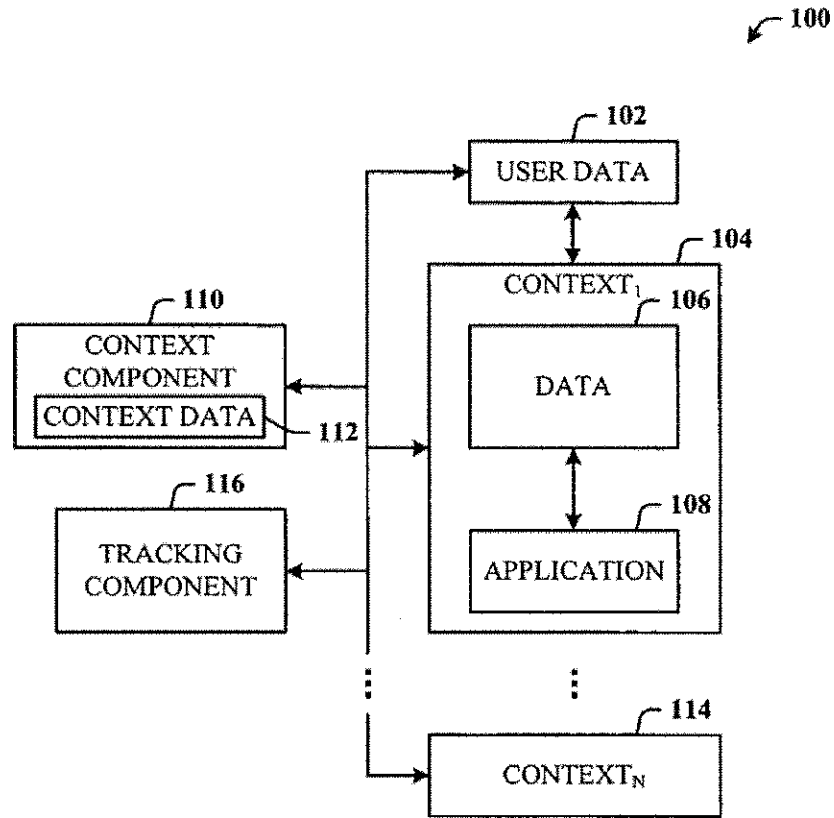


FIG. 1

16. As shown in Figure 1 above, the data management system (100) includes a context component (110), a tracking component (116), a first context (104) and at least one other context (114). Within the first context (104) exists data that is created by a user (106), as well as an application for use by the user (108). The textual description corresponding to Figure 1, which echoes much of what was in the Summary of the Invention discussed above, further explains:

Referring now to FIG. 1, there is illustrated a block diagram of a system 100 that facilitates the management of data in accordance with the present invention. The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity

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that consists of one or more users. *The data management and storage model first assumes that data is associated with the user.* Thus, data generated by an application employed by the user is associated with the user, groups of users, and topical content; and not simply with a folder, as in traditional systems.

In support thereof, when a user logs-in to the system **100**, user data **102** is generated and associated with at least the user and the login process. The user automatically enters into a user workspace or a first context **104** (also denoted CONTEXT1) or environment. This environment can be a default user workspace, or workspace environment predesignated by the user or an administrator after login, for example. After login, the user can perform data operations (e.g., create and manipulate) on a data **106** in any number of ways, including, but not limited to, viewing, editing, copying, moving, and deleting the data. Such data operations can be performed using at least one application **108**. For example, where the data **106** is text data, a text editing or word processing application can be employed. Many different text editor and/or word processing applications exist that can be used to create, view, edit, copy, and move the data **106**, to name just a few of the operations. Where the data **106** is program code, the application **108** is one that is suitable for providing user access and interaction therewith. Where the data **106** is a voice file, the application **108** can be an application suitable for playing the voice file. This all occurs in association with the first context **104**.

The system **100** also includes a context component **110** in association with the first context **104** to monitor and generate context data **112** associated with data operations of the user in the first context **104**. *The context data **112** includes at least data representative of the user (e.g., some or all of the user data **102**), data representative of the first context **104**, data representative of the data **106**, and data representative of the application **108**.* The context data **112** can be stored in the form of a table (or any other suitable data structure) for access and processing, and at any location, as desired.

The system **100** can include a plurality of the contexts, denoted as CONTEXT1, . . . , CONTEXTN. Thus, in addition to the first context **104**, there is at least a second

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context **114** with which the context component **110** is associated. This is because the user of the first context **104** can move to the second context **114**, and perform many different data operations therein which will then be associated with that user in that second context **114**. The data operations performed in the second context **114** are also associated with the user and stored automatically. Such user activities and data operations in the one or more contexts of the system **100** and movement of the user between contexts are tracked using a tracking component **116**. Thus, data generated by applications is associated with an individual, group of individuals, and topical content; and not simply with a folder, as in traditional systems. Col. 6:15-7:7.

17. The '761 patent goes on to describe Figure 2, which illustrates the basic process that appears throughout each asserted claim of the '761 patent. I have placed Figure 2 with the corresponding text, side-by-side, below:

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Figure 2	Corresponding Description
<pre> graph TD START([START]) --> 200[USER ASSOCIATES WITH A FIRST CONTEXT] 200 --> 202[USER ASSIGNS APP(S)] 202 --> 204[USER PERFORMS A DATA OPERATION] 204 --> 206[USER CHANGES CONTEXT] 206 --> 208[APPS AND DATA ASSOCIATED WITH NEW CONTEXT] 208 --> STOP([STOP]) 210[AUTO CREATE AND UPDATE CONTEXT DATA] -.-> 200 210 -.-> 202 210 -.-> 204 210 -.-> 206 208 -.-> STOP </pre>	<p>“At 200, a user is associated with a first context. This can occur by the user logging in to a system and automatically entering a user workspace, which workspace is associated with the first context. At 202, the user assigns applications for use in the user context. This can occur explicitly by the user manually selecting the application(s) for association with the context, or implicitly by the user launching an application and performing data operations within the context. At 204, the user performs a data operation. At 206, the user changes context from the first context to a second context. At 208, the data and application(s) are then automatically associated with the second context. The process then reaches a Stop block.” Col. 7:23-35.</p> <p>“As the user performs data operations in the first and second contexts, the system automatically creates and updates context data, as indicated at 210. This occurs transparently to the user, as indicated by the dashed line.” Col. 7:36-39.</p>

18. The examples in the Summary and Detailed Description shown above describe a three step process in which (1) a user creates data within a first context or workspace; (2) the user changes or moves from the first to a second context or workspace; and (3) the data that was created in the first context or workspace is, automatically and in response to the user’s movement, associated with the second context or workspace. This last step is succinctly summarized in the Summary: “As a user

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creates a context, or moves from one context to at least one other context, the data created and applications used previously by the user automatically follows the user to the next context. The change in user context is captured dynamically.” Col. 4:1-4. Claims 1, 9, 21 and 23 of the ’761 patent, which I understand to be the independent claims of the patent asserted by the plaintiff in this litigation, all incorporate this basic three-step process. Those claims read as follows:

1. A computer-implemented network-based system that facilitates management of data, comprising:

a computer-implemented context component of the network-based system for capturing context information associated with user-defined data created by user interaction of a user in a first context of the network-based system, the context component dynamically storing the context information in metadata associated with the user-defined data, the user-defined data and metadata stored on a storage component of the network-based system; and

a computer-implemented tracking component of the network-based system for tracking a change of the user from the first context to a second context of the network-based system and dynamically updating the stored metadata based on the change,

wherein the user accesses the data from the second context.

9. A computer-implemented method of managing data, comprising computer-executable acts of:

creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents;

dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment;

tracking movement of the user from the user environment of the web-based computing platform to a second user environment of the web-based computing platform; and

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dynamically updating the stored metadata with an association of the data, the application, and the second user environment wherein the user employs at least one of the application and the data from the second environment.

21. A computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:

creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;

dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform, the metadata includes information related to the user of the user workspace, to the data, to the application and to the user workspace;

tracking movement of the user from the user workspace to a second user workspace of the web-based computing platform;

dynamically associating the data and the application with the second user workspace in the metadata such that the user employs the application and data from the second user workspace; and

indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces.

23. A computer-implemented system that facilitates management of data, comprising:

a computer-implemented context component of a web-based server for defining a first user workspace of the web-based server, assigning one or more applications to the first user workspace, capturing context data associated with user interaction of a user while in the first user workspace, and for dynamically storing the context data as metadata on a storage component of the web-based server, which metadata is dynamically associated with data created in the first user workspace; and

a computer-implemented tracking component of the web-based server for tracking change information associated with a change in

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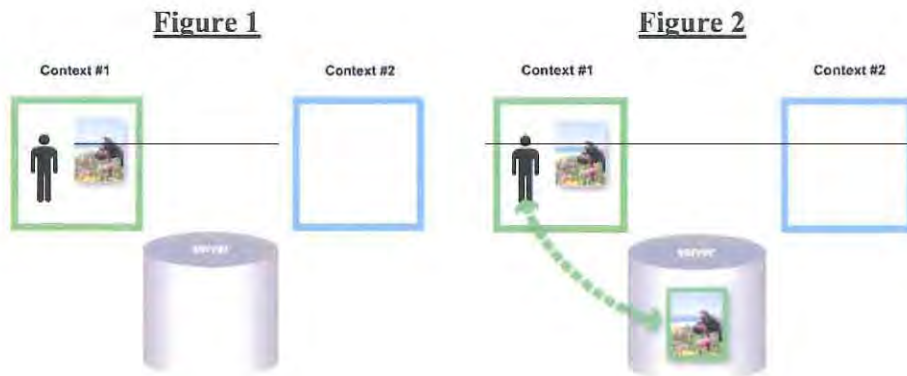
access of the user from the first user workspace to a second user workspace, and dynamically storing the change information on the storage component as part of the metadata,

wherein the user accesses the data from the second user workspace.

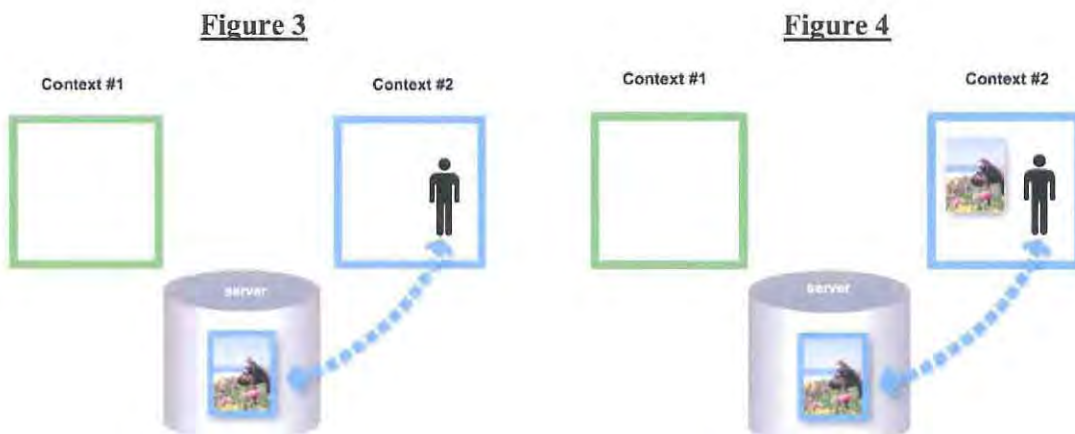
19. I understand that Facebook’s claim construction briefing in this litigation analogized the systems and methods claimed in the ’761 patent with a user who carries a “backpack” containing his or her data. I agree that this is an appropriate analogy to explain some basic concepts of the ’761 patent using a physical world analogy, as it captures the notion of a user’s data being linked or associated with that user, and that the user’s data automatically follows the user as he or she moves from one location to another. In the electronic world, one can further refine this analogy by envisioning a user who creates a photo file in a first context and then moves to a second context. An illustration is provided in Figures 1 through 4 below, which provide a graphical and sequenced representation of the basic steps in each asserted claim.

20. As shown in Figure 1 below, a user creates a graphical photograph file in a first context that is shown as a green box. (The context boxes are not necessarily intended to represent physical spaces, but rather, separate computing environments in which data can be created). The data is then stored on a server, as shown in Figure 2, and the green frame surrounding the photo signifies that the server has stored metadata associated with the user-defined data that identifies the context (green) in which the data was created. The green arrow connecting the user and the data represents the linkage between the user and his or her data that is captured by the metadata.

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21. The user can then move from the first context to a second context, i.e., from the green box to the blue box, as shown in Figure 3 below. The system tracks this movement and automatically updates the stored metadata solely in response to the movement, as shown by the blue frame that then surrounds the picture on the server as shown in Figure 3. The blue dashed line shows that the linkage between the user and his or her data has now changed to reflect the movement to the second context. Finally, in Figure 4, the user accesses the data from the second context:



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143. In light of Dr. Vigna’s failure to tie the claimed many-to-many functionality to the information in claim 23 that he identifies as the alleged “metadata,” he cannot show that the doctrine of equivalents applies here without ignoring express requirements of the claim. Removing the connection between the metadata and the claimed functionality results in a fundamental difference in the way claim 23 operates as compared to Facebook, and the results achieved. Nor does the addition of the claim element of claim 32 impact the prior art or hypothetical claim analysis, discussed in connection with claim 1, because the prior art systems clearly disclosed the claimed many-to-many functionality to the extent it could be construed to cover Facebook.



Michael Kearns, Ph.D
April 22, 2010

CERTIFICATE OF SERVICE

STATE OF CALIFORNIA, COUNTY OF SANTA CLARA

I am employed in the County of Santa Clara, State of California. I am over the age of 18 and not a party to the within action. My business address is 3000 El Camino Real, Five Palo Alto Square, Palo Alto, CA 94306.

On April 22, 2010, I served the following document:

EXPERT REPORT OF MICHAEL KEARNS, PHD

on the interested parties in this action follows:

<u>BY E-MAIL:</u>	<u>BY E-MAIL:</u>
Paul J. Andre, Esq. Lisa Kobiarka, Esq. James Hannah, Esq. King & Spalding 333 Twin Dolphin Drive, Suite 400 Redwood Shores, CA 94065 pandre@kslaw.com lkobiarka@kslaw.com jhannah@kslaw.com	Philip A. Rovner, Esq. Potter Anderson & Corroon LLP P.O. Box 951 Wilmington, DE 19899-0951 provner@potteranderson.com

[XX] **BY ELECTRONIC MAIL:** I am personally and readily familiar with the business practice of Cooley Godward Kronish LLP for the preparation and processing of documents in portable document format (PDF) for e-mailing, and I caused said documents to be prepared in PDF and then served by electronic mail to the parties listed above.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on April 22, 2010 at San Francisco, California.

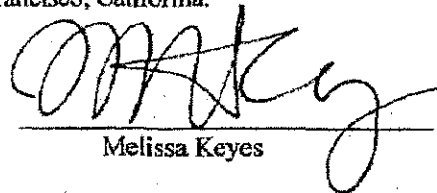

Melissa Keyes

EXHIBIT E

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
	)	Civil Action No. 1:08-cv-08-862-JJF
Plaintiff,-Counterdefendant,)	
)	
v.	)	DISCLOSURE OF EXPERT
	)	TESTIMONY FOR GIOVANNI
FACEBOOK, INC.,)	VIGNA, PH.D. PURSUANT TO
a Delaware corporation,)	FED. R. CIV. P. 26(A)(2)
)	
Defendant-Counterclaimant)	
)	

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Plaintiff Leader Technologies, Inc. (“Leader”) submits the following disclosure of expert testimony for Giovanni Vigna, Ph.D. pursuant to Federal Rules of Civil Procedure 26(a)(2). This expert is engaged in ongoing refinement of his opinions and expected testimony, and Leader specifically reserves the right to modify or supplement the information contained in this disclosure pursuant to the Federal Rules of Civil Procedure.

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18. For the purposes of this report, I considered a person of skill in the art to be someone with a bachelor's degree or higher in computer science and/or several years of experience in the computer industry.

19. I understand that a product may infringe a claim directly or indirectly. Direct infringement requires a party to make, use, sell, or offer to sell a product that contains each and every element of a claimed system or performs all of the steps of a claimed method. When a party participates in or encourages infringement but does not directly infringe a patent, indirect infringement can be found. Indirect infringement requires, as a predicate, a finding that some party amongst the accused actors has directly infringed the patent.

20. I understand that claims may be either independent or dependent. A dependent claim is infringed if a product meets all of the recited claim elements of the independent claim that the dependent claim depends from, as well as the additional claim elements recited in the dependent claim.

GENERAL SUMMARY OF THE TECHNOLOGY OF THE '761 PATENT

21. The '761 Patent discloses an online collaboration tool. An online collaboration tool is a mechanism that allows users to participate in a shared "world," where their data and their actions are visible to other users, who might take actions based on the change in status of other users, the way data is accessed, or information about the users and their data. The tool disclosed in the '761 patent defines different contexts and workspaces where users can generate or consume content and perform actions. The system tracks the movement of users from one context or workspace to another and updates the information about their status, action, and access to data. The online collaboration tool disclosed in the '761 Patent is extremely effective at allowing users to share data with each other because, instead of simply allowing shared access to the data, it stores a variety of information in metadata relating to a user and the data he creates, including information relating to the user's content and actions. The information collected and stored in metadata allows content to be effectively shared among its users and allows users to keep track of others users who are also using the tool.

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GENERAL SUMMARY OF THE TECHNOLOGY OF THE FACEBOOK WEBSITE

22. The Facebook website is an online collaboration tool. It is also extremely effective at allowing users to share data with each other because it uses the same technology disclosed in the '761 Patent. Specifically, the Facebook website stores a variety of information in metadata relating to a user and the data he creates, including information relating to the user's content and actions. The information collected and stored in metadata by Facebook allows content to be effectively shared among its users and allows users to keep track of others users who are also using the tool.

FACEBOOK'S INFRINGEMENT OF THE '761 PATENT

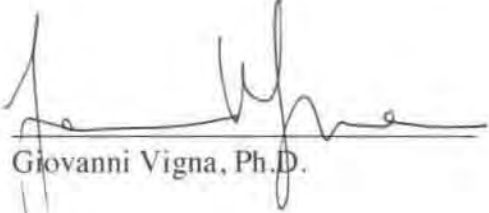
23. In my opinion, Facebook infringes Claims 1, 4, 7, 9, 11, 16, 21, 23, 25, 31 and 32 of the '761 Patent ("the asserted claims"). It is my opinion that Facebook literally infringes the asserted claims directly. At the very least, Facebook directly infringes the asserted claims under the doctrine of equivalence. In addition, it is my opinion that Facebook literally infringes the asserted method Claims 9, 11 and 16 indirectly. At the very least, Facebook indirectly infringes the asserted method Claims 9, 11 and 16 under the doctrine of equivalence.

24. Based on the material and deposition testimony, all of the Facebook servers are located in the United States and have been since at least November 21, 2006. Furthermore, all development and testing of the Facebook website is done in the United States and has been since at least November 21, 2006.

25. As described in detail below, the underlying architecture of the Facebook website infringes the asserted claims. For example, the vast majority of the Facebook applications dynamically captures context information and stores the information in metadata. Moreover, the vast majority of the user's actions while using the applications is also captured in metadata and used to generate stories on either the user's Wall, News Feed, or both. Thus, my description of the use cases below is not intended to be limiting, but rather an example of the multiple ways in which the Facebook website is based on an infringing architecture.

substantially the same way because the Facebook website provides many-to-many functionality through storing metadata about Wall posts, group membership or comments in a database which allows multiple users to share multiple pieces of data with each other. The Facebook website achieves substantially the same result because the Facebook website allows multiple users to share multiple pieces of data. For example, a user can share data via Wall posts, groups or comments, realizing the result of many-to-many interaction functionality.

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on April 8, 2010 in Santa Barbara, California.



Giovanni Vigna, Ph.D.

CERTIFICATE OF SERVICE

I, Gladys Tong, hereby certify that on April 8, 2010, I served the foregoing on the following as noted:

BY E-MAIL

Heidi Keefe
Mark Weinstein
Jeffrey Norberg
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3000 El Camino Real
Palo Alto, California 94306-2155
Tel: (650) 213-0300
Fax: (650) 213-8158

E-Mail: hkeefe@cooley.com
E-Mail: mweinstein@cooley.com
E-mail : jnorberg@cooley.com



Gladys Tong
KING & SPALDING LLP
333 Twin Dolphin Drive
Suite 400
Redwood Shores, CA 94065
(650) 590-0700

EXHIBIT F

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
	)	Civil Action No. 1:08-cv-08-862-JJF
Plaintiff,-Counterdefendant,)	
)	
v.	)	DISCLOSURE OF EXPERT
	)	TESTIMONY FOR JAMES
FACEBOOK, INC.,	)	HERBSLEB, PH.D. PURSUANT
a Delaware corporation,	)	TO FED. R. CIV. P. 26(A)(2)
)	
Defendant-Counterclaimant)	

Plaintiff Leader Technologies, Inc. ("Leader") submits the following disclosure of expert testimony for James Herbsleb, Ph.D. pursuant to Rule 26(a)(2) of the Fed. R. Civ. P. This expert is engaged in ongoing refinement of his opinions and expected testimony, and Leader specifically reserves the right to modify or supplement the information contained in this disclosure pursuant to the Federal Rules of Civil Procedure.

TRADITIONAL SYSTEMS

14. The '761 Patent describes several traditional systems for managing data. These systems were inefficient for large scale online collaboration because data was not shared in an efficient manner, and it lacked context surrounding online collaboration.

15. For example, many users organize their data in so called "folders," which mimic the operation of folders in the physical work. However, using hierarchical folders to store and organize data is highly inefficient. For example, if a file was associated with several different topics, in order to keep the folder in each topic, multiple locations would need to have the same file. As a result, the context of the file is completely dependent on which folder the user manually selects to put the file in. It is also difficult for other users to find data that the user organized into folders because the user's decisions about contexts of files are subjective.

ONLINE COLLABORATION TOOL OF THE '761 PATENT

16. The '761 Patent discloses an online collaboration tool that facilitates efficient communication, organization, and content sharing between users and allows multiple users to share and use electronically stored content over a network.

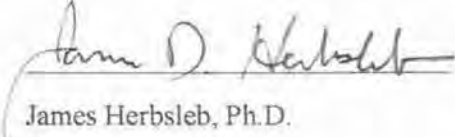
17. The online collaboration tool described in the '761 Patent addresses the problems with traditional systems. The technology of the '761 Patent uses a server that hosts the online collaboration tool and is connected through the internet to the user's computer, typically running a web browser. The '761 Patent describes a technology where the user can upload content over the Internet, through the web browser on the user's computer, to the online collaboration tool. The online collaboration tool of the '761 Patent automatically associates context information with the content. This is described as being performed by a context component residing on the server, which associates the content with context information, relating to the context in which this content was created. This context information is stored as metadata and associated with newly created content. In this manner it provides valuable context to the content. This information is then stored on the back-end server in a database or other data storage means.

18. The online collaboration tool described in the '761 Patent also automatically tracks user actions within different environments on the online collaboration tool using a tracking component. For example, the user may move from their home page to the home page of a friend or coworker. The tracking component tracks the user's movement and automatically captures the user's actions where the user accesses or employs their previously uploaded content from this new context. The metadata associated with the data is then updated based on how content is used in the new context and what actions are taken. The type of user actions the tracking component captures includes identification of the user who performed the action, the time the action was taken, and context in which the action was taken.

19. The online collaboration tool described in the '761 Patent thereby automatically captures information about user content and leverages this information to allow effective collaboration. For example, the user content can be efficiently shared and used by many people using the online collaboration tool. The information about the user content can be used to avoid requiring multiple versions of a file, allowing a file to be uploaded once and accessed from multiple locations, by multiple users, in multiple contexts. Furthermore, a user can provide content in one context and have that content associated with multiple other contexts. This allows the user to use the content in different contexts and not have to re-upload content in the other contexts. The information can also be leveraged to allow users to easily search for particular files based on the captured metadata.

20. The highest contextual assumption of the online collaboration tool is that there exists an entity of one or more users and that the data storage model assumes that the content is associated with the user. Thus, metadata is created when a user creates an account, and that metadata gets constantly updated based on the content the user uploads, or actions the user takes.

Dated: April 8, 2010.


James Herbsleb, Ph.D.

CERTIFICATE OF SERVICE

I, Gladys Tong, hereby certify that on April 8, 2010, I served the foregoing on the following as noted:

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EXHIBIT G

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES,)
INC.,) Trial Volume 1
)
)
Plaintiff,)
) C.A. No. 08-862-JJF-LPS
v.)
)
FACEBOOK, INC., a)
Delaware corporation,)
)
)
Defendant.)

July 19, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

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BY: PHILIP A. ROVNER, ESQ.

-and-

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1 know, any sort of device like that that is
 2 hooked up to the internet typically has some
 3 kind of a browser.
 4 Q. Now, what are we looking at at
 5 this level?
 6 A. Okay. So what I'm trying to show
 7 here is over on the left hand we have that same
 8 set of five workspaces.
 9 And we're trying to sort of drill
 10 down a little bit on Jim's workspace in the
 11 middle here. So this is what's on the server,
 12 and we're focusing on Jim's workspace.
 13 Over here on the right-hand side,
 14 this is what it looks like to Jim. This is what
 15 it looks like to the user when the user accesses
 16 this workspace. This is one way it could look.
 17 So this is Jim's kind of profile
 18 page. It has some tools that could be,
 19 obviously, many kinds of tools here, but this
 20 just shows, you know, the way that Jim could
 21 access messages.
 22 He could access his calendar. He
 23 could access notes that he's made. He could
 24 access files and upload files.

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1 And down here it shows Jim's
 2 contacts. As we saw before, they're Alice,
 3 Bob, Steve and Betty. And so this has that
 4 workspace, looks like, you know, when Jim's
 5 actually using it.
 6 This is what it shows, him on his
 7 computer.
 8 Q. And how is the data organized on
 9 it with the '761 patented technology?
 10 A. Okay. So I think the easiest way
 11 to show that is by contrasting it with what we
 12 saw over here.
 13 Of course, what we saw over here,
 14 the traditional hierarchial system where you
 15 have to name folders. Then you have to decide
 16 what folder each item goes into.
 17 And we have all these problems we
 18 talked about of, you know, different people
 19 having different sets of folders and being --
 20 how somebody else thinks about their stuff, so
 21 it's hard to find it.
 22 In contrast to that, over here the
 23 '761 technology organizes things very
 24 differently. Here when you create an account on

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1 server, it establishes for you metadata. So
 2 metadata is -- I know it's sort of a confusing
 3 sounding term, when the explanation is also
 4 confusion as well.
 5 Metadata is sort of data about
 6 data, if you will. But, it's really not that
 7 confusing if you think about uploading
 8 something, say a document, or a picture, for
 9 example.
 10 Okay. If I upload a picture, then
 11 that's data.
 12 And I might want to have some
 13 descriptions of that picture. All right.
 14 So I want -- I might want, for
 15 example, to store the fact that I was the one
 16 who uploaded that picture, not somebody else.
 17 And I might want to store the fact that it was
 18 uploaded at 10 o'clock Sunday morning, not some
 19 other time. And there might be other things
 20 that might be useful to store about that
 21 picture.
 22 So those kind of descriptions of
 23 the data are what we call metadata. And in the
 24 '761 technology when I upload something,

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1 automatically this sort of information about who
 2 uploaded it, when it was uploaded, that's what
 3 we call context information. And that updates
 4 the metadata that was established when I started
 5 my account.
 6 That's one of the ways that
 7 metadata gets updated. According to this
 8 technology, also, there's also a tracking
 9 component.
 10 So I can also move from my page to
 11 other people's pages. If I have a link to
 12 Alice, I might want to move over to Alice's
 13 page.
 14 And since my system kind of has to
 15 know where I am, so it kind of tracks my
 16 movements, I can also go over from my page to
 17 Alice's page and access my data from Alice's
 18 page. When I do that, this tracking information
 19 is then used also to update the metadata.
 20 Q. Can you walk through an example
 21 how one can share data using the on-line
 22 networking in collaboration invention of the
 23 '761 patent?
 24 A. Sure. Sure.

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1 All right. So here's sort of the
 2 starting point.
 3 Let's just say that I have kind of
 4 a manilla profile page. I haven't put much up
 5 there yet, so it just says profile page and has
 6 a few tools. And I'd like to upload a photo to
 7 it.
 8 So I might go down here to where
 9 it says file if that's the place that I upload
 10 files. I could click on that and select the
 11 option to upload a photo.
 12 And then it would let me sort of
 13 look around on my computer and find the photo I
 14 wanted to upload. When I found it, excuse me --
 15 when I found it, I would select it. Push a
 16 button that would probably say something like
 17 upload.
 18 And at that point, the picture
 19 would go from my computer. The data would be
 20 copied. Right.
 21 It would be data now on the server
 22 that would represent that picture. Okay. And
 23 it would be in my workspace.
 24 And so that would show up like

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1 this on my on-line workspace. But this is now
 2 really data on the server. This is the copy on
 3 the server as opposed to the one that's on my
 4 local machine. So that's the way I can upload a
 5 photo.
 6 Okay. And as I do that, the
 7 context information, as I mentioned concerning
 8 the picture updates, is used to update the
 9 metadata. So things like, you know, it was I
 10 who uploaded it, and maybe the size of the
 11 picture, and perhaps the time it was uploaded
 12 and other kinds of information are automatically
 13 added over here in the system and metadata is
 14 updated.
 15 So at this point, the picture that
 16 I'm observing and the metadata about that
 17 picture are all on the server.
 18 Q. What's this slide representing?
 19 A. This is another kind of
 20 interaction that I could have in this system.
 21 So here let's assume I am Jim, I might want to
 22 navigate over to Alice's workspace.
 23 So I click on the Alice link here
 24 and it takes me over to Alice's workspace, and

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1 now that I'm at Alice's workspace I might
 2 actually want to access some of my own data over
 3 there.
 4 So here is one reason I might want
 5 to do that. I might want to say leave a message
 6 for Alice, say hey, Alice, check out my new
 7 picture and I could place my picture accessing
 8 data from my workspace. I'm getting a little
 9 carried away, I'm afraid, accessing data from my
 10 workspace and placing it here on Alice's page.
 11 Now at this point, when I actually
 12 place data here, access data from my workspace
 13 while I'm in Alice's workspace, that triggers
 14 the change in metadata that this tracking
 15 information that I am accessing my data from a
 16 different work space, that information is used
 17 to update the metadata. And that's how that
 18 transaction happens.
 19 Q. And all this, the metadata itself
 20 and the context information and the tracking
 21 information, that's all stored on the back end,
 22 correct?
 23 A. That's all stored to the back end.
 24 That's all on the storage component of the

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1 system on this server or some set of servers.
 2 MR. ANDRE: That's all we have,
 3 Your Honor. Thank you.
 4 THE COURT: That's the end of the
 5 direct?
 6 MR. ANDRE: Yes.
 7 THE COURT: Okay. I think that
 8 will be a good place to stop for the day since
 9 we're letting the jury go at 4:30.
 10 Dr. Herbsleb, you can step down at this point.
 11 We'll excuse the jury at this
 12 point. One second, bear with me. There are a
 13 few things I need to tell the jury before I let
 14 you go.
 15 First off, we're starting at nine
 16 o'clock tomorrow morning, so please arrive at
 17 the building in time so that you can be up here
 18 in your seats at nine o'clock.
 19 Also, as I told you before, you're
 20 not to discuss the case with anybody, amongst
 21 yourselves or with anybody else at this point.
 22 I don't know if there will be any
 23 media coverage of this case, but if there is,
 24 you're not to read it or view it. Also, you're

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,	)	Trial Volume 2
)	
Plaintiff,)	
	)	C.A. No. 08-862-JJF-LPS
v.)	
)	
FACEBOOK, INC., a Delaware corporation,)	
)	
Defendant.)	

Tuesday, July 20, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
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-and-

KING & SPALDING
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1 tracking a user as it moves around, and then
 2 generating tracking information as whenever
 3 certain actions happen, like writing on the
 4 wall, joining a group, uploading a photo to an
 5 album and so forth.
 6 Next, And you can see that this
 7 tracking information is also reflected had back
 8 in the original account because there is a news
 9 feed and a MiniFeed which is two ways which this
 10 information is presented to this user. In this
 11 particular case in my original file a note
 12 appears that John wrote on Mary Smith's wall. I
 13 think we're done.
 14 Q. Now, let me ask you some even more
 15 fundamental questions. How do you get to the
 16 Facebook website?
 17 A. How do you get there?
 18 Q. Yes.
 19 A. You open a browser and you type a
 20 URL in the browser, and you actually are sent to
 21 the website.
 22 Q. Do you know the website address?
 23 A. It's www.Facebook.com.
 24 Q. And how do you get to an account?

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1 A. Well, usually when you start
 2 interacting with the Facebook website, if you
 3 don't have an account, if you have never been on
 4 it, or maybe you have an account but you're not
 5 logged in, and therefore you will get a page
 6 that invites you to either join Facebook and
 7 create a new account or to log in with the
 8 account that you already created.
 9 MR. ANDRE: Your Honor, at this
 10 time I'd like to go set up a white board next to
 11 the witness. May I approach?
 12 THE COURT: Yes, you may approach.
 13 MR. ANDRE: Thank you. Is that
 14 okay?
 15 THE COURT: Yeah, as long as the
 16 jury can see it. And Ms. Keefe, if you need to
 17 move so you can get a better view, that's fine.
 18 MS. KEEFE: I'll have to move.
 19 Too many things in the way, Your Honor. Sorry.
 20 BY MR. ANDRE:
 21 Q. All right. Dr. Vigna, let's look
 22 at the claims of the '761 patent that's been
 23 asserted against Facebook.
 24 A. Yes. Okay.

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1 Q. First of all, is your
 2 understanding that in order for a product to
 3 infringe, it must meet all the elements of the
 4 claim?
 5 A. Yes.
 6 Q. Is also your understanding that
 7 you only look to the claims to determine
 8 infringement?
 9 A. Yes.
 10 Q. If you look at the Claim 1,
 11 element one, the context component; do you see
 12 that?
 13 A. Yes.
 14 Q. Can you put the screen up?
 15 Sorry. I realized that she was
 16 standing there. I thought she was going to sit
 17 back down.
 18 MS. KEEFE: I thought you were
 19 going to do something with it.
 20 THE COURT: I think if she -- if
 21 you believe she's going to need to stand, if
 22 you're going to direct us to the board, feel
 23 free to bring a chair over so that you can --
 24 you don't have to stand for the whole time.

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1 MS. KEEFE: Thank you, Your Honor
 2 BY MR. ANDRE:
 3 Q. Dr. Vigna, would you please
 4 briefly describe the elements of Claim 1?
 5 A. So the first element says that
 6 there is a computer-implemented context
 7 component of the network-based system for
 8 capturing context information associated with
 9 user-defined data created by user interaction of
 10 a user in a first context of the network-based
 11 system, the context component dynamically
 12 storing the context information in metadata
 13 associated with the user-defined data, the
 14 user-defined data and metadata stored on a
 15 storage component of the network-based system.
 16 Q. Could you give us a -- your
 17 understanding of what that claim element is
 18 referring to?
 19 A. So this claim element describes in
 20 very technical terms basic concept that there is
 21 a context component. Whenever a user wants to
 22 provide some data, it will capture that data,
 23 plus other data, some context information.
 24 Take both these things and store

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1 them in a storage using a storage component into
 2 metadata which is additional data about a
 3 certain data. Okay.
 4 So it is rather abstract. So it
 5 describes a generic component like that can be
 6 implemented in many different ways, but the gist
 7 of it is that there is some data of a user, for
 8 example, a personal picture and there is
 9 something else that is captured of that
 10 particular environment, which that data is
 11 entered and this information is stored as
 12 metadata on a storage component.
 13 Q. Now, I'd like to show you the
 14 court order for the claim interpretation in this
 15 case. I want to direct your attention to the
 16 term component.
 17 Do you see that?
 18 A. Yes.
 19 Q. Do you recognize this as the order
 20 from the Court interpreting the claims?
 21 A. Yes.
 22 Q. And could you read what the term
 23 component means?
 24 A. So in this document, it say the

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1 term component means a computer-related entity,
 2 either hardware, a combination of hardware and
 3 software, software, or software in execution.
 4 Q. Now, what does that mean to
 5 computer scientists?
 6 A. Well, in this particular case, I
 7 would say --
 8 THE COURT: Hold on. There's an
 9 objection.
 10 MS. KEEFE: Objection. Your
 11 Honor, that's the definition, not what it means
 12 to him. It's what it means to the Court and the
 13 Court's construed it that way.
 14 MR. ANDRE: I'll rephrase it that
 15 way, Your Honor.
 16 THE COURT: Sustained. Sustain
 17 the question.
 18 MR. ANDRE: I will.
 19 BY MR. ANDRE:
 20 Q. When you're talking about
 21 hardware, what's that referring to?
 22 A. Well, it's referring to any kind
 23 of equipment, group of equipment, it could be
 24 one CPU. It could be a CPU on a disk.

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1 It could be an array of disks. It
 2 could be a network system like a distributed
 3 system. It could be even spread across the
 4 nation.
 5 That would be hardware. It's --
 6 it's a composition of hardware elements.
 7 Q. And when you see one skilled in
 8 the art when they see that the word in
 9 combination of hardware and software, what would
 10 that mean to you?
 11 MS. KEEFE: Same objection, Your
 12 Honor. I mean --
 13 THE COURT: We will see counsel at
 14 side-bar.
 15 MS. KEEFE: Your Honor, it's the
 16 Court's claim construction. The Court's claim
 17 construction is what it is.
 18 And it seems like we're trying to
 19 reargue claim construction by redefining what
 20 the construction is.
 21 THE COURT: Mr. Andre?
 22 MR. ANDRE: Your Honor, the claim
 23 construction is determined based on one skilled
 24 in the art. Words in construction have special

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1 meaning to those skilled in the art. I'm just
 2 asking what those words are and what they mean.
 3 THE COURT: I think in this case,
 4 the jury needs some translation into English
 5 essentially to understand the concepts. And
 6 that's my understanding of what these questions
 7 are seeking to elicit, not reconstruing claims.
 8 But just trying to help the jury understand what
 9 it is that the Court's construction says.
 10 MS. KEEFE: I think he's going a
 11 little bit far, Your Honor. We are talking
 12 about words that are supposed to have plain
 13 meaning. This is the definition they propose.
 14 It comes from the patent.
 15 THE COURT: I'm overruling the
 16 objection.
 17 (Conclusion of conference held at
 18 side-bar.)
 19 BY MR. ANDRE:
 20 Q. Dr. Vigna, go back to my previous
 21 question. What does it mean when there's a
 22 combination of hardware and software?
 23 A. Well, usually a combination of
 24 hardware and software is a system that is

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,	)	Trial Volume 3
)	
Plaintiff,)	
	)	C.A. No. 08-862-JJF-LPS
v.)	
)	
FACEBOOK, INC., a Delaware corporation,)	
)	
Defendant.)	

July 21, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

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1 THE WITNESS: If you go down,
 2 next. Next. Next. Again. Again. Okay. You
 3 can see here on the left-hand side that there is
 4 a clear depiction of how the website can be
 5 accessed through your mobile phone which would
 6 be wireless portable device.
 7 Q. And that's on PTX 942 on the Bates
 8 number LTI 157087; correct?
 9 A. Yes.
 10 Q. Let me try with the right exhibit
 11 number this time. Can you turn to PTX-277.
 12 A. I'm just trying to be helpful.
 13 Q. That's a good one, too. I
 14 appreciate that. This is what I was looking
 15 for.
 16 A. Yes.
 17 Q. Have you seen this document?
 18 A. Yes.
 19 Q. And did it inform your opinion as
 20 to Claim 16?
 21 A. Yeah.
 22 Q. And how did it do so?
 23 A. This is a document that describe
 24 the Facebook mobile client that allows to

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1 interact with Facebook through network mobile
 2 device, like a cell phone, for example.
 3 Q. When it talks about the mobile
 4 client provides automatic photo upload from
 5 mobile devices.
 6 A. Correct.
 7 Q. Does that inform your opinion at
 8 all?
 9 A. Yeah. I mean, this is just
 10 facilitating the access through the
 11 functionality of the website by means of cell
 12 phone or wireless portable device.
 13 Q. And based on the documents that
 14 you have shown us here today and the previous
 15 testimony that you have given, do you have an
 16 opinion as to whether or not Facebook infringes
 17 Claim 16 of the '761 patent?
 18 A. Yes, I think Facebook infringes
 19 that claim.
 20 Q. Would you put a check in that box?
 21 A. (Witness complying.)
 22 MR. ANDRE: Your Honor, may I
 23 approach?
 24 THE COURT: You may.

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1 MR. ANDRE: Your Honor, I would
 2 like to move Exhibit 277 into evidence as well.
 3 MS. KEEFE: No objection, Your
 4 Honor.
 5 THE COURT: It's admitted.
 6 BY MR. ANDRE:
 7 Q. Dr. Vigna, I would like to turn
 8 your attention to Claim 21. What type of claim
 9 is Claim 21?
 10 A. So this is a claim that describes
 11 a computer-readable medium for storing
 12 computer-executable instructions for a method of
 13 managing data and then describes the
 14 characteristics of the methods.
 15 Q. What exactly is computer-readable
 16 media?
 17 A. So, anything that can store
 18 information that you can retrieve and that can
 19 be used as part of a computer system. An
 20 example would be a computer disk, it could be
 21 the memory, it could be -- that's pretty much
 22 it. That's what we have. I was thinking about
 23 new technology, and not yet.
 24 Q. And in Facebook's case, where is

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1 the computer-readable media located?
 2 A. On the servers that execute the
 3 code, for example, the computer-readable
 4 instructions are somewhere, so whenever a
 5 request is made that code is retrieved and it's
 6 executed.
 7 Q. And where are Facebook's servers
 8 located?
 9 A. According to what I could read
 10 from the testimony, on a number of servers in
 11 the United States.
 12 Q. And what type of code are on those
 13 servers that Facebook has in California and the
 14 East Coast?
 15 A. I think that there are several
 16 kinds of code. By and large, Facebook is
 17 written PHP, which is this code that I have been
 18 showing you. Of course there is also Sequel
 19 code. There are also other pieces of the system
 20 that are implemented in different programming
 21 language. I mean, a complex system often times
 22 is implemented in different ways with different
 23 subcomponents implemented using different
 24 technologies for a number of reasons; could be

Page 738	Page 740
<p>1 movement of users from between workspaces.</p> <p>2 Q. At the very least, does the</p> <p>3 Facebook website perform substantially the same</p> <p>4 function as Element 4 of Claim 21?</p> <p>5 A. Yes, because it dynamically</p> <p>6 associates data and application in the metadata.</p> <p>7 Q. At the very least, does the</p> <p>8 Facebook website perform substantially the same</p> <p>9 function as Element 5 of Claim 21?</p> <p>10 A. Yes, because it provides indexing</p> <p>11 capability, so that that data can be accessed by</p> <p>12 multiple environments.</p> <p>13 Q. Going back up to the first</p> <p>14 element, at least -- at the very least, does the</p> <p>15 Facebook website perform substantially the same</p> <p>16 way as Element 1 of Claim 21?</p> <p>17 A. Yeah, because it creates data</p> <p>18 through user interactions as it says.</p> <p>19 Q. At the very least, does the</p> <p>20 Facebook website perform in substantially the</p> <p>21 same way as Element 2 of Claim 21?</p> <p>22 A. Yeah, because it dynamically</p> <p>23 associates the metadata the same way.</p> <p>24 Q. At the very least, does the</p>	<p>1 Element 2 of Claim 21?</p> <p>2 A. Yeah, because it dynamically</p> <p>3 associates metadata with the data.</p> <p>4 Q. At the very least, does the</p> <p>5 Facebook website yield the same results as</p> <p>6 Element 3 of Claim 21?</p> <p>7 A. Yeah, because the user is tracked</p> <p>8 from one environment to another, from a</p> <p>9 workspace to another, I should say.</p> <p>10 Q. At the very least does the</p> <p>11 Facebook website yield the same results of</p> <p>12 element four of Claim 21?</p> <p>13 A. Yeah. Because it results in</p> <p>14 ascertaining the data in the application with</p> <p>15 the second user workspace.</p> <p>16 Q. At the very least does the</p> <p>17 Facebook website yield the same results of</p> <p>18 element five of the Claim 21?</p> <p>19 A. Yes. Because it results in</p> <p>20 creating the same data to allow access to</p> <p>21 information.</p> <p>22 Q. At the very least, when we are</p> <p>23 talking about the Doctrine of Equivalents, at</p> <p>24 the very least, does the Facebook website</p>
Page 739	Page 741
<p>1 Facebook website perform in substantially the</p> <p>2 same way as Element 3 of Claim 21?</p> <p>3 A. Yeah, because it tracks the user</p> <p>4 from one workspace to another.</p> <p>5 Q. At the very least, does the</p> <p>6 Facebook website perform in substantially the</p> <p>7 same way as Element 4 of Claim 21?</p> <p>8 A. Yeah, because it dynamically</p> <p>9 associates the data and the application in the</p> <p>10 workspace in the metadata.</p> <p>11 Q. At the very least, does the</p> <p>12 Facebook website perform in substantially the</p> <p>13 same way as Element 5 of Claim 21?</p> <p>14 A. Yeah, because it indexes the data.</p> <p>15 That's a lot of results.</p> <p>16 Q. At the very least, does the</p> <p>17 Facebook websites yield the same results as</p> <p>18 Element 1 of Claim 21?</p> <p>19 A. Yes, because data gets created.</p> <p>20 Q. Are you talking about the data of</p> <p>21 Element 1?</p> <p>22 A. Yeah. Yeah.</p> <p>23 Q. At the very least, does the</p> <p>24 Facebook website yield the same results of</p>	<p>1 infringe under the Doctrine of Equivalents for</p> <p>2 all the reasons you testified to earlier today</p> <p>3 regarding Claim 21?</p> <p>4 A. Yes.</p> <p>5 Q. Would that hold true also for</p> <p>6 Claim 1 and Claim 9 as well?</p> <p>7 A. Yes.</p> <p>8 Q. All right. Now let's turn to the</p> <p>9 last independent claim, Claim 23. Dr. Vigna,</p> <p>10 what kind of a claim is Claim 23?</p> <p>11 A. It describes a system,</p> <p>12 computer-implemented system that facilitates the</p> <p>13 management of data.</p> <p>14 Q. How many elements does this claim</p> <p>15 have?</p> <p>16 A. There are two elements of the</p> <p>17 claim.</p> <p>18 Q. Let's talk about the first</p> <p>19 element, the context component element.</p> <p>20 A. Yeah. I could read it, but mainly</p> <p>21 in laymen's term, there is a context component</p> <p>22 that creates workspace where there are one or</p> <p>23 more application and when these applications are</p> <p>24 used, the context data is associated with the</p>

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1 data uploaded by the user and it's dynamically
 2 stored, this additional context information, as
 3 metadata on a storage component. And the
 4 dynamic -- the metadata is dynamically
 5 associated with the data created in the first
 6 user workspace.
 7 Q. Can you turn back to PTX 942.
 8 This is the screen captures of the presentation
 9 you have been giving; correct?
 10 A. Correct.
 11 Q. Could you show us in I guess the
 12 third use case how Claim 23 is implicated in
 13 these slides?
 14 A. So, you have to go a little
 15 forward because I think -- I don't remember
 16 exactly where the group interaction starts. But
 17 forward, forward, forward, this is writing on
 18 the wall, becoming friends, writing on the wall.
 19 Okay. The first part of this is actually
 20 creating a group. So Mary Smith creates a
 21 group. And next, fills in all the information
 22 about the group that she's going to create.
 23 Q. Is that the group name right here?
 24 A. Italian Food Lovers, yeah, that's

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1 correct. Next. This is things that one can do
 2 about the group. You can go ahead. At this
 3 point Mary Smith actually invites John Vineyard
 4 to participate in the group. Next. And this is
 5 the page of the group itself. And it shows it
 6 has one member. If you go forward.
 7 Here is the home page of John
 8 Vineyard that decides to go to the group's
 9 application that you can see on the left-hand
 10 side, and decides to join the Italian Food
 11 Lovers group. Go ahead.
 12 At this point if you go forward,
 13 you will see that now in the group there are two
 14 people involved in the members, John Vineyard
 15 and Mary Smith. And if you go forward, in this
 16 particular case, you know, John Vineyard is
 17 actually posting a comment on the wall of the
 18 group.
 19 Q. Is this the posting right here?
 20 A. Yeah, that's correct.
 21 Go forward. Go a little forward.
 22 And at this point, go a little forward. There
 23 will be some photos that are updated, first to
 24 the user itself. So go ahead. And this is a

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1 group, a personal album called My Recipes that
 2 is created by the user. It's a quite lengthy
 3 task. But it would be clearer later.
 4 Go ahead. For example, here, I
 5 choose to upload a picture of lasagna. And as a
 6 result of this, of interacting with this, I
 7 uploaded a picture.
 8 Go next.
 9 And show now there is my recipes
 10 is an album with a photo uploaded by me,
 11 Q. At this point you have a photo of
 12 lasagna in your own personal photo album as John
 13 Vineyard?
 14 A. That's correct. Go forward. This
 15 shows that I uploaded a photo and it's been
 16 tracked, create an event. Not relevant at this
 17 point. But let's go forward.
 18 At this point I get to the group
 19 and I click on the group. Next. Okay. Go
 20 next. I mean, click on photos of the group.
 21 And you can see that there are no photos there
 22 for the group. And I decide to add a photo to
 23 the group. So I click on add group photo. And
 24 I choose one of my albums, the recipes. And I

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1 add the selected photo to the group.
 2 Q. How does that -- let me just give
 3 the Bates number for the record of where you
 4 started from. It was approximately --
 5 A. No, go forward. Let me just
 6 finish that and then I can comment on a more
 7 high level. If you go next. These are photo,
 8 if you go next. I commented on the photo saying
 9 this is what I cooked the night before. People
 10 can comment more. But go next. And this shows,
 11 for example, a news feed that this action has
 12 been tracked and has been generating a news in
 13 my personal news feed.
 14 Now, the main idea here, if you go
 15 back to the claim for a second. So there is a
 16 first -- the idea here is that there was a first
 17 user workspace, in this case it's my personal
 18 album and the way I interact with it. And in
 19 this case, the upload application is what allows
 20 me to insert the data into the first album.
 21 And as we seen before, there is
 22 the capturing of context data with the user
 23 interaction. For example, the context data is
 24 when I uploaded this picture on what album and

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES,) Trial Volume 4
INC.,)
)
Plaintiff,)
) C.A. No. 08-862-JJF-LPS
v.)
)
FACEBOOK, INC., a)
Delaware corporation,)
)
Defendant.)

July 22, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
BY: JAMES HANNAH, ESQ.

Counsel for Plaintiff

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715 North King Street - Wilmington, Delaware 19801
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1 '761 patent. When you read it the first time
 2 and perhaps the second and third time as part of
 3 your effort to comprehend what it covered, what
 4 was your initial impression of that patent?
 5 A. Well, my initial reaction is one
 6 of confusion. I found the patent quite
 7 confusing, the language in it.
 8 I found a lot of the language very
 9 vague. I felt like there were, you know, many
 10 terms that were not well defined, and seemed
 11 very similar and were sort of used in a very
 12 loose way.
 13 So, you know, there's things like
 14 webs, and boards, and contexts and environments.
 15 And these are sort of all used interchangeably.
 16 So it took awhile for me to try to
 17 figure out what the patent was trying to
 18 propose, but that was my first reaction.
 19 Q. So in light of that first
 20 reaction, would I be presumptuous to ask you if
 21 you then spent more time studying the patent to
 22 try to really grasp what problem the inventors
 23 thought they were trying to solve?
 24 A. Yeah. So I spent quite a bit of

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1 time working on that and trying to come to some
 2 understanding of it.
 3 I think it helped when I went to
 4 the claims themselves, you know, which are sort
 5 of what matters most, and sort of read them
 6 carefully, and realized that, you know, at the
 7 end of all this, something rather specific and
 8 narrow and precise is described in the patent.
 9 Even in other places, the high-level
 10 descriptions were a bit confusing to me
 11 initially.
 12 Q. Do you have an understanding as to
 13 what the problem was that the invention of the
 14 '761 patent was trying to solve?
 15 MR. ANDRE: Objection, Your Honor.
 16 Outside the scope of this expert's report. He's
 17 an infringement expert.
 18 THE COURT: Okay. Well, the
 19 objection is noted, but overruled subject to the
 20 protocol we've discussed.
 21 You may go ahead, Mr. Rhodes.
 22 BY MR. RHODES:
 23 Q. Let me take a step back. You were
 24 asked to render an opinion on whether or not the

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1 patent infringed; is that right?
 2 A. That's correct.
 3 Q. Yeah. And my question is simply:
 4 When you read the patent, were you able to, in
 5 your own mind, determine what problem you
 6 thought the patent was trying to solve?
 7 A. Yeah, I mean --
 8 MR. ANDRE: Same objection.
 9 THE COURT: Okay. There's no need
 10 to keep noting the objection. The objection
 11 with respect to the protocol we have discussed
 12 is noted as a standing objection.
 13 MR. ANDRE: Thank you.
 14 THE COURT: Okay. You may
 15 proceed, if you have recall the question.
 16 BY MR. RHODES:
 17 Q. Do you have the question?
 18 A. I think -- I think I understand
 19 the gist of the question. I mean, the patent
 20 itself is really rather forthcoming very early
 21 on in describing the problem or the situation
 22 that it seems to think needs addressing.
 23 Q. And what is that?
 24 A. So, you know, the language of the

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1 patent very much feels as if it's addressing
 2 sort of corporate enterprise workflow
 3 environments where the management and tracking
 4 of information is extremely important.
 5 So in the very first couple of
 6 pages the patent the laments the fact that, you
 7 know, in the modern era in large organizations,
 8 people are creating documents, emails, contents,
 9 presentations, and there is all sorts of
 10 pointers to them in all kinds of places, all
 11 kinds of places that are referencing those
 12 documents. And it's hard to sort of keep track
 13 of all this activity. It's hard to sort of keep
 14 track of the context in which a document was
 15 created, sort of what the workflow was if you
 16 like in sort of getting the document from its
 17 initial creation to some later point.
 18 And it sort of laments the fact
 19 that all of this information that sort of is
 20 about the document or should be stored with the
 21 document is scattered in a kazillion different
 22 places that nobody can find and that's sort of
 23 the patent starts by discussing very clearly
 24 that pain, if you like, and then goes on to

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES,) Trial Volume 5
INC.,)
)
Plaintiff,)
) C.A. No. 08-862-JJF-LPS
v.)
)
FACEBOOK, INC., a)
Delaware corporation,)
)
Defendant.)

Friday, July 23, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
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1 disclose every element of the asserted claims of
 2 the 761 patent.
 3 Q. And did you come to an opinion
 4 regarding your second task, whether or not the
 5 patent was valid?
 6 A. Yes, I did.
 7 Q. What was that?
 8 A. As you can see here, I compared
 9 each asserted claim of the 761 patent to a
 10 variety of references, and for the first three
 11 there, we see U.S. patent 6236994. I'll call
 12 this Swartz from now on. Swartz is the inventor
 13 assigned to.
 14 Everything in the asserted claims
 15 was in Swartz, and the iManage 6.0 reference
 16 manual, and I again found all the ideas in the
 17 asserted claims in each and every element of the
 18 asserted claims in the iManage system.
 19 And I also looked at the European
 20 patent application, EP 10873067 AT, which I'll
 21 call Hubert, and I found each and every element
 22 of the asserted claims in the Hubert patent were
 23 in the 761 patent -- I should correct myself.
 24 For Swartz and Hubert. That's each and every

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1 asserted claim except for sixteen.
 2 If you look at these patents in
 3 combination with another patent called Ausems,
 4 then claim sixteen, the idea is also there.
 5 Q. If I understand you correctly,
 6 you're saying that all of the claims would be
 7 invalidated by -- every claim except sixteen
 8 would be invalidated by Swartz or iManage or
 9 Hubert by themselves; is that correct?
 10 A. It's almost correct, except for
 11 sixteen by Swartz or Hubert alone. iManage does
 12 disclose claim sixteen.
 13 Q. And then for claim sixteen, would
 14 claim sixteen be invalid as well?
 15 A. Well, I believe claim sixteen, if
 16 you look at what's in the claim, it would really
 17 be obvious to one skilled in the art to a
 18 practitioner of the day.
 19 Aside from that, it would be
 20 obvious in you combine the Ausems patent with
 21 any one of the other patents.
 22 Q. We'll go into those with detail.
 23 Before we do that, I'd like to
 24 learn about how you went about your analysis.

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1 So what materials you used and what documents
 2 you relied on in coming up with your opinion.
 3 A. Sure. Should I start with the
 4 provisional?
 5 Q. Let's start with the provisional.
 6 What documents did you use in order to come to
 7 your opinion that the provisional did not
 8 disclose all of the elements of the final
 9 patent?
 10 A. For the provisional, I looked only
 11 at the provisional, and I compared all the
 12 material, and I compared that extensively with
 13 what was in the asserted claims of the 7612
 14 patent. I would look at, for example, claim
 15 one, each one of the elements, and I would
 16 search through the provisional application to
 17 see if that idea was there.
 18 Q. And in order to understand what
 19 the claims of the issued patent covered, how did
 20 you do that? Did you have any documents that
 21 educated you as to what the language of the
 22 claims meant?
 23 A. Yes, the Court construed certain
 24 terms that was in the 761 patent, so I followed

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1 that definition when they were there.
 2 If the Court did not construe or
 3 define any terms, I went to the patent itself to
 4 see if they provided a definition.
 5 If they did not provide a
 6 definition, I used the definition that would be
 7 known to one skilled in the art.
 8 These slides are bit of evidence
 9 back up.
 10 Q. I think you were saying if there
 11 wasn't a definition provided by the Court, you
 12 used the patent itself to find the definition or
 13 you used what one of ordinary skill in the art
 14 would use.
 15 A. That's correct.
 16 Q. What is one of ordinary skill in
 17 the art in computer science in this case?
 18 A. One of ordinary skill in the art,
 19 as I believe, is somebody with a bachelor of
 20 science in computing science or computer
 21 engineering or equivalent and a couple years of
 22 experience.
 23 I kind of know what students can
 24 do as soon as they graduate, and you need a

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1 ask.	1 A. That's what it looks like.
2 A. Yeah.	2 Q. And because the Patent Office on
3 Q. So your interpretation is wherein	3 the claim wanted the claims written this way,
4 means as a consequence, you can do this?	4 wouldn't a reasonable interpretation be that the
5 A. Yes.	5 dynamically updating happens in which user
6 Q. It doesn't mean in which or during	6 accesses data from the second context?
7 which; correct?	7 MS. KEEFE: Objection.
8 A. It means -- well, let me see this.	8 THE COURT: Hold on.
9 Well, so when I say it has a consequence, it	9 MS. KEEFE: Objection, Your Honor.
10 could be during or after, right, it says	10 Goes to issues we discussed before.
11 wherein. So --	11 THE COURT: Sustained.
12 Q. I want to make sure I get your	12 BY MR. ANDRE:
13 understanding. Now, you have looked at the	13 Q. If you go to the last page of the
14 prosecution history in this case; correct?	14 examiner's amendment, you see Page 683?
15 A. Yes, I have.	15 A. Mm-hmm.
16 Q. Okay.	16 Q. And you see the examiner's name
17 A. It's been quite awhile now.	17 here?
18 Q. Okay. And if you go to PTX 2, and	18 A. I do.
19 you go to Bates Number 668. Dr. Greenberg, this	19 Q. Diane Mizrahi?
20 is the Notice of Allowance of the '761 patent;	20 A. Yes.
21 correct?	21 Q. Go to PTX 1 and go up here to this
22 A. It looks like it.	22 column here.
23 Q. If you go to the next page, you'll	23 Now, Ms. Mizrahi cited certain
24 see that the examiner of the '761 patent put in	24 exhibits here, certain references against the
Page 1580	Page 1582
1 an amendment. Do you see that?	1 '761 patent; correct?
2 A. I see it.	2 A. That's correct.
3 Q. Okay. Basically saying that	3 Q. And you saw the fact that like the
4 changes and additions being unacceptable, the	4 Swartz reference was not listed there; right?
5 applicant can appeal whatever. But this is the	5 A. That's correct.
6 basis for allowance; correct?	6 Q. Now, the implication from you
7 A. I'm not sure what you mean.	7 pointing that out is that Ms. Mizrahi or Mizrahi
8 Q. Well, that's okay. It may be more	8 -- I'm probably butchering her name here -- she
9 of a legal question.	9 was not aware of Swartz here and didn't put it
10 A. Yeah.	10 here; right? That is the implication?
11 Q. Any way the examiner is going to	11 MS. KEEFE: Objection?
12 amend the claims correct?	12 THE WITNESS: Well, what I said --
13 A. Okay.	13 THE COURT: Hold on.
14 Q. All right. So go to the next	14 MS. KEEFE: Objection, Your Honor.
15 page.	15 THE COURT: Sustained.
16 And the examiner here put in	16 BY MR. ANDRE:
17 language that talks about dynamically updating	17 Q. You're aware, of course, that the
18 the stored metadata wherein the user accesses	18 examiner was aware of the Swartz patent;
19 the data from the second context; correct?	19 correct?
20 A. I see that. Yes.	20 MS. KEEFE: Objection, Your Honor.
21 Q. And the examiner got rid of the	21 THE COURT: Sustained. Move on,
22 term and automatically updating the stored	22 if you have something else you can do in two
23 metadata. Based on the change, just by itself,	23 minutes.
24 she put those two elements in; correct?	24 BY MR. ANDRE:

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1 and reduction to practice. They're all centered
 2 around similar disputes about how to get the
 3 right language in, and part of this goes to
 4 whether or not the provisional discloses enough
 5 of the invention so we get that priority date.
 6 THE COURT: I think I understand
 7 those issues.
 8 MS. KOBIALKA: Okay. So then we
 9 should have put chapters in this thing.
 10 Then the next dispute was 4.5 that
 11 I was going to address. They have inherency
 12 instruction that they would like. This is on
 13 page 128.
 14 Inherency has not been an issue
 15 that any expert has opined on. We kept going
 16 back and forth. Why are we giving an
 17 instruction on inherency if there isn't any
 18 evidence to it? So they didn't want to strike
 19 it. That is the core of that dispute.
 20 THE COURT: Just being mindful of
 21 the time, I'm going direct you to one issue that
 22 would be helpful to me and then let's move to
 23 Mr. Andre, to his issue.
 24 And level of ordinary skill and

Page 1612

1 whether I need an instruction directing the jury
 2 as a functional matter that they're supposed to
 3 determine that. What is your position?
 4 MS. KOBIALKA: That there does
 5 need to be an instruction, and the jury makes
 6 that determination, what constitutes one of
 7 ordinary skill in the art.
 8 THE COURT: Facebook is of the
 9 view that the Court has determined what a person
 10 of ordinary skill in the art is. Do you have an
 11 idea what that is?
 12 MS. KOBIALKA: I think they're of
 13 the view that you're supposed to decide that and
 14 tell the jury what that is. I know there were
 15 issues about on-sale bar and public use. There
 16 were elements missing. Mr. Rovner was going to
 17 address that. I don't want to shortchange him
 18 on that. He's been preparing.
 19 THE COURT: Mr. Rovner. Is he
 20 here?
 21 MR. ANDRE: He stepped back, Your
 22 Honor.
 23 THE COURT: We'll come back to him
 24 if I need to.

Page 1613

1 Let's hear from Mr. Andre, and
 2 then I want to give Facebook some time.
 3 MR. ANDRE: Your Honor, on the
 4 contributory infringement, it's a pretty
 5 standard instruction. I don't see anything
 6 extraordinary about the points, puts out the
 7 elements as set forth, looks like Facebook wants
 8 to insert the statute into the instruction to
 9 some degree, and I don't think that's necessary
 10 or appropriate at this point.
 11 I don't see the big issue here
 12 because the Thrasher case has come out and
 13 determined that any type of contributory
 14 infringement to the patent requires a product in
 15 the stream of commerce, and then you have three
 16 elements set for most part.
 17 THE COURT: Let me turn it over to
 18 Facebook at this point. Feel free to address
 19 any of the issues that have been raised or
 20 others if you think there are others that are
 21 important, and basically we have up to
 22 twenty minutes because I do want to leave the
 23 last five minutes to hear from Leader.
 24 MR. WEINSTEIN: There's only two

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1 issues to address. The most critical ones on
 2 jury instruction, 3,4.
 3 Your Honor, I'd like to hand up a
 4 portion of some of the transcript from the trial
 5 to illustrate why we need an instruction that
 6 "wherein" does not mean when.
 7 THE COURT: You've already cited
 8 pretty extensively in your support, which we
 9 looked at, so in the spirit of compromise,
 10 construing at this late moment the term
 11 "wherein" to mean in which, which has been
 12 agreed to by Leader, is not satisfactory to you?
 13 MR. WEINSTEIN: It isn't, Your
 14 Honor. The problem with in which, Your Honor,
 15 they're going to make the exact, same argument
 16 what I heard today, is they think this is a
 17 factual issue to go to the jury.
 18 When I read the '02 Micro case
 19 last night, I was haunted how similar that case
 20 is to this. There was a claim term only if like
 21 there. This case, they presented witnesses and
 22 cross-examined witnesses on what do you think
 23 this term means.
 24 What ultimately came down and the

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	Trial Day 6
)	
Plaintiff,)	
	)	C.A. No. 08-862-JJF-LPS
v.)	
)	
FACEBOOK, INC., a Delaware corporation,)	
)	
Defendant.)	

Monday, July 26, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD F. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
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BY: LISA KOBIALKA, ESQ.
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<p>1 A. Okay. Good.</p> <p>2 Q. Could you just generally and</p> <p>3 briefly describe what your understanding of what</p> <p>4 Claim 1 covers?</p> <p>5 A. All right. So what you called the</p> <p>6 context component, we have to go back to the</p> <p>7 claim construction order to understand what's</p> <p>8 meant by context here.</p> <p>9 And the claim construction order</p> <p>10 says that a context is environment. So an</p> <p>11 environment is, you know, what I've been calling</p> <p>12 a workspace. It is a place that has -- you</p> <p>13 know, lets a user do some work, contains the</p> <p>14 things that the user needs to do something.</p> <p>15 So what the first element is</p> <p>16 saying is that the '761 invention has a context</p> <p>17 component, so it has that kind of a workspace.</p> <p>18 And one of the things that it does is to use</p> <p>19 that context data to sort of update metadata</p> <p>20 every time you use or upload something to your</p> <p>21 workspace.</p> <p>22 So by uploading something, the</p> <p>23 context component will attach some -- will use</p> <p>24 that context information to update your</p>	<p>1 a few examples of that. Does that sound right?</p> <p>2 A. Yes.</p> <p>3 Q. Okay. So if we take a look at the</p> <p>4 summary of the invention here, I believe it's</p> <p>5 Paragraph 16.</p> <p>6 Would you please explain what this</p> <p>7 tells you and how it relates to the claims of</p> <p>8 the '761 patent?</p> <p>9 A. Okay. As you can see, it says</p> <p>10 that the tool automatically stores contextual</p> <p>11 information relating to an item of communication</p> <p>12 and utilizes that contextual -- I believe the</p> <p>13 words information is missing from performance of</p> <p>14 communication tasks.</p> <p>15 So that tells me that it's storing</p> <p>16 this contextual information and using it later.</p> <p>17 So it's stored in some permanent kind of form.</p> <p>18 Q. And is there anything in the code</p> <p>19 that's also helpful with respect to the context</p> <p>20 component element of Claim 1?</p> <p>21 A. I think there are a couple of</p> <p>22 things that are helpful.</p> <p>23 Q. If you turn to the first page of</p> <p>24 the code, I think it will --</p>
Page 1753	Page 1755
<p>1 metadata.</p> <p>2 So the second element is a</p> <p>3 tracking component. Again, this sort of keeps</p> <p>4 track of a user moving from one workspace to</p> <p>5 another, if you will.</p> <p>6 And what this element says that</p> <p>7 when a user works -- moves from one workspace to</p> <p>8 another, and then accesses from the second</p> <p>9 workspace, accesses data that was uploaded into</p> <p>10 the first workspace, it updates the metadata</p> <p>11 with that tracking information about that</p> <p>12 action.</p> <p>13 Q. Why don't we turn to the</p> <p>14 provisional application PTX 3.</p> <p>15 A. Okay.</p> <p>16 Q. And see where these elements are</p> <p>17 described. Now, does the entire provisional</p> <p>18 application inform your opinion that each of the</p> <p>19 elements of the asserted claims are disclosed in</p> <p>20 the provisional?</p> <p>21 A. Yes. Reading this as a whole, it</p> <p>22 -- well, it's responsible for my opinion that it</p> <p>23 does disclose all the elements.</p> <p>24 Q. So right now we'll just go through</p>	<p>1 A. Right. All right.</p> <p>2 So if you look at these import</p> <p>3 statements, these import statements represent</p> <p>4 taking code that's, you know, common code class</p> <p>5 libraries, code that exists sort of outside and</p> <p>6 imports them into this application.</p> <p>7 So this is very common in most</p> <p>8 programming languages. You have certain --</p> <p>9 certain kind of sort of boiler plate codes.</p> <p>10 Things are used all the time over and over and</p> <p>11 over again.</p> <p>12 And usually you just take those</p> <p>13 common things and import them for use in your</p> <p>14 own application. Now, what's interesting is</p> <p>15 that by looking at the kinds of things that get</p> <p>16 imported here, you know, you can get a pretty</p> <p>17 good idea of some of the things that the</p> <p>18 application is doing.</p> <p>19 So if we look at the fourth and</p> <p>20 fifth lines where it says import com, you know,</p> <p>21 persist and persist.vbsf. So that tells us that</p> <p>22 there's some form of persistent storage here.</p> <p>23 And vbsf, in particular, is a</p> <p>24 middleware package that makes it easier to store</p>

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1 A. Right.

2 Q. And the next element is

3 dynamically associating the data and continues

4 on through and says and data from the second

5 user workspace. And do you see that?

6 A. Mm-hmm.

7 Q. That will be Claim 4 or element

8 four of Claim 21.

9 And finally, the last element

10 which is indexing the data, and it ends with

11 from a corresponding plurality of different user

12 workspaces; right?

13 So I'll refer to that as element

14 five.

15 A. Okay.

16 Q. Can you explain how Claim 21 is

17 different than the claims we've already talked

18 about?

19 A. Well, Claim 21 is again very

20 similar, although it talks about a

21 computer-readable medium for storing

22 instructions. But the elements of the claim are

23 very similar to what we've seen before. It does

24 again mention indexing down at the end.

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1 It describes a context component.

2 It describes a tracking component.

3 So, you know, for the reasons that

4 I've described before, these are disclosed in

5 the provisional application for exactly the same

6 citations and uses.

7 Q. With respect to indexing the

8 data, --

9 A. Mm-hmm.

10 Q. -- that particular element, is

11 there a place that we can look to in the

12 provisional application in the code that might

13 be helpful that informs your opinion that all

14 the elements of Claim 21 are, in fact, disclosed

15 in the provisional?

16 A. Yeah. I think I would point us

17 back to the same place we looked at before in

18 terms of when we looked at indexing, when we see

19 that relational database is being used to store

20 the data and to store the metadata. And it just

21 would not be sensible to do that any way except,

22 you know, by indexing.

23 That's just almost essential,

24 otherwise it would take forever to sort of go

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1 through everything to see if it's there. You

2 would just naturally do this.

3 Q. And for the record, are you

4 referring to what has LTI 758 at the bottom

5 there?

6 A. Yes. Yes, that's what I'm

7 referring to.

8 Q. Okay. We're in the last set of

9 claims. Let's look at Claim 23, 25, 31 and 32.

10 A. Okay.

11 Q. And as soon as we have that up,

12 Can you generally describe what Claim 23

13 discloses and how it's different than what we've

14 already talked about?

15 A. Well, so what claim -- so we're

16 looking at 23. Okay.

17 So this is now

18 computer-implemented system. This is again, you

19 know, basically describing a context component,

20 but it says now it's on a web-based server,

21 okay, which is a little bit different

22 terminology than has been used so far.

23 And it also talked about assigning

24 one or more applications to the first user

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1 workspace and capturing context associated with

2 the user interaction while in that workspace.

3 So that's a little bit different than what we

4 see.

5 The second element describes

6 tracking change information, right, which is a

7 little bit different associated with a change in

8 access of the user from the first workspace to

9 the second user workspace and dynamically

10 storing the change on the storage component as

11 part of the metadata, wherein the user accesses

12 the data from the second user workspace.

13 So this describes slightly

14 differently, but this is very similar to the

15 tracking component that we've looked at already.

16 Q. Okay. So we can refer to Claim

17 23, the two elements. The first element being

18 the context component that would be the entirety

19 of the element and the second element being the

20 tracking component, meaning the remainder of the

21 claim; is that fair?

22 A. Yes, that makes sense.

23 Q. Okay. Could you provide an

24 example in the provisional application where it

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
	)	PUBLIC VERSION
FACEBOOK, INC.,)	
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

**DECLARATION OF RYAN HOPKINS IN SUPPORT OF PLAINTIFF LEADER
TECHNOLOGIES, INC.'S OPPOSITIONS TO DEFENDANT FACEBOOK, INC.'S
RENEWED MOTIONS FOR JUDGMENT AS A MATTER OF LAW**

VOLUME 1 – EXHIBITS 1-25

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*Attorneys for Plaintiff and Counterdefendant
Leader Technologies, Inc.*

Dated: September 15, 2010
Public Version: September 22, 2010

I, Ryan Hopkins, hereby declare as follows:

1. I am an attorney with the law firm King & Spalding LLP, counsel for Plaintiff Leader Technologies, Inc. I have personal knowledge of the facts set forth in this declaration and can testify competently to those facts. I make this declaration in support of Plaintiff Leader Technologies, Inc.'s Oppositions to Facebook, Inc.'s Renewed Motions for Judgment as a Matter of Law ("Leader's Oppositions to Facebook's JMOL Motions").

2. Attached hereto is a true and correct copy of documents referenced in Leader's Oppositions to Facebook's JMOL Motions:

Exhibit	Trial Exhibit	Description
1	PTX 1	U.S. Patent No. 7,139,761, bearing bates numbers LTI 000001-31
2	PTX 145	Facebook Wiki Page, bates numbered FB00109890-91
3	PTX 180	Facebook Wiki Page, bates numbered FB00109965-66
4	PTX 190	Facebook Wiki Page, bates numbered FB00109982-83
5	PTX 191	Facebook Wiki Page, bates numbered FB00109984-87
6	PTX 208	Facebook Wiki Page, bates numbered FB00110029
7	PTX 252	Facebook Wiki Page, bates numbered FB00110111-12
8	PTX 269	Facebook Wiki Page, bates numbered FB00110138-39
9	PTX 277	Facebook Mobile Client, bates numbered FB00110536-43
10	PTX 300	Facebook Pages, bates numbered FB00112895-904
11	PTX 302	Politician Users Guide To Facebook, bates numbered FB00113052-71
12	PTX 341	Facebook Wiki Page, bates numbered FB00113847

Exhibit	Trial Exhibit	Description
13	PTX 628	Facebook Website Pages, bates numbered LTI 000717-24
14	PTX 629	Facebook Website Pages, bates numbered LTI 000770-80
15	PTX 882	Facebook Website Pages, bates numbered LTI 156866-70
16	PTX 886	Facebook Website Pages, bates numbered LTI 156902-05
17	PTX 904	Facebook Website Pages, bates numbered LTI 156964-67
18	PTX 906	Facebook Website Pages, bates numbered LTI 156970-72
19	PTX 907	Facebook Website Pages, bates numbered LTI 156973
20	PTX 911	Facebook Website Pages, bates numbered LTI 156982-87
21	PTX 920	Facebook Website Pages, bates numbered LTI 157010-11
22	PTX 942	Facebook Website Screenshots, bates numbered LTI 157081-137
23	PTX 1000	Facebook Statement of Rights and Responsibilities, bates numbered LTI 157155-57
24	PTX 1001	Facebook's Privacy Policy, bates numbered LTI 157158-61
25	DTX 919	U.S. Patent No. 6,236,994 ("Swartz")
26	DTX 922	European Patent Application No. EP 1 087 306A2 ("Hubert")
27	DTX 1010	iManage DeskSite 6.0 User Reference Manual

Exhibit	Trial Exhibit	Description
28		Transcript of Trial Proceedings, Pages 244, 473-493, 506-829, 862-863, 883-884, 914-916, 969-973, 1003, 1074, 1142, 1387-1878, 1884, 1923-24
29		Chart of Testimony Supporting Literal Infringement of the '761 Patent
30		Chart regarding Dr. Giovanni Vigna's Testimony Compared to His Expert Report
31		Chart of Dr. James Herbsleb's Testimony Supporting Validity of the '761 Patent
32		Email from counsel for Leader, James Hannah, to counsel for Facebook, Jeff Norberg, dated August 26, 2010
33		Deposition transcript of Saul Greenberg taken April 30, 2010, Page 192
34		Letter from Melissa Keyes to James Hannah regarding Autonomy document production, dated November 20, 2009
35		USPTO Office Action from the reexamination proceedings of U.S. Patent No. 7,139,761, dated May 21, 2010
36		Expert Report of Dr. Giovanni Vigna, dated April 8, 2010

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on September 15, 2010 in Redwood Shores, California.


 Ryan Hopkins

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 22, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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EXHIBIT 9

Facebook Mobile Client (Version 1.0 Verizon)

The Facebook Mobile Client will allow users to interact with the Facebook web application via the installation and usage of rich client software on a networked mobile device with imaging and phonebook functionality.

Product Overview

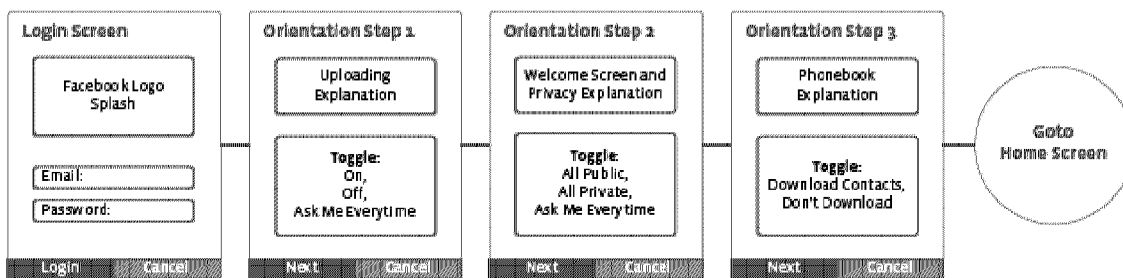
The Facebook Mobile Client provides automatic photo upload from mobile devices to Facebook servers as well as phonebook integration.

Client Download

There will be several alternative ways in which a user may discover and download the Facebook Mobile Client. For Verizon subscribers, users will download the FMC from the Verizon menu (“Get it Now”).

First Login

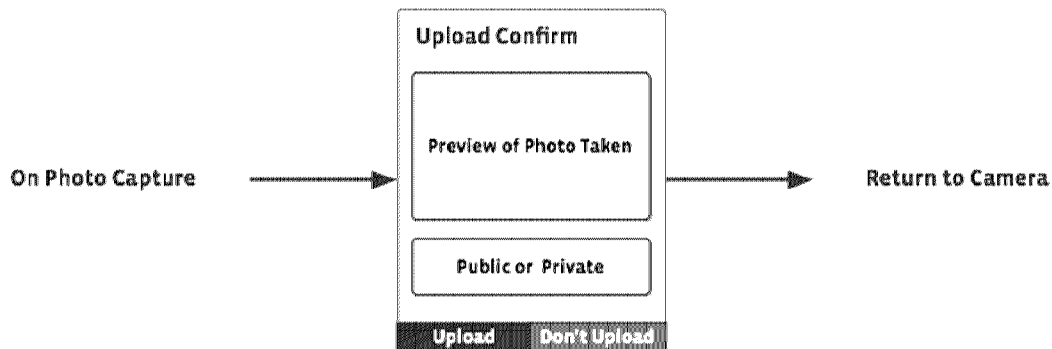
1. User lands on Login screen and receives one-time prompt to enter Facebook Email and Password. Note: User will always remain logged-into the client and will not be presented again with the Login screen unless they explicitly select “Logout” from the Option menu.
2. User selects Login button and enters Orientation workflow.
 - a. Welcome message
 - b. Walk-through Preferences options. Default preferences are: “On” for Upload, “All Public” for Privacy, and “Download Contacts” for Phonebook. (Note the following logic for Orientation: If user selects “Off” Upload option, Step 2: Privacy explanation is not shown. Also, if user selects “Cancel” during Orientation at any time, they are taken to the photo gallery page and the following default settings are applied for any Setting option(s) that they might have skipped. If not set, the Upload Setting will be set to “Ask Me Everytime”, the Privacy Setting to “All Public” and the Phonebook Setting to “Don’t Download.”)
 - c. Phonebook explanation and option to “Download Contacts”.



Plaintiff's Trial Exhibit
PTX-277
 Case No. 08-CV-00862

Photo Upload Process

1. User takes photo using native camera application.
2. Client instantly detects new photos.
3. If user has elected to always upload and privately, photo is added to gallery and appears as private photo in mobile album on site.
4. If user has elected to always upload and publicly, photo is added to gallery and appears as public photo in mobile album on site.
5. If user has elected the “Ask Every Time” Upload option and any one of the three privacy options, photo is added to gallery and client displays preview of photo with the option to upload public or privately, or not upload.



- a. If privacy setting is set to “All Private”, “Private” option is default selected.
 - b. If privacy setting is set to “All Public”, “Public” option is default selected.
 - c. If privacy setting is set to “Ask Me Everytime”, “Public” option is default selected.
6. If user has elected to not upload, photo is simply added to gallery.
 7. If photo is in the process of uploading, photo is marked as uploading in the gallery.
 8. If upload is successful, photo is marked as uploaded privately or publicly in gallery.
 9. If upload fails, photo is marked as failed in gallery with error message “Your photo upload has failed. Do you want to try again?” at the top of the gallery page. User will only see this notification if they navigate to the photo gallery page.

Photo Gallery

PixSense Gallery will display all photos that are currently residing on the user's handset. This includes:

1. Photos not uploaded
2. Photos that failed to upload
3. Photos uploaded publicly
4. Photos uploaded privately
5. Photos that are in the queue.

User can view and manage these photos from the photos gallery, the default client homepage. The gallery will display thumbnails of all photos in order of recency from top left to bottom right. For a standard phone screen, 9 photo thumbnails will display onscreen at a time. Each photo will have a graphic to indicate the status of the photo (i.e. private, public, failed, in queue). If the photo is not uploaded, the photo has no graphic.

From photos gallery view, thumbnail of most recent photo is default selected. User can navigate gallery to select any other single photo thumbnail. With regard to media stats, when a photo is highlighted, show the date and time of the photo in the first row, and the Status in Text followed by the Page number/Total pages in the second row.

From this page, user can click on the Options button for the following menu options:

Not Uploaded	Uploaded Privately	Uploaded Publicly	Failed Upload
Open	Open	Open	Open
Upload	Make Public	Delete	Retry
Delete	Delete	Settings	Delete
Settings	Settings	Logout	Settings
Logout	Logout	About/Help	Logout
About/Help	About/Help		About/Help

Individual Photo View

User can see an enlarged view of a photo thumbnail by clicking on the selected thumbnail or selecting “Open” from the Options menu.

As per PixSense suggestion with regard to media stats, show the date and time of the photo in the first row, and the Status in Text followed by the Page number/Total pages in the second row.

From this page, user can click on the Options button for the following menu options:

Not Uploaded	Uploaded Privately	Uploaded Publicly	Failed Upload
Upload	Make Public	Delete	Retry
Delete	Delete	Settings	Delete
Settings	Settings	Logout	Settings
Logout	Logout	About/Help	Logout
About/Help	About/Help		About/Help

Website

If user has elected to upload photo publicly, photo will appear as public photo in the Mobile Uploads album on site.

If user has elected to upload photo privately, photo will appear as a private photo in the Mobile Uploads album on site.

Menu Options

Below is a comprehensive list of all available menu options and the action taken when selected.

<p>Open - Selected photo appears in individual photo view.</p>
<p>Upload – Depending on the user’s Upload and Privacy settings:</p> <ul style="list-style-type: none"> • If set to the “On” Upload option and the “All Private” Privacy option, selected photo will be automatically uploaded to Facebook website as a private photo and marked as private in the client gallery. • If set to the “On” Upload option and the “All Public” Privacy option, selected photo will be automatically uploaded to Facebook website as a public photo and marked as public in the client gallery. • If set to the “Ask Me Everytime” Upload option and the “All Private” Privacy option, client displays preview of photo with the option to upload privately default selected.. • If set to the “Ask Me Everytime” Upload option and the “All Public” Privacy option, client displays preview of photo with the option to upload publicly default selected.. • If set to the “Ask Me Everytime” Upload option and the “Ask Me Everytime” Privacy option, client displays preview of photo with the option to upload publicly default selected..
<p>Make Public – Selected private photo becomes a public photo on the Facebook website and is marked as public in the client gallery.</p>
<p>Retry – Selected failed photo is added to upload queue.</p>
<p>Delete – Selected photo is deleted from the client gallery.</p>
<p>Settings – User lands on Settings page.</p>
<p>Logout – User lands on Login screen.</p>
<p>About/Help – User lands on About/Help page.</p>

Settings Management

Client

User can edit the application settings from the client device by navigating to the Settings page from the Options menu.

User can elect to not upload all photos automatically in cases where cost, bandwidth, or visibility is an issue. User may elect to be shown a prompt before each photo is uploaded and choose whether to upload publicly, privately, or not upload. Finally, user may elect to turn the phonebook on or off, or invoke a manual update.

In this regard, the Settings page has three Settings options (Privacy, Upload and Phonebook.) Selecting any of these options will display the following toggles:

Upload Settings	Privacy Settings	Phonebook Settings
Always Upload	Always Private	Update Now
Never Upload	Always Public	Remove Updates
Ask Me Everytime	Ask Me Everytime	

The following settings are default selected: “Ask Me Everytime” for Upload Settings, “Always Public” for Privacy Settings, and “Update Now” for Phonebook Settings.

Phonebook Integration

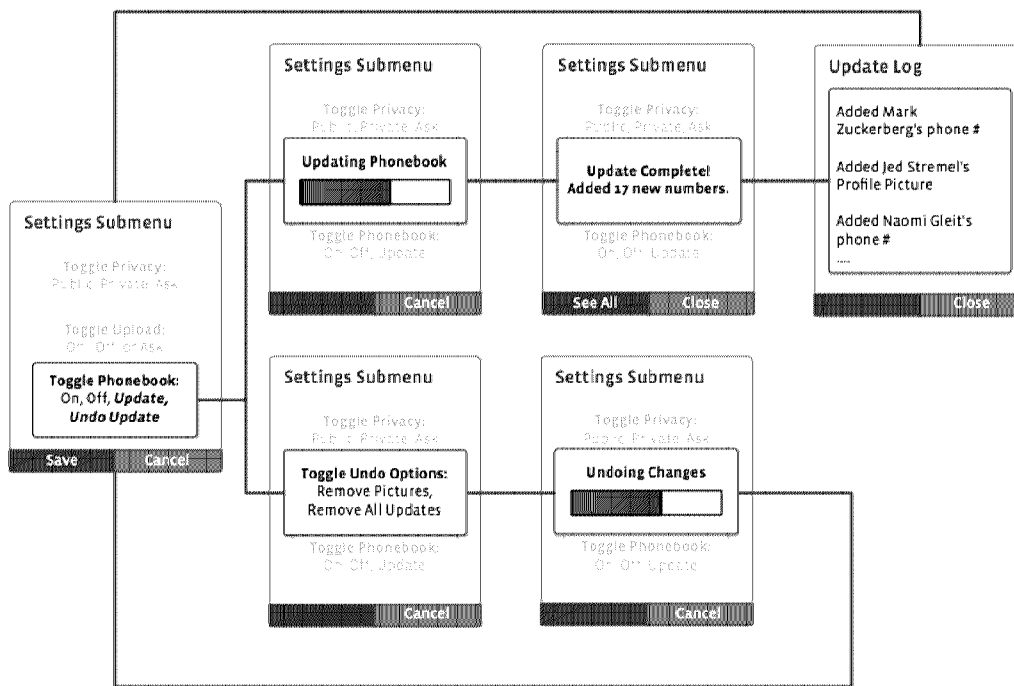
The user is able to sync contact information from their device phonebook onto a Facebook server and populate contact information from Facebook into their device phonebook. The application will also attach Facebook profile photos to phonebook entries for corresponding contacts.

Updates on the Facebook website should be propagated to the device when the user manually invokes this function during Orientation and/or from the Phonebook options on the Settings page.

Facebook will flag information that has been assigned by the user vs. information populated by the application. Information assigned by the user will never be overwritten, whereas information assigned by the application will be always be updated. Verizon users will be identified in phonebooks by a watermark (In Network Logo) on their profile picture.

Upon selecting "Update Now", user will see a progress bar and a button option to "Cancel." Upon successful update, user will be notified of the number of contacts added and/or modified and have button options to "See All" and "Exit". If Update fails, ask either to "Try Again" or "Cancel".

User can also select to "Remove Updates" from the Phonebook Settings page. Upon selecting this option, user will be presented with two sub-options "Remove Added Pictures Only" and "Remove All Phonebook Updates". Selecting "Remove Added Pictures Only" will remove all added profile pictures. "Remove All Phonebook Updates" will remove all facebook added fields. "Remove Added Pictures Only" is the default selected.



About

[insert About content – Naomi]

Help

[insert Help content – Naomi]

EXHIBIT 8

Using Activity Streams to Read User Data

Facebook syndicates users' streams, including content from both the News Feed and the Wall. Your applications and sites can read and display the stream in your application or site. One way you can do this is through the open Activity Streams standard, which gets sent to you as an Atom feed.

For information about streams, read Using the Stream API.

Before you can get stream content, the user must have granted your application or site `read_stream` extended permission. See Prompting for Permission to Access Streams for details on the permission.

Once the user has granted the permission, you can get that user's stream from the following URL:

`http://www.facebook.com/activitystreams/feed.php`

Reading the User's Stream

To read the user's stream with the intention of displaying it on your application or site, you would construct the URL with the following parameters:

`http://www.facebook.com/activitystreams/feed.php?source_id=<user-id>&app_id=<yourApplicationId>&session_key=<session_key>&sig=<checksum-slash-signature>&v=0.7&read&updated_time=<UnixTime>`

The GET parameters you need to append to the URL are:

- `source_id`: The user ID of the user whose stream you are accessing.
- `app_id`: Your application's ID.
- `session_key`: The active session for the current user.
- `sig`: A signature verifying that the request is coming from your application.
- `read`: A parameter whose presence dictates that your application is pulling the user's stream, provided your application has permission to do so.
- `updated_time`: (optional) If you include this parameter with your request, Facebook will only include posts created after that specified time. Specify this parameter as Unix time.

You must pass these GET parameters with the URL. Facebook ignores any other parameters you pass.

The `sig` parameter in particular is necessary so Facebook can easily verify the source of the HTTP request and trust that the user's stream is truly being sent to a known Facebook Connect site or Platform application.

The signature is an MD5 hash of a string involving the application ID, the source ID, the session key, and the application secret (or the session secret if you have a desktop application or you don't want to pass the application secret). You can get a session secret by calling `auth.getSession` and setting `generate_session_secret` to true.

For example, if the user ID is 44444, your application ID is 12345, your active session key is BBBB, and your application secret is WWWW, then the signature needs to be the MD5 hash of:

```
app_id=12345session_key=BBBBsource_id=44444WWWWW
```

The MD5 hash of `app_id=12345session_key=BBBBsource_id=44444WWWWW` is `9d27f75779c650e5769d64f28b7b7e4e`, so the actual URL you would pass in this case would be:

`http://www.facebook.com/activitystreams/feed.php?source_id=44444&app_id=12345&session_key=BBBB&sig=9d27f75779c650e5769d64f28b7b7e4e&v=0.7&read`

Desktop applications should compute signatures precisely the same way, except that the session secret should be used instead of the application secret.

Response Codes

Like most HTTP responses, Facebook Activity Streams responses include a response header, which always includes a traditional response code and a short response message. The supported response codes include:

- 200 Code provided whenever the Facebook servers were able to accommodate the request and provide a response.
- 304 Code provided whenever the request header included `If-Modified-Since` and no new posts have been generated since the specified time. "Note:" Code 304 will never be returned if `If-Modified-Since` isn't included in the request header.
- 401 Code provided whenever the URL omits one or more of the required parameters.
- 403 Code provided whenever the URL is syntactically valid, but the user hasn't granted the required extended permission.
- 404 Code provided whenever the URL is syntactically valid, but the signature is incorrect, or the session key is invalid.

What Data Applications Can Republish

Once you pull the user's stream, you can republish this content on your site or in your application. The types of user posts that your application can republish depends upon the privacy setting the user applied to each specific piece of content. The types of content currently available include:

- Status updates and shared items, only if privacy is set to friends, friends of friends, networks, or everyone
- Videos, only if privacy is set to everyone
- Photos, only if privacy is set to everyone
- Links, only if privacy is set to everyone
- Notes, only if privacy is set to everyone

Any posts you publish using this content are built on the Atom feed framework. See some examples below.

Note: At this time, the Activity Stream feed contains posts that were generated by user-created content, but not by applications.

Sample Activity Stream Entries

The following entry represents a post generated because a user, Snapshot Smith, uploaded a single photo to her Wall. Most of the content within the `<entry>` tag is traditional Atom, and is the very material that all popular Atom readers like Google Reader and NewzCrawler use to render the content. The `<activity.verb>` and `<activity.object>` tags are drawn from the Activity Streams specification, and are the portions of the entry that applications should program against.

```
<entry>
  <title>Snapshot Smith uploaded a photo.</title>
  <id>http://www.facebook.com/album.php?aid=6&id=499225643&ref=at</id>
  <link href="http://www.facebook.com/album.php?aid=6&id=499225643&ref=at" />

  [MSV] I think there's a bug here (it's using & instead of just &). Look at wiki source if what I'm saying doesn't make sense ...

  <published>2009-04-06T21:23:00-07:00</published>
  <updated>2009-04-06T21:23:00-07:00</updated>
  <author>
    <name>Snapshot Smith</name>
    <uri>http://www.facebook.com/people/Snapshot-Smith/499225643</uri>
  </author>
  <category term="Upload Photos" label="Upload Photos" />
```

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[MSV] What is this? Is this the album name? Why isn't this just Photos?

```
<activity:verb>
  http://activitystrea.ms/schema/1.0/post/
</activity:verb>
<activity:object>
  <id>http://www.facebook.com/photo.php?pid=28&id=499225643&ref=at</id>
  <thumbnail>http://photos-e.ak.fbcdn.net/photos-ak-snc1/v2692/195/117/499225643/s499225643_28_6861716.jpg</thumbnail>
  <caption>A very attractive wall, indeed.</caption>
  <published>2009-04-06T21:23:00-07:00</published>
  <link rel="alternate" type="text/html" href="http://www.facebook.com/photo.php?pid=28&id=499225643&ref=at" />
<activity:object-type>
  http://activitystrea.ms/schema/1.0/photo/
</activity:object-type>
</activity:object>
</entry>
```

The next entry represents a new note (with photo attachment) that a user, Nota Bene, wrote and posted to her profile. The entry includes two self-identifying <activity:object> entries, the first describing the note itself, the second describing the photo attachment. As with the first example, the assumption is that existing Atom readers can digest and render content based on the standard Atom tags, and Activity Streams-aware applications can program against the <activity:verb> and <activity:object> entries.

```
<entry>
  <title>Nota Bene wrote a new note: Here&apos;s a new note.</title>
  <id>http://www.facebook.com/note.php?note_id=71154267806&ref=at</id>
  <link href="http://www.facebook.com/note.php?note_id=71154267806&ref=at" />
  <link rel="vi" href="http://www.facebook.com/note.php?note_id=71154267806&ref=at" />
  <link rel="related" href="http://www.facebook.com/note.php?note_id=71154267806&ref=at" />
  <published>2009-04-08T19:29:53-04:00</published>
  <updated>2009-04-08T19:29:53-04:00</updated>
  <author>
    <name>Nota Bene</name>
    <uri>http://www.jcain.devrs005.facebook.com/people/Nota-Bene/499225638</uri>
  </author>
  <category term="Create Note" label="Create Note" />
```

[MSV] Same question about 'Create Note'.

```
<activity:verb>
  http://activitystrea.ms/schema/1.0/post/
</activity:verb>
<activity:object>
  <id>http://www.facebook.com/note.php?note_id=71154267806&ref=at</id>
  <title>Here&apos;s a new note.</title>
  <content>
    Here&apos;s a new note, everyone. It&apos;s viewable by everyone.
  </content>
  <published>2009-04-08T19:29:53-04:00</published>
  <link rel="alternate" type="text/html" href="http://www.facebook.com/note.php?note_id=71154267806&ref=at" />
  <activity:object-type>
    http://activitystrea.ms/schema/1.0/note/
  </activity:object-type>
</activity:object>
<activity:object>
  <id>http://photos-g.ak.fbcdn.net/photos-ak-snc1/v2687/232/18/499225638/s499225638_30_6831075.jpg</id>
  <thumbnail>http://photos-g.ak.fbcdn.net/photos-ak-snc1/v2687/232/18/499225638/s499225638_30_6831075.jpg</thumbnail>
  <published>2009-04-08T19:29:53-04:00</published>
  <link rel="alternate" type="text/html" href="http://photos-g.ak.fbcdn.net/photos-ak-snc1/v2687/232/18/499225638/s499225638_30_6831075.jpg" />
  <activity:object-type>
    http://activitystrea.ms/schema/1.0/photo/
  </activity:object-type>
</activity:object>
<content type="html">Here&apos;s a new note, everyone. It&apos;s viewable by everyone.</content>
</entry>
```

Seeing a Sample Syndicated Stream

You can take a look at a sample Activity Stream feed from a Facebook test user account. Pass user ID 499225637 as the source_id URL parameter. You don't need to pass the app_id and the sig parameters. That is, go to http://www.facebook.com/activitystreams/feed.php?source_id=499225637 in your browser. You can't write any content into this test user's stream, but you can get any content from here.

EXHIBIT 7

Uploads Last modified Friday, August 7, 2009 at 5:10pm by Jack Pan-che

This node explains our high level upload architecture and how uploads are handled in different environments.

Basic upload flow

1. User navigates to form editfoo.php page on www tier that lets them upload data to facebook. editfoo.php includes lib/distfs/dfs.php and calls distfs_get_upload_server() to get the root http host to use in the form's action field, which tells the browser where to send the POST to. The user selects the items they want to upload and hit submit.
2. Data is posted to uploadfoo.php page on the upload tier that receives the upload POST and stores it on our storage or database.
3. Upload page then redirects to editfoo.php?success=1 or ?success=0 based on the success of the data write that occurred on the upload tier. Other metadata about the write is passed in the get args.

Always make sure to call distfs_get_upload_server(). It determines what environment you are in and generates a url to the proper upload host for you.

NOTE: Don't go to an updev url and start browsing the site. If your code depends on this, it is not following the normal upload pipeline described above and will FAIL IN PRODUCTION.

Environments

Since production uploads happen on two separate tiers, we model this on the dev and intern side as well. This helps guard against people writing code that posts to /uploadfoo.php on their sandbox, which would work in dev if you mounted the volumes on your sandbox, but would fail when your code went to prod.

Environment	WWW URL	Upload URL	Host(s)	Push stage	Releases
Dev	www.devsXXX.facebook.com	www.updevo04.facebook.com	updevo04.snc1	N/A	engshare trunk /var/www
Dev Sandbox	www.\$sandbox.devsXXX.facebook.com	www.\$sandbox.updevo04.facebook.com	updevo04.snc1	N/A	sandbox code from /mnt/devsXXX/data/...
Latest	www.latest.facebook.com	upload.latest.facebook.com	updevo03.snc1	P1	/var/www release
Beta	www.inyour.facebook.com	upload.inyour.facebook.com	updevo03.snc1	P1	/var/www release
Prod	www.facebook.com	upload.facebook.com	up.sf2p, up.snc1	P4	/var/www release
Internal uploads	dev.intern	intupload.vip.facebook.com	intup.sf2p	P8	/var/www release, but only serves pages from /var/www/html/intern
ads internal upload		adintupload.vip.facebook.com	updevo04/5/6.snc1	N/A	engshare trunk /var/www

Dev

updevo04.snc1 is the dev upload server.

If you hit a non-sandbox dev server, distfs_get_upload_server() will return http://www.updevo04.facebook.com, which points at /var/www on updevo04 and runs fb95 engshare trunk.

updevo04 also supports developer sandboxes. It mounts the devsXXX:/data dirs, and then distfs_get_upload_server detects when you are in a dev sandbox and in those cases, generates a url of http://www.\$user_sandbox_name.updevo04.facebook.com.

This runs your sandbox code on updev without any config work or code syncing required on your part.

NOTE: If you have a non-devs dev server and have hacked /var/www to point to your own code checkout, distfs_get_upload_server will not properly detect your sandbox and you will be sent to www.updevo04.facebook.com. This aspect of upload sandboxes is currently broken, but we're working on fixing it.

Latest & Intern

updevo03.snc1 is the latest/intern upload server.

It serves upload.inyour.facebook.com and upload.inyournew.facebook.com, and the corresponding hosts for latest as well. It has a custom host.conf that lets it mimic a production upload server with /var/www and /var/www-fb95. It is pushed as part of P1.

Prod

upload.facebook.com balances DNS requests across upload-sf2p and upload-snc1 vips, which are the up.sf2p and up.snc1 pools respectively. These hosts run the latest releases at /var/www and /var/www-fb95, and respond to upload.facebook.com and upload.new.facebook.com.

Internal uploads

intupload.vip.facebook.com takes uploads for internal volumes and serves those files as well. This is used for internal email attachments on cortana and xtools, original copies of upload videos, fb fund proposals, etc. This tier only allows php to be loaded from /var/www/html/intern, if you try to load /profile.php, etc, it won't load, since it uses anything not in /intern as the document root for the served files on the internal volumes.

Why have separate a separate upload tier?

The short answer is that there are too many web hosts and uploads have different resource usage from www pages. By having a separate upload tier, we insulate the two use cases from each other and can scale them separately.

Too many web hosts

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There's too many web hosts to mount all of our storage volumes on them. A lot of our storage is still on NFS, and trying to reliably mount a NFS volume on thousands of hosts is a losing battle. Once the bulk of our storage is on haystacks, we still have the issue of supporting writes from tens of thousands of client hosts (and a hundred apaches on each host). Constraining the number of nodes sending physical writes helps keep the number of connections down to manageable levels.

Different resource usage

PHP upload receivers don't do any display work, they just receive some data, check it for well-formedness, and then write it to disk and issue a redirect to a success page on the www tier.

Also, since uploads are POSTs of user data to us, their apache processes are longer lived. The scaling of the images also takes a lot of cpu and wall clock.

So we have pages in www that are heavy on display, low in computation, and relatively short lived, compared against upload receivers that don't do any display logic, but do lots of cpu work and are long lived.

Photo servers

We also serve photos from dedicated photo tiers instead of serving them from upload or www. This is so we can tune service of the images since the httpd requirements are very different for taking uploads versus serving images, you'll have many more active requests per second when serving images.

Also, the upload tiers are the only tiers that mount volumes with read/write access. The filers export to all other tiers as read-only, so even if you try the mount the vol rw on a photo host, the filer won't let you. This is to make sure that we only mutate data from authorized tiers, and to guard against issues where bad application code running in www or on someone's random sandbox might delete user images.

Updev setup

See the Updev Setup Guide for instructions on how to setup a new updev host. You won't have to look at this unless you are in ops.

Refreshing vols on an updev host

If you think the updev host is missing a vol, login as root and run `'/usr/local/pyface/scripts/photos/distfs-mount-manager -a'`. It will print out any volumes it adds or removes and tell you if there are errors.

EXHIBIT 6

Photos Storage Architecture Last modified Thursday, December 14, 2006 at 3:15am by Robert Johnsc

Photos Storage Architecture

Each photo uploaded by a user is stored on disk as several files of different sizes. Files are grouped logically into volumes, which are the basic unit of backend storage. A volume contains a few tens of millions of files, and could be physically stored in different ways. The database record for a photo includes the volume in which its files can be found.

The primary storage for photo files is on several netapps. These are large arrays of disks with heads that serve files over nfs. They appear to the rest of the network as a large amount of storage that can be mounted over nfs, and they store data on multiple disks in a redundant and reliable way. Each netapp holds the data for many volumes.

Users interact with two pools of web servers in front of the netapps: pics and upload. These servers mount the netapps' photo directories over nfs. The pic servers serve requests for existing files, and the upload servers run PHP code to upload new files.

Requests for photo files or uploads are split among the pic and upload pools by a load balancer. The pics pool is subdivided into several groups of servers that each handle a different group of volumes, so that when a volume is unavailable only some of the web servers will get bogged down with nfs timeouts.

There are also some stand-alone servers with copies of sealed (i.e. full) volumes on local or iSCSI drives. These run a custom web server called tarhttd and are heavily optimized for read-only performance, but are not reliable. A second copy of the volume remains on the netapp as a backup. The load balancer will redirect requests to the netapp if it detects that a tarhttd server is down.

Content Distribution Network

All of these servers sit behind several 3rd party content distribution networks or CDNs. CDNs act as a very large (many TB) cache, and serve photos to users from many geographic locations. User requests for photos go to the CDN first, and if the CDN doesn't have the file in cache it requests it from our servers. This means that we would get very little benefit from running our own caching software, as it wouldn't have nearly as much storage as the CDN. As of this writing about 5% of requests come back to our servers.

We currently work with three CDNs: Limelight, Akamai, and Panther Express. There is code to distribute the load between these services (or our servers directly) in a way that's granular and easy to change, so we're not too dependent on any one service. Changing CDNs still has some cost because we have to serve a lot more files while we build the cache for the new CDN. We eliminate this problem for profile pictures by splitting requests in such a way that all CDNs have a complete copy of the data. This is feasible for profile pics because there are a relatively small number of them. The code for choosing CDNs is in `www/lib/distfs/dfscommon.php`, look for "buckets".

Volumes

A volume is a collection of files stored together. It consists of a logical volume and one or more physical volumes. We currently have only one physical volume per logical volume, but this is a configuration choice and not a limitation of the software. The details of these volumes are stored in the photos database on `cdboo2` in the tables `distfs_logical_volumes` and `distfs_physical_volumes`. The logical volume is identified by an id number commonly referred to as the "volume id" and includes a virtual ip where the data for the volume can always be accessed. The physical volume has detailed information on the physical location of the data, basically everything required for a pic or upload server to mount it. The physical volume has an ID number that is often the same as the logical volume ID, but this will not always be the case. Logical and physical volume ids are independent, and should never be assumed to be the same. The term "volume ID" without mention of logical or physical should be assumed to refer to the logical volume ID.

PHP Interface

This is described in more detail [here](#). The code that knows about physical volumes and the specific location of files is abstracted into a module called `distfs`, with code in `www/lib/distfs/dfscommon.php` and `www/lib/distfs/dfsclient.php`.

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EXHIBIT 5

Multifeed Last modified Thursday, August 27, 2009 at 12:25pm by Scott Stra

The best resource for troubleshooting/fixing multifeed downtime is [Fixing Multifeed](#).

FAQ

What is multifeed?

The new feed backend system introduced in July 2008. It is named because it takes the approach of "multi-getting" your friends' feeds and then aggregating/ranking/sorting/filtering them on the fly before finally displaying your home page.

How does it work?

There are several pieces of the puzzle:

1. The aggregators. An aggregator is a server that takes requests when the home page (PHP) is loaded, connects to the leaves, fetches all your friends data, aggregates/ranks/filters the stories, and sends them back to PHP via Thrift. It takes "actions" from the leaves and converts them into "stories".
2. The leaves. A leaf server stores in memory all the recent actions for some subset of the users on the site. It initially loads in the actions off log files on disk, and then receives new actions via RPC's sent by the tailers.
3. The tailers. These just tail a bunch of log files and send the actions they read in to the leaves. The log files are written to by Scribe whenever a user takes a public action on the site.
4. View state. This is a memcache tier dedicated to storing each user's most recent view of their News Feeds. It is fetched in PHP before making the request to the aggregator in order to maintain consistency of stories over time.

How do I build Multifeed?

Check out `fbcode`, and type `"fbconfig multifeed; fbmake dbg"`.

How do I run my own instance of Multifeed?

(generally, you want to set up an SMC tier for your service. then you can point a dashboard to your setup if you pass the get params `leaf_tiername`, `agg_tiername`, & `tailer_tiername`)

Aggregator

1. clone this tier: `http://www.dev.facebook.com/intern/smc/smc.php?tier=multifeed.aggregator`
2. optionally modify the `smc_leaf_tier` property to point to your own leaf tier
3. start the aggregator server via `"/_bin/multifeed/aggregator_server --smc_tiername=TIER --smc_server_port=PORT"` where PORT is something like 2220 and tiername is the name of your cloned tier
4. to generate feed with your aggregator, modify `lib/feed/multifeed/tiers.php` to return your aggregator tier name in `_multifeed_get_aggregator_production_smc_name()`

Leaf

1. clone this tier: `http://www.dev.facebook.com/intern/smc/smc.php?tier=multifeed.leaf_o`
 1. Rename it whatever you prefer (say `<user>.leaf`)
 2. If you get the error: "could not get tier: `<user>.leaf`", then run the following 3 commands from `phpsh`:
 1. `php> $smc_manager = new ServiceManagerHandler();`
 2. `php> $a=$smc_manager->getTierByName('<user>.leaf');`
 3. `php> $smc_manager->deleteTier($a->id);`
 3. Try cloning again to `<user>.leaf`. It should work this time. Retry a couple times if you still see the error.
 4. If that doesn't work, email dreiss or peter.
 5. Once the tier is created, delete all registered services
 1. `fbcode> php tools/smc_util/smc_util.php --cmd=rm_tasks --tier=<user>.leaf`
 6. Go ahead and add a new service - set the server the same as from where you plan to start up your leaf server, and choose any port (say 2220)
 7. Add property with name as "smc_task_id", set value to 0, type INT
2. start the leaf server via: `"/_bin/multifeed/leaf_server --smc_tiername=TIER --smc_server_port=PORT"` where PORT is something say 2220 (using the example above) and tiername is the name of your cloned tier (`<user>.leaf`)
 1. If you see errors indicating that `/mnt/multifeed_logs` do not exist, do the following:
 1. go to one of the multifeed servers running a leaf server.
 2. `vi /etc/fstab`, copy the line with `/mnt/multifeed_logs` mount information
 3. back on your server: `sudo vi /etc/fstab`. paste the above copied line
 4. `sudo mkdir /mnt/multifeed_logs`
 5. `sudo mount /mnt/multifeed_logs`
 2. you might want to `sudo run leaf_server` if you see permission denied errors as the leaf tries to read the logs
3. (you will need to have an aggregator running and pointed at your leaf tier in order to use it)

Tailer

1. clone this tier: `http://www.dev.facebook.com/intern/smc/smc.php?tier=multifeed.tailer`
2. Remove all services associated with this tier as explained in the leaf cloning section above.
3. choose a machine to run tailer on (say `multifeedio10.sn1`)
4. add the machine as the single service in the tier on whatever port
5. edit `smc_leaf_tiername` in the tailer tier to pt to your leaf tier
6. `fbdeploy <tier>` start to get the package onto the tier and start it

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- fbdeploy tail_log should give you the progress and errors. It takes a few minutes to open all 1000 logs and start the tailing.

How do I deploy a new version of Multifeed to the tier?

We use fbpackage and fbdeploy for all our tiers. That means starting/stopping servers is just an fbdeploy call. The tiers are configured with all the needed parameters to start up correctly.

Deploying to a single machine (in the case of hardware failure), is therefore trivial. The challenge is deploying to an entire tier while still serving traffic.

Deploying the aggregators

If multifeed is currently running, the sitevar MULTIFEED_AGGREGATOR_PRODUCTION_TIERS show which tiers are getting the load. Assume it's "multifeed.aggregator_1". This means that there are 2 tiers right now that are getting requests: multifeed.aggregator_1_west_v1, and multifeed.aggregator_1_east_v1. The region and version are auto-appended by the frontend. What we need is to deploy the new aggregators on another tier, and slowly move the load over. Then shut down the current one.

- build the correct package (from multifeed release branch run fbpackage build multifeed.aggregator"
 - deploy the package to tiers that are not being used (multifeed.aggregator_2_[east,west]_v1). Just run "fbdeploy multifeed.aggregator_2_west_v1 start; fbdeploy multifeed.aggregator_2_east_v1 start.
 - Check that the dashboard shows the tiers as up
 - edit sitevar MULTIFEED_AGGREGATOR_LOADTEST_CONFIG and send some load to the new tiers
 - monitor scribe for multifeed fatals. you may see a few in the very beginning, but after a few minutes, there should be none.
 - slowly raise the load to 100% on the new tier. continue to monitor scribe logs to make sure there are no fatals
 - change the loadtest load back down to 0 for the new tiers
 - shift 1% of production load to the new tier (edit MULTIFEED_AGGREGATOR_PRODUCTION_TIERS)
 - if everything looks fine, shift the rest of the load to the new tier
 - after a few minutes, it should be safe to turn off the old aggregator tiers by doing "fbdeploy stop" on them. make sure they are not getting any requests by looking at the multifeed_samples log in scribe.
 - Good job. Get yourself a cookie.
- Note: Check the the launch tool at http://www.intern.facebook.com/intern/launch_tool.php to see what percentage load is at. MULTIFEED_AGGREGATOR_LOADTEST_CONFIG will only divide load as a fraction of what is set in launch tool.

Deploying the leaves

Leaves should be redeployed 1 rack at a time. So use fbdeploy with the --tasks argument to only stop/start a rack of leaves at a time. Once the leaves start up, use the dashboard to monitor their loading progress. When the whole rack is back up and fully loaded "green", you can do the next rack.

Deploying the tailers

To update the package run: 'fbpackage build multifeed.tailer' from fbcode directory

To start them on the west coast, run: 'fbdeploy multifeed.tailer start' from fbcode directory.

This will start two tailers with the latest package.

If you are restarting, you can use --tasks=1 or --tasks=2 to restart a single tailer. Waiting a few minutes in between assures no loss of data. Both tailers are configured to run on all buckets, so only one needs to be running at a time, and the second is for redundancy.

For the east run: fbdeploy multifeed.tailer_east_0 start

What to do when a leaf goes down?

Just restart the leaf. It will take a little while for the leaf to fully load in all the data, but it should eventually start working again.

What to do when an aggregator goes down?

Restart it. Aggregators are stateless and so can be restarted at will (as long as there are enough running to handle the current load).

What to do when a tailer goes down

Restart the tailer. The bad news is that the leaves will be missing anything that happened while the tailer was down, so if the tailer was down for any substantial amount of time, you've got to cycle the leaves so that they can load in all the data. Do not take down all the leaves at once or there will be trouble!

How to check if a specific leaf or aggregator is working?

What machines are running multifeed?

- see dashboard for up-to-date machine-specific info: http://www.dev.facebook.com/intern/feedtools/multifeed_dashboard.php
- west coast
 - node group: multifeed.snc1 - west coast aggregators/leaves
 - node group multifeed.snc1 - west coast tailers + scribe node
 - see dashboard for info on which are using tailers
 - multifeedmc.snc1 - view state machines (000-010)
 - mfscribe001.snc1 - scribe node
- east coast
 - node group multifeed.ash1
 - multifeed{001..105}.ash1 - east coast aggregators/leaves
 - tailers running on multifeed118.ash1/multifeed119.ash1
 - node group multifeedmc.ash1 - view state machines (000-010)
 - mfscribe001.ash1 - scribe node

- cdb: multifeed.settings

Multifeed Host counts in 'aggregator and leaf' tiers

	sys.multifeed	sys.multifeed.ash1	sys.multifeed.snc1	sys.multifeed.ash1	sys.multifeed.snc1
SMC TOTALS	410	439	400	439	400
multifeed.aggregator_2_east_v2	120	319		319	
multifeed.aggregator_2_west_v2	290		120		120
multifeed.leaf_east_3	120	319		319	
multifeed.leaf_3	290		120		120

What is the configuration of those machines?

- snc1 machines: /mnt/multifeed_logs => nfsutil302.snc1:/vol/multifeed01
- ash1 machines: /mnt/multifeed_logs => nfsutil202.ash1:/vol/multifeed01
- currently running kernel 2.6.21

How to check on the health of multifeed as a whole?

Check out the dashboard - http://www.dev.facebook.com/intern/feedtools/multifeed_dashboard.php and Ganglia - <http://ganglia001.sf2p.facebook.com/ganglia-multifeed/>

Check the fatals log - `tail -f /mnt/scribe/multifeed_fatal/multifeed_fatal_current`

Check the ods latency graph - <http://www.fburl.com/?key=999116> If latency is not below 20-30ms, or is ramping up, there is likely a problem. Recently restarting the leaves has taken care of some of these issues.

Check the ods request rate - <http://www.fburl.com/?key=999118>

Error logs

- Most important is fatals: all fatals (=> retried the max number of times and given up/fallen back to old feed) are logged in /mnt/scribe/multifeed_fatal/multifeed_fatal_current. Tail this log to see how many users are failing requests. format described here: <https://trac.facebook.com/trac/browser/tfb/trunk/www/lib/feed/multifeed/multifeed.php#L294>
- 1 out of 100 requests get logged to /mnt/scribe/multifeed_sample/. format is as described here: <https://trac.facebook.com/trac/browser/tfb/trunk/www/lib/feed/multifeed/multifeed.php#L309>
- all errors are recorded in /mnt/scribe/multifeed_error/ in format described here: <https://trac.facebook.com/trac/browser/tfb/trunk/www/lib/feed/multifeed/multifeed.php#L209>

There is a script running on devrso04.sctm that monitors the fatals log and sends alerts when they get too many errors. The script is in fbcode/multifeed/scripts/logmon.py and is itself monitored by chronicle.

What do I need to know about machine failures/upgrades?

It's important to not restart too many machines at a time, if it's at all avoidable.

For the multifeedi machines (two of which are running the tailers), please only restart 5 at a time and *make sure* the 5 do not include both tailers. I.e. one tailer should always be left running. You can check status of the tailers on either the multifeed.tailer smc tier or the dashboard to see where and whether they're running. (TBD: Make tailers run on start-up). If tailers don't run on start-up, we need to be careful to restart them after each reboot.

What tools are available for working with multifeed?

- http://www.dev.facebook.com/intern/feedtools/multifeed_log.php - this can show you what an employee's feed looked like for any load of their feed, and some meta-data about the request that was made to get that feed. one thing to note about multifeed_log: it "caches" your days worth of feed in a separate file (ie it does "grep uid allemployeesforthedayfile > yourcachefortheday") so if you load it and then reload your feed you have to click the "force reload" checkbox to have it regenerate your cache for the day. this is pretty necessary since the log file is like 1-2 GB/day and grepping through it every page load is slow (as you can see by how slow it is the first time you load the page)...
- http://www.dev.facebook.com/intern/feedtools/multifeed_console.php - this lets you do queries against the multifeed backend with custom parameters or for custom lists of users.
- http://www.dev.facebook.com/intern/feedtools/multifeed_dashboard.php - this shows the state of the multifeed tier (which machines are running, how caught up the leaves are, etc.)
- http://www.intern.facebook.com/intern/ods/dashboard.php?dashboard_id=149 - monitor latency
- <http://www.dev.facebook.com/intern/smc/smc.php?tier=feed> - smc page for feed, allows you to create your own multifeed tier or modify parameters for the live multifeed tier.
- <http://www.dev.facebook.com/intern/feedtools/stats.php> - the usual feed stats page; you can filter it to see different stats about multifeed vs old feed.
- http://www.dev.facebook.com/intern/launch_tool.php - we're using this to control which users we have launched to.
- <http://ganglia001.sf2p.facebook.com/ganglia-multifeed/> - standard ganglia monitoring
- <http://nms006.sf2p.facebook.com/megarrd/cgi-bin2/viewMetrics.cgi?namespace=/storage/netapp/nfsutil302.snc1.facebook.com/volumes/vol/multifeed01> - megarrd monitoring for filer
- <http://syslog01b.tfbnw.net/cgi-bin/dash.cgi?d=15> - show the port channels on the core switches that the top of rack switches uplink to. It also shows the gigabit ports that make up the port channel.

Who do I contact if I need help with multifeed?

- multifeed@lists.facebook.com is the best point of contact
- multifeed-errors@lists.facebook.com is for automated emails about stuff like machines going down
- if necessary, you can contact david braginsky, serkan piantino, lior abraham, ari steinberg, or any of these people: <http://lists.facebook.com/mailman/roster/multifeed>

How does the algorithm work?

not really answering this question, but various settings for the algorithm (such as app weights, story type weights, etc) are set in the cdb multifeed.settings.

This article has been marked as Evergreen. The Reaper will duly disregard this article as it makes the rounds.

EXHIBIT 4

Mulligan Last modified Saturday, July 11, 2009 at 10:48am by Michael Sharc

Mulligan is an ongoing improvement to Facebook's Photos product.

For a technical overview of FBPlugin, the project driving the new photo uploader, see [FBPlugin Technical Overview](#).

Goals

- Greatly increase the number of photos and videos getting uploaded to and consumed on FB
- Simplify the Photos and Video products
- Attract more power users

Uploader

Facebook's current photo uploader is an unwieldy beast. It was written by a third party company (Aurigma) and has been untouched since its release in 2005. It consists of two separate plugins: an ActiveX control for IE and a Java applet for all other browsers. In a recent poll to users, 37% of respondents who have used the uploader reported having trouble with it.

Due to the problems users have faced with the current uploader as well as a desire for a simpler and more consistent design, we're building a new one.

The new uploader will be an ActiveX control in IE and a Netscape Plugin API (NPAPI) browser plugin for our other supported browsers (Safari, Opera, Firefox). The plugin itself is invisible, and will simply provide a Javascript interface for performing tasks not normally possible in JS -- filesystem access, image manipulation, and interaction with the OS. This model allows for speedy iteration on the visual components of the plugin and will only require a recompile and update to users when lower level JS interfaces need to change or be updated.

Trojan Horse (Sort of)

The new uploader represents the first home-grown compiled software that Facebook will hand to users for execution on their local machine. It will include an automated update process of some form so we can have it update itself, as well as some hooks for installing other Facebook desktop software in the future (but we intend not to be evil). Potential software down the road might include a resident application to detect when digital cameras are plugged into the computer, so we can recommend the user to dump its contents to Facebook.

Key Differences between ActiveX and NPAPI Plugin

ActiveX

Most of our users use IE and will therefore use this.

- Works only on IE.
- There is no form of install, and thus no need to self-update.

NPAPI

- Does not work on IE. Works on all other supported browsers.
- Installation requires some level of administrative privileges, so we may take a hit in computer labs at schools where Firefox tends to be pushed on users. One easy way to help mitigate this is to build a simple network install executable for IT admins to deploy on multiple machines.

Technical Info

The uploader does not have a drawable area, and the interface will be created entirely in the DOM with HTML and CSS. For displaying local thumbnails, we have decided on a model where the uploader will run a local web server (bound to localhost to avoid firewall complaints) to serve them. Other models considered include using the data:// URI, using SWFs to display base64-encoded image data strings, and using the file:// URI -- in each case, either not all of our supported browsers supported the model or it was too resource/plugin intensive.

The JS API for the uploader will include mostly asynchronous methods to accomplish the following:

- Get filesystem roots and OS-specific shortcut folders (e.g. "Photos" on OS X and "My Photos" on Windows)
- List the contents of a directory with simplified file types
- Generate local thumbnails for images
- Retrieve thumbnails for videos from the OS (where possible)
- Provide URLs for displaying local thumbnails
- Perform a multipart form post to some URL for a selection of images and videos
- Check for updates / perform a self-update

<p>Plaintiff's Trial Exhibit PTX-190 Case No. 08-CV-00862</p>
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Testing

Due to the nature of pushing new binary code which can be tedious and generally never sees full penetration vs. the previous version, there is an imminent need for thorough testing across as many platforms as we can get our hands on. Every supported browser must be tested as well as all common OS's, antivirus/firewall software, and "computer lab" scenarios.

Operating Systems:

- XP SP0/SP1/SP2/SP3
- Vista SP0/SP1
- OS X 10.4/10.5
- Ubuntu (Latest stable release)

Photos Product Improvements

While the new uploader is the first priority, it paves the way for a great deal of long-needed improvements to the photos product to advance the goals of the Mulligan project.

The Photos product is currently a system where:

- All photos must belong to albums
- Videos and photos are contained in completely separate products
- The upload flow is "filling an album" -- and is hampered by an album size limit
- Context switching in photo browsing is either not easy/obvious or not possible (e.g. a photo in an album to an event or group this photo is in)
- No real bulk photo management exists
- Images are fairly low resolution relative to originals and other photo sharing web sites

Improvements that we want to make to mitigate the above:

- Photos and albums are decoupled -- photos can be in multiple albums and even have multiple owners. All of a user's media will be kept in a big library. Photo privacy will be per-photo, and setting album privacy will just apply settings to a group of photos.
- Videos will be rolled into the new "media library," and treated just like photos for the purposes of albums and other groupings.
- The upload flow will be changed to optimize for maximum image/video throughput to the site, with a secondary goal of good editorial control for surfacing of the content (e.g. album creation after the fact or automatic album creation based on timestamps)
- Every photo/video permalink page will identify all contexts in which the photo may be displayed, and a mechanism for switching to a new stream than the current context.
- A tool will be built for bulk management of the library for applying privacy settings, deleting, editing captions, and tagging.
- Resolution will be increased and we'll explore the possibility of a premium product for storing high-resolution originals.

What happens to Video?

We haven't yet figured out exactly how the roll-in of Video will work with these improvements, but it will likely cease to exist in a lot of its current forms. It will be possible to filter a stream's view to "only videos" (or only photos, defaulted to both), which is enough to eliminate the "videos by so-and-so" pages. The Video dashboard can also be rolled into the Photos dashboard.

It's likely the Video application will simply become "Photos". Other sites have already led by example, like Flickr, where they had a primarily photos-focused brand and added video into it without needing to call it out separately.

Resolution Increases

We don't plan to support storage of originals, because at current projections it'd be prohibitively expensive. Instead we'll look into the appropriate resolution increase to ensure photos on Facebook are great-looking, but not wasteful on space. At the very least, we should increase the default large edge resolution of photos to the new frame width introduced in FB95.

Technical Info

Technical FBPlugin Information

See FBPlugin Technical Overview.

FBOject / Associations

To support the further decentralized model of photos and their connections, we will work toward using FBOject and Associations for all photo objects (albums, photos, tags, etc). This involves a significant migration up-front, but avoids recreation of the wheel and will pay off in code simplicity and consistency with other products on the site.

EXHIBIT 3

Login PROCESS Last modified Thursday, May 7, 2009 at 9:14am by Luke Shepar

Cookies

There are three critical cookies for use in the login process:

c_user

"Current user". The user ID of the logged in user. Only set when the user is actually logged in.

xs

The hashed login session key. The xs cookie is the secret key that authenticates the user. It rotates every twenty minutes, and has to match the key on the other side.

sid

The session id of the active session. This cookie is only set if persistent login is used; otherwise, the cookie is unset and it corresponds to session o.

next_path

if you try to access a protected resource and are redirected to login.php, then this cookie is first set. after login, user is redirected here.

There are other various cookies that appear to be related to login, but are not part of the main login flow.

login_x

keeps track of the email the user last entered. Used to pre-populate the box on the login page.

h_user

"Hashed user". This is a hash of the user id of the last logged in user. Used for tracking logged out page views.

d_user

"Dark user". Set when a dark user is logged in, by clicking on an invitation link and routed through p.php. This operates the same as c_user, but can be invoked via get_logged_in_user('d_user');

login

I don't even know, it's a plus sign when you're logged in, but seems useless to me
Used to be the previous cookie we used to keep track of what email user entered. Replaced by login_x. We had to force everyone to logout at one point in time. I think it was because of cache busting.

Flow Chart

Initial Login

When someone logs in, here's what goes down:

1. User submits email / password to login.php

- Server looks up user id from email. (in login_emails table, federated)
- Checks password against hashed value (password_crypt in info table, federated)
- If it matches, create a new session in the session table on the user's database.

session table at login

	uid	sid	update_time	old_key	key	future_key
value	12345	o	now()	o	A	B
example	2901279	o	1207591313	o	241291693	509106625

- Set these cookies on the user:

cookies sent to the user

key	value	example
login_x	email used to log in	email@given.com
c_user	user id	2901279
xs	hash of 'key' from session table i.e., gen_sec_key(A,'c_user')	7bb1e0f40f6b9d0178cd97c55ff441f5
sid	only set if you clicked "remember me"	2

2. Usual Page Load (user clicking around)

User sends the **c_user**, **xs**, and **sid** cookies to the server. Those are checked against the contents of the session table on the user's database. If a key matches either the old_key, key, or future_key, then it is considered passed.

Great! So the user clicks around for a while, and on each click their xs cookie matches the key in the database. But if more than 4 minutes have passed since the key was created, then the key gets rotated. The keys are rotated to limit the damage of a stolen key. If a packet sniffer catches someone's cookie, then that xs cookie can only be used for up to 8 minutes before it will no longer work.

Plaintiff's Trial Exhibit
PTX-180
Case No. 08-CV-00862

When the key is rotated, then key becomes old_key, future_key becomes key, and a new future_key is generated. The session table now looks like this:

session table after a key rotation

	uid	sid	update_time	old_key	key	future_key
value	12345	0	now()	A	B	C
example	2901279	0	1207591313	241291693	509106625	726026508

cookies sent to the user

key	value	example
xs	hash of the current key	af675fbb8daf0ff5c1fee78e4d281a83

3. Login Errors

Everytime the user hits Facebook, the client sends the cookies above and is authenticated. If any of the three keys doesn't match, then the user is logged out and the process starts over.

All login-related cookies are cleared when the user logs out.

User uses multiple browsers

Suppose you log in with Firefox, and you get xs key A. Then, if you log in with Safari, the key in session o is deleted and a new one is generated. The next time you hit a page from Firefox, your xs cookie will not match any available key, and a logout occurs.

Code Reference

Check out lib/login.php for details, although good luck. Start with get_loggedin_user(), since that is where all of this comes from. Pay particular attention to check_session_cookie() and change_login_keys(). Also see logout_user() for a list of the cookies that are cleared on logout.

Security

- Keep in mind that cookies are typically private, but they *could* be intercepted, either by a network sniffer or by any proxies that the user passes through. For instance: http://401000.info/cookies_in_4.txt
- People pay attention to our cookies, strangely enough. For instance: <http://my.opera.com/quakerdoomer/blog/2009/05/01/facebok-daughtry-song-abt-var-coookie>

EXHIBIT 2

Facebook Platform White Paper IX Last modified Tuesday, March 24, 2009 at 4:55pm by Dave Fetterma

IX. Development Implications

The Facebook Development Platform does not exist of its own merit; it relies on both user-facing Facebook concepts (e.g. “Facebook events”) and the engineering necessary to support it (e.g. the code to support “events”). The public API is not a replacement for users, groups, events, photos, and the like; it is merely a broadening of the audience for those pieces of information. If the concept of an event were to change in the Facebook application, it would not do justice to Facebook, nor the developers who come to depend on both on their users’ notion of a Facebook event and the technical specification of event data, to fail to update the notion of group for the outside community.

Therefore, the deployment of the public API implies that the data must retain a certain integrity otherwise not specifically required on the site. The development implications of the public API are then twofold:

- The integrity of the data must be maintained in a rigorous way. This means, there must be dedicated testing of the API when any code in the Facebook logic changes, to avoid passing bugs to everyone dependent upon the API.
- The data interface must be maintained and versioned tightly. Even the smallest change could disrupt the site of an outside partner, who we must (conservatively) assume is tightly coupled to every aspect of our functionality.

1. Testing

Let us say we are changing a piece of Facebook functionality for www.facebook.com, say search, during daily operations. This usually involves the search developers making a change, doing sandbox testing, and verifying to the best of their knowledge that the code change breaks nothing, and works as intended. Before pushing the code to live servers, the changes are copied to beta servers on inyour.facebook.com, and available Facebook engineers of all sorts are told to “bang around” on this feature to make sure there are no (obvious) bugs. The code is then pushed live. Invariably, bugs are found in that (or any other) feature, they are fixed, and the process iterates until the level of bugs is sufficiently small. This ‘iterative’ process serves as our main testing strategy. If bugs exist, they are visible on the Facebook site for a hopefully short time before they are fixed. In the normal case, faulty Facebook display and business logic affects the site. In the worst case, faulty Facebook logic affects the data, which is largely unrecoverable.

For all its faults, this strategy at most affects the Facebook site. The Development Platform primarily exists to enable outside applications to build off the Facebook site. A bug unchecked then could affect or ruin someone else’s application, or all outside applications, which does much more damage to our relationships and reputation, not to mention the applications we empower through the API. For this reason, Facebook changes require a defined and dedicated test suite and process.

We are currently developing this suite, which needs to run at an acceptable level by the time of full release. However, we need to make sure that for all changes, this suite is run at the time of every push or hotfix affecting non-display logic not strictly in the www.facebook.com display layer.

The main drawback here is that our development and push process is slowed, and we could lose some agility. The resounding positive, however, comes when we have a dedicated testing process for the API, which in turn, verifies a good portion of the www.facebook.com functionality as well.

We need this test suite integrated into our daily development process, and visible to the entire engineering organization, beyond those directly responsible for its maintenance on the Platform engineering team.

2. Interface Versioning

Even if the functionality of www.facebook.com is not broken by a completely unintentional bug, alterations to the scheme of the data contained defining, say, a “Facebook group”, can affect the public API if they are not properly communicated. The test suite comes in handy here, too, since these changes, at the time of push, will break the tight interface exposed by the API. However, we need a way to build on top of the existing contract we give out to applications developed on the API.

The first part is *communication*. Again, this is a process change. Changes to the data provided by our key public APIs need to be communicated to the Platform engineering team. We need a process to facilitate this.

The second part is *technical versioning*. If a data change meets with universal approval, the API either needs to back port its functionality to maintain something of an old interface, support multiple versions of the API contract, or be able to effectively drop old versions. This responsibility falls to the engineers of the public API, the Platform team.

First, simply adding to the API’s functionality requires none of these measures. Even in a strict interface, adding members orthogonal to existing ones does not ruin the dependent code in any meaningful way. If the first edition of the API shipped without, say, notes are added and the API adds a way to interact with them, these new separate procedures can be added without fear.

Back porting is suitable when the change is very small. For instance, if the data structure for a user’s network affiliations is changed from including a field for a network key to containing a substructure containing that key, the public API should translate that to maintain the old interface. This involves some work but does not engender inherent complexity.

Multiple versioning is the best choice when functionality has changed significantly for the better. The new interface has been deemed more useful, faster, cleaner, etc. and the API users should also enjoy that goodness. In order to not break applications using the now ‘old interface’, both old and new versions can be supported. This is a technical challenge, but entirely solvable within the Platform engineering organization. We are trying to achieve version support right from the first release.

Dropping old versions occurs after multiple versioning for a period of time. Partners are notified of the change, the date for dropping support for old versions, and that change happens. Naturally, we try to avoid this, especially for large partners with inflexible engineering, or client applications that have already been downloaded. Good planning is necessary to make sure this option is avoided, but there are times when it is necessary. Supporting dozens of different versions remains much worse than requiring our partners to evolve just as we do.

The Three-Version Queue

One elegant plan for combining these three features together is a three-version queue system. At any time, we maintain (at least) versions A, B, and C, where A, B, and C are some version numbers like 1.0.1, 1.0.2, 1.0.3. These correspond to ideas like “legacy”, “current”, and “latest”. Version A additionally has an expiration time associated with it. When version A expires, the addition of version D immediately drops version A, and the timer begins on version B, the new “legacy” version. A reasonable timeout, especially once large partners with fixed release schedules enter the picture, would be on the order of 90 days.

<p>Plaintiff’s Trial Exhibit PTX-145 Case No. 08-CV-00862</p>
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This *multiple versioning scheme* incorporates *backporting* for all but the latest version, and *drops old versions* on a public schedule. The developer application selects the interface version within the request protocol (likely an element in the XML procedure call).

Prev Section <<

Next Section >>

(touch)

EXHIBIT 1



US007139761B2

(12) **United States Patent**
McKibben et al.

(10) **Patent No.:** **US 7,139,761 B2**
(45) **Date of Patent:** **Nov. 21, 2006**

- (54) **DYNAMIC ASSOCIATION OF ELECTRONICALLY STORED INFORMATION WITH ITERATIVE WORKFLOW CHANGES**
- (75) Inventors: **Michael T. McKibben**, Columbus, OH (US); **Jeffrey R. Lamb**, Westerville, OH (US)
- (73) Assignee: **Leader Technologies, Inc.**, Westerville, OH (US)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Diane Mizrahi; Patent Cooperation Treaty International Search Report; Jun. 27, 2004; Alexandria, Virginia.

- (21) Appl. No.: **10/732,744**
- (22) Filed: **Dec. 10, 2003**

* cited by examiner

- (65) **Prior Publication Data**
US 2004/0122835 A1 Jun. 24, 2004

Primary Examiner—Diane Mizrahi

Related U.S. Application Data

- (60) Provisional application No. 60/432,255, filed on Dec. 11, 2002.

(57) **ABSTRACT**

- (51) Int. Cl. **G06F 17/30** (2006.01)
- (52) U.S. Cl. 707/10
- (58) **Field of Classification Search** 707/1-10, 707/100-104.1; 379/202.01; 715/753; 725/87, 725/112; 709/202, 204, 205
See application file for complete search history.

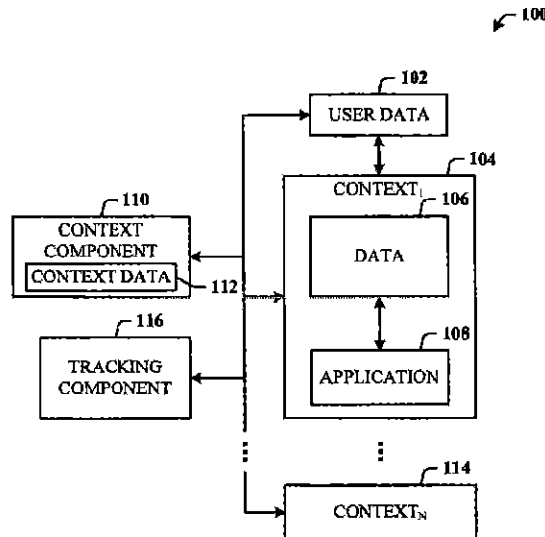
A data management tool. The tool is a unified, horizontal system for communications, organization, information processing, and data storage. The tool operates seamlessly with existing platforms, and is a common workflow layer that is automated with a scalable, relational database. The tool uses one or both of a relational and object database engine that facilitates at least many-to-many relationships among data elements. The highest contextual assumption is that there exists an entity that consists of one or more users. The data storage model first assumes that files are associated with the user. Thus, data generated by applications is associated with an individual, group of individuals, and topical content and not simply with a folder, as in traditional systems.

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35 Claims, 18 Drawing Sheets



Plaintiff's Trial Exhibit
PTX-1
Case No. 08-CV-00862

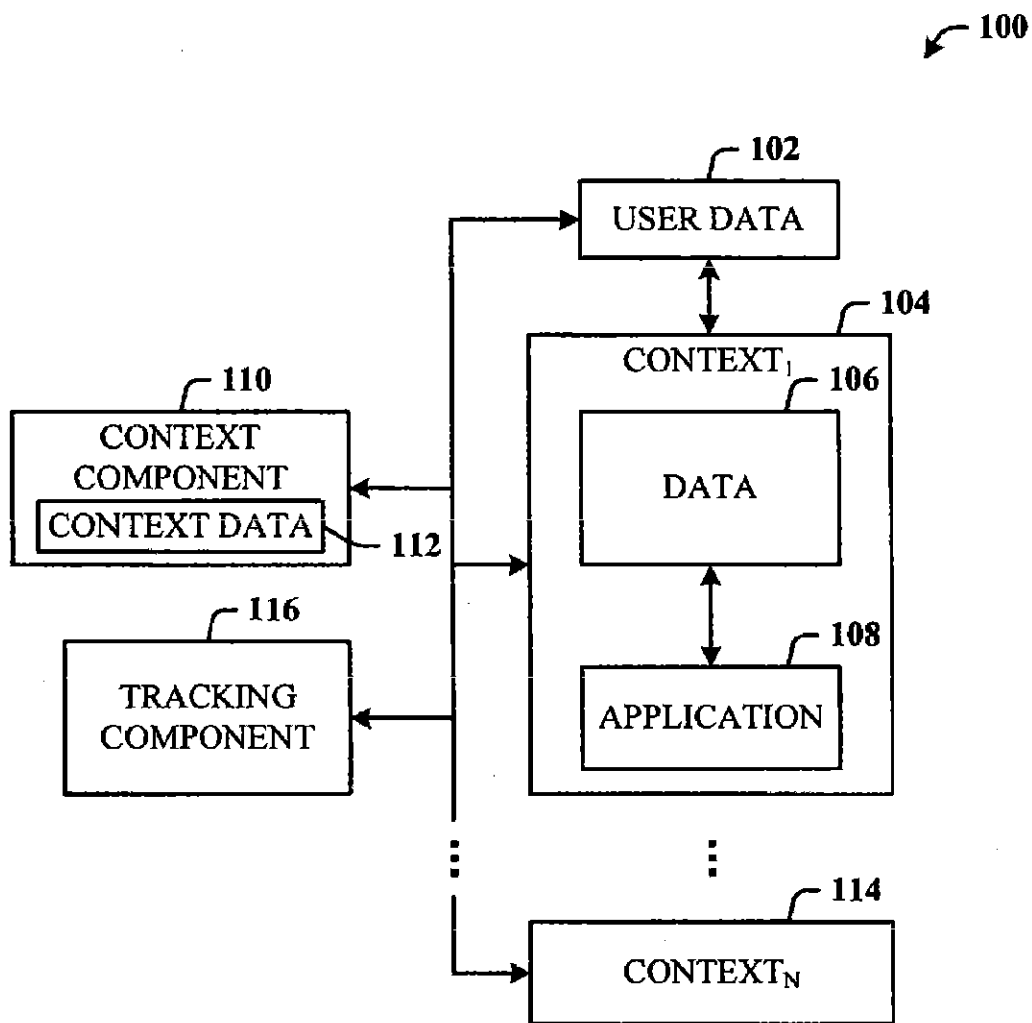


FIG. 1

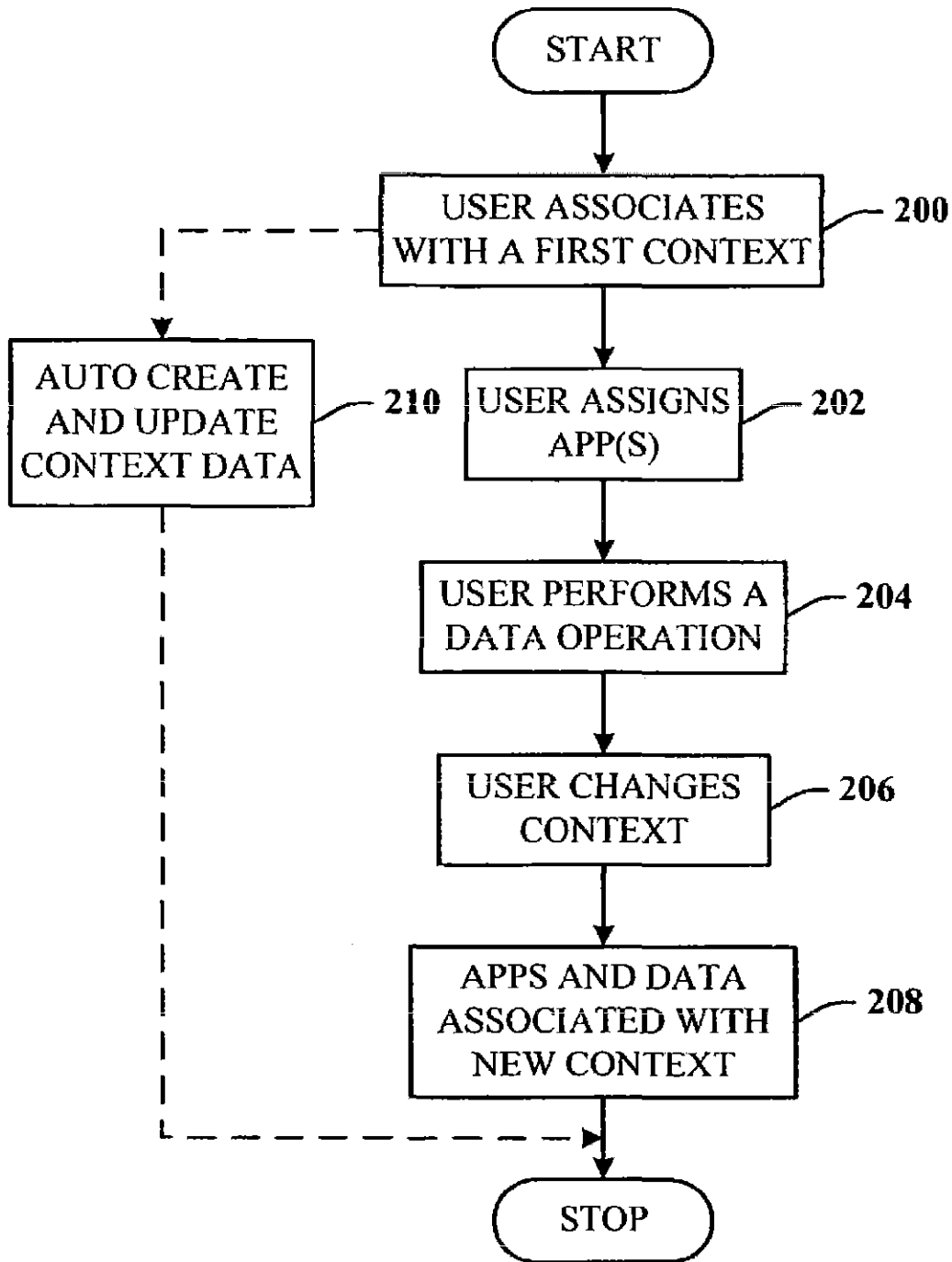


FIG. 2

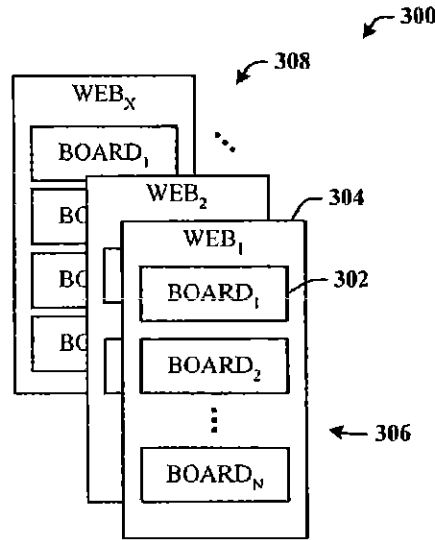


FIG. 3

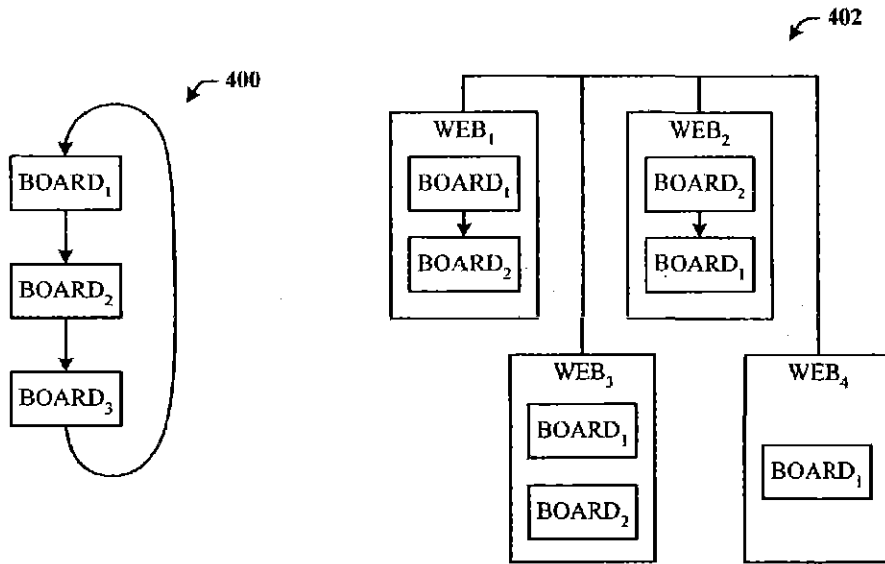


FIG. 4A

FIG. 4B

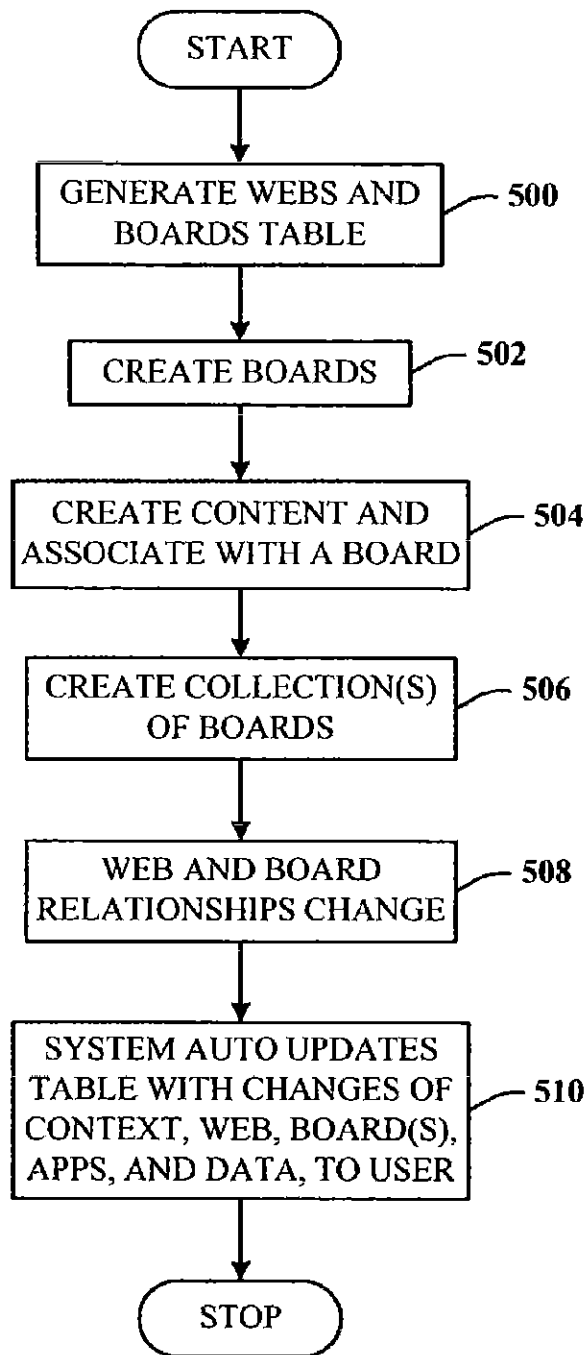


FIG. 5

600

WEBS AND BOARDS TABLE			
USER(S)	WEB(S)	BOARD(S)	BOARD(S) P/C RELATION
1,2,3	W1	B11, B12, B14	B11: B12; B14
6	W2	B23, B25	NA
7,8	W1,W3	B36,B37	B36:B37;B36

FIG. 6

700

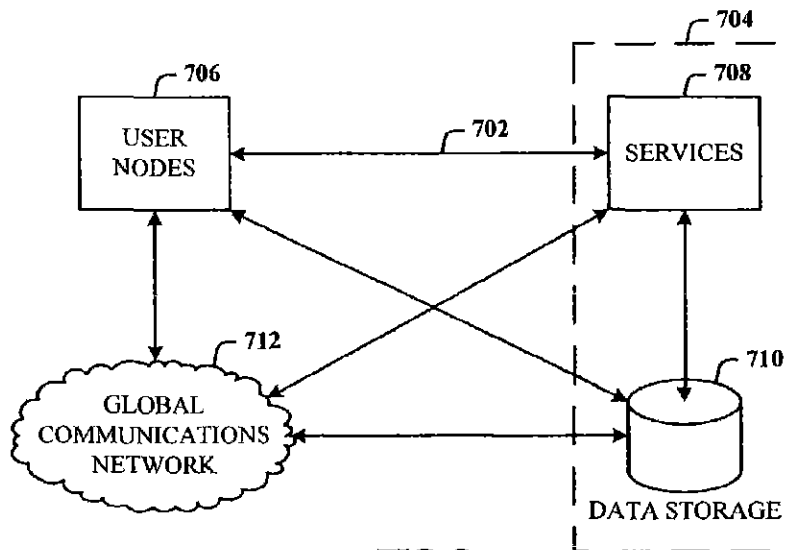


FIG. 7

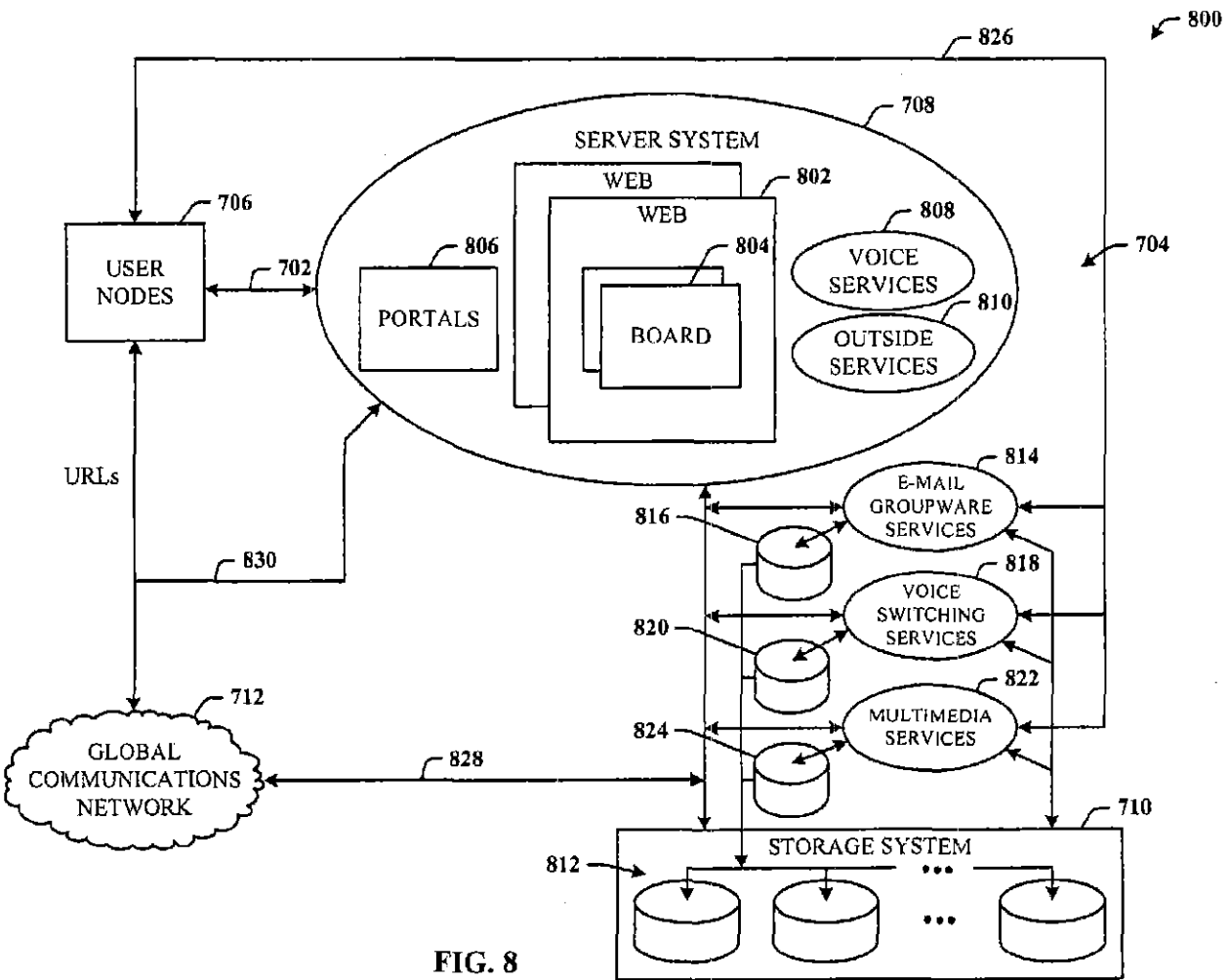


FIG. 8

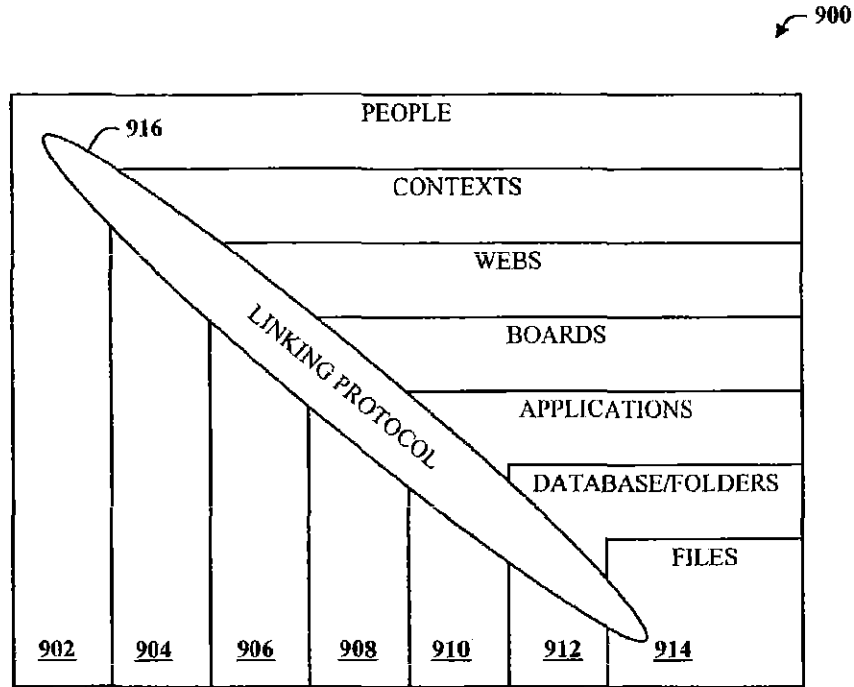


FIG. 9

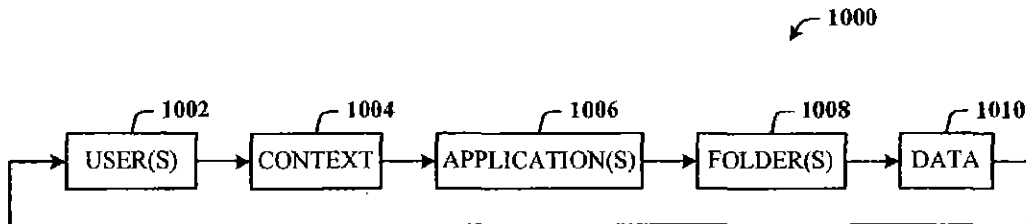


FIG. 10

U.S. Patent

Nov. 21, 2006

Sheet 8 of 18

US 7,139,761 B2

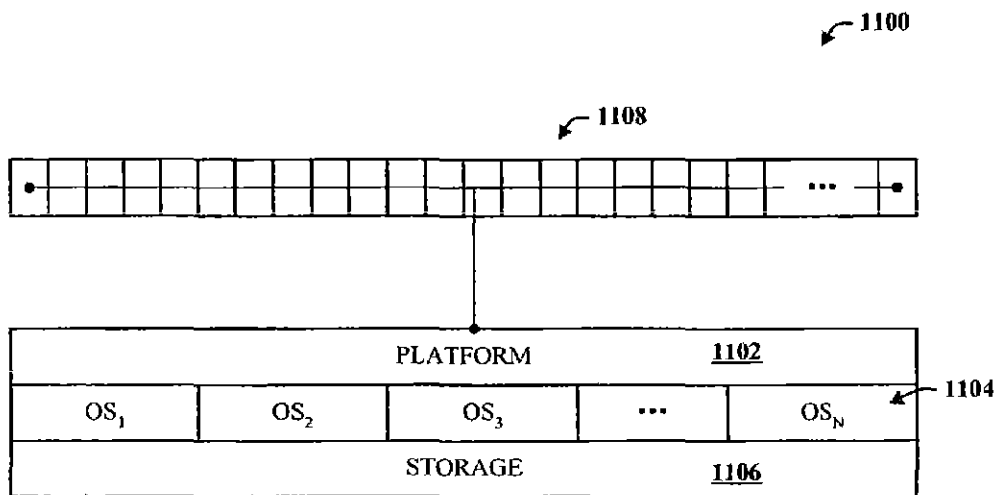


FIG. 11

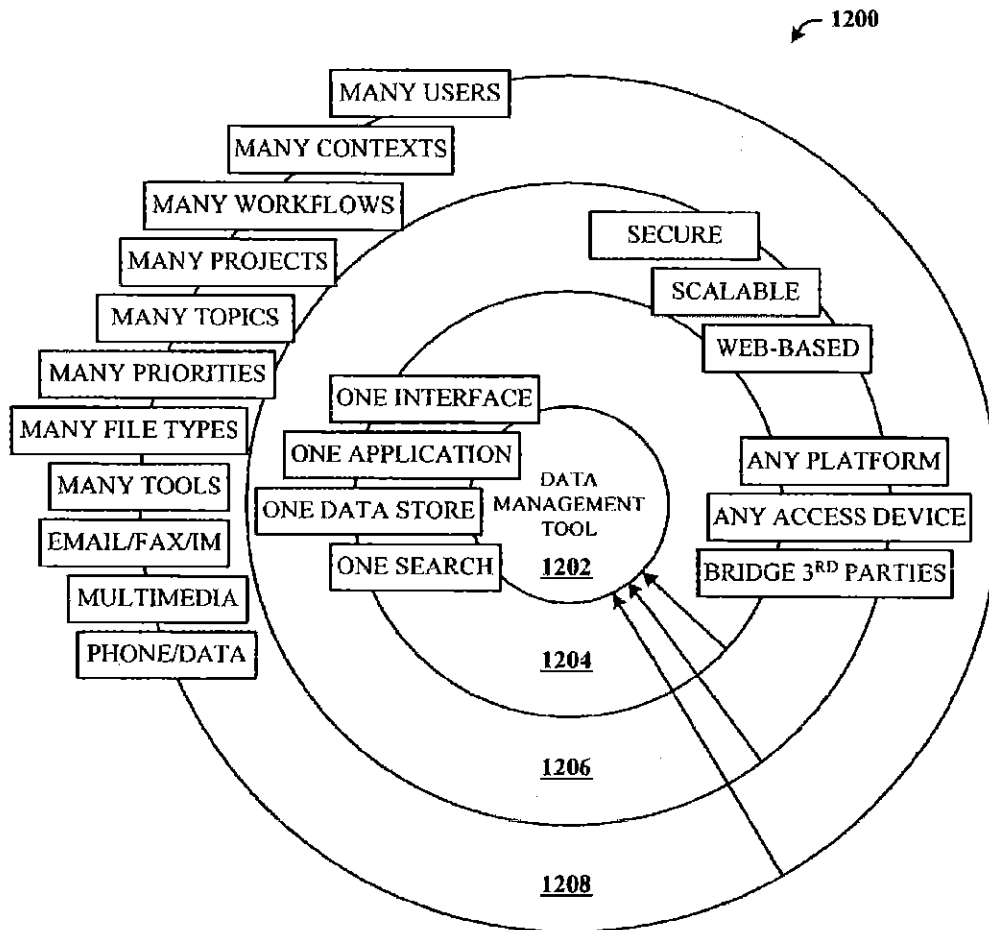


FIG. 12

1300

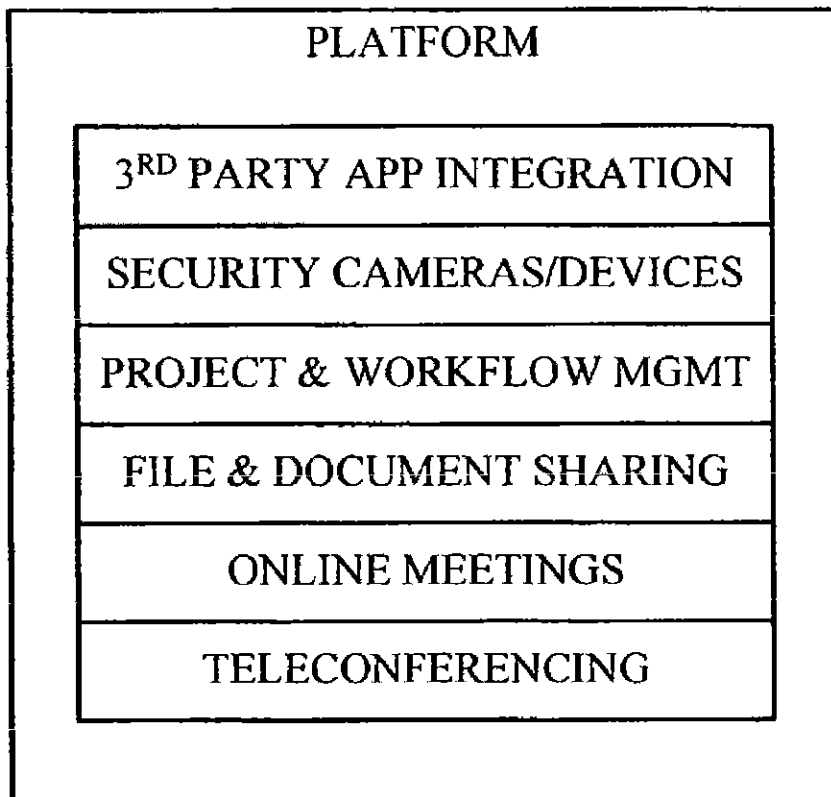


FIG. 13

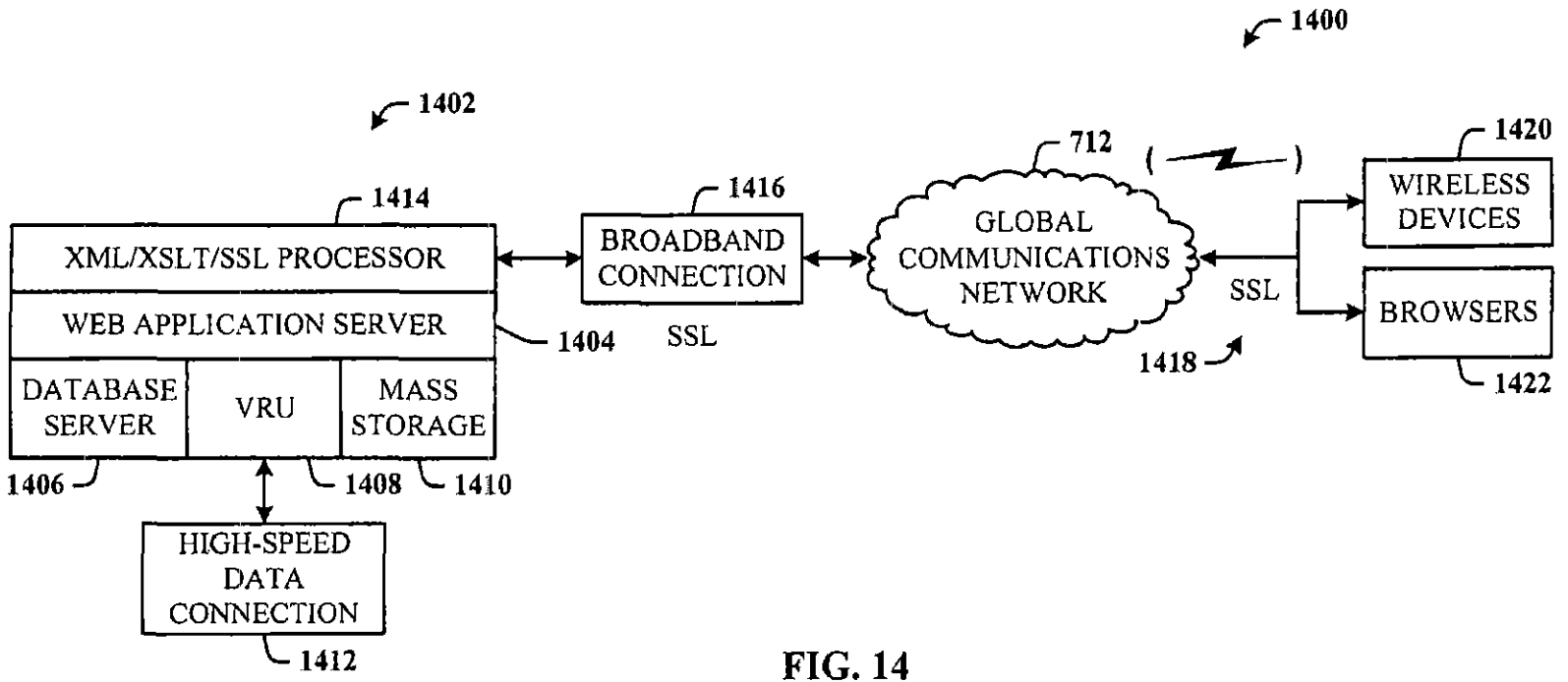


FIG. 14

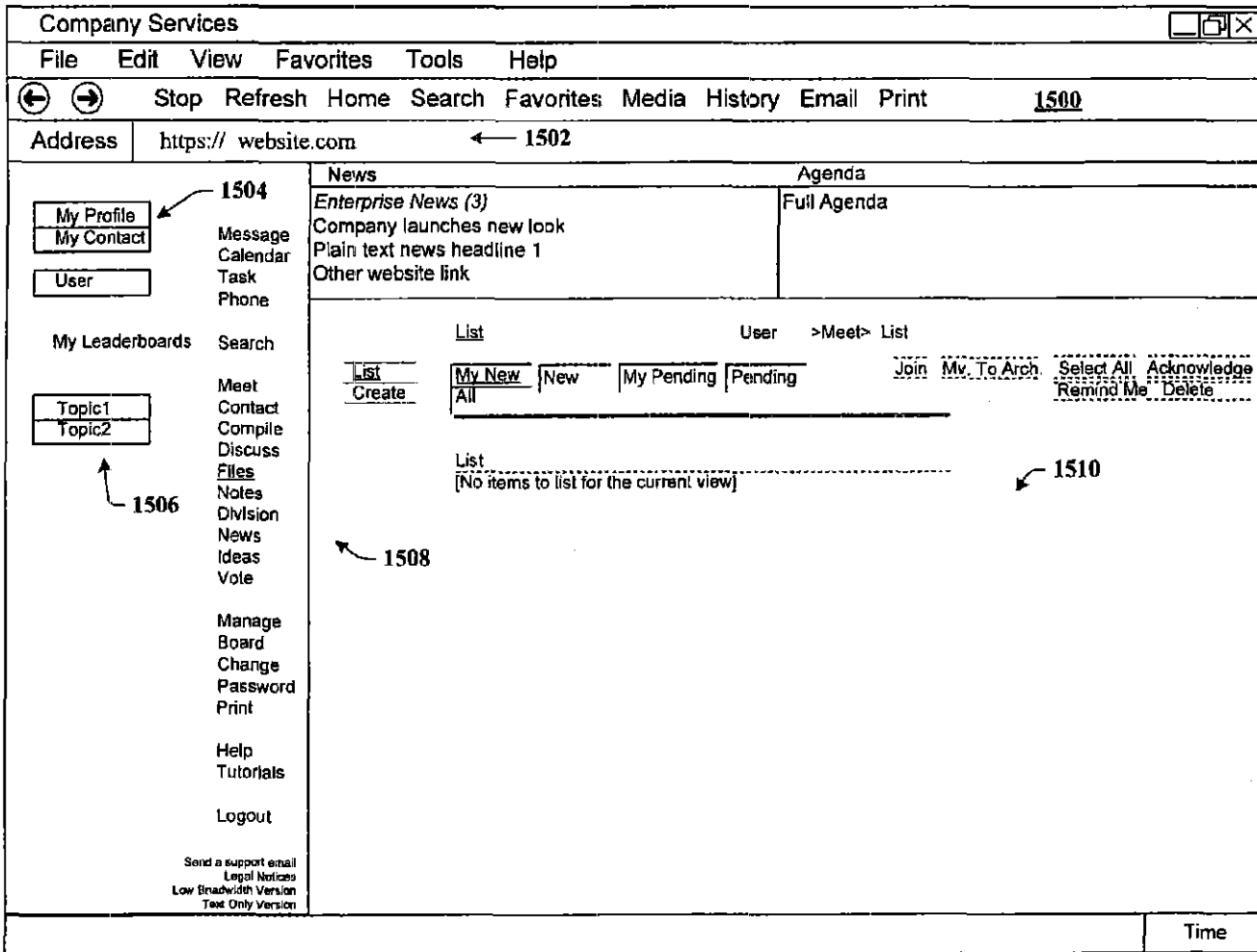


FIG. 15

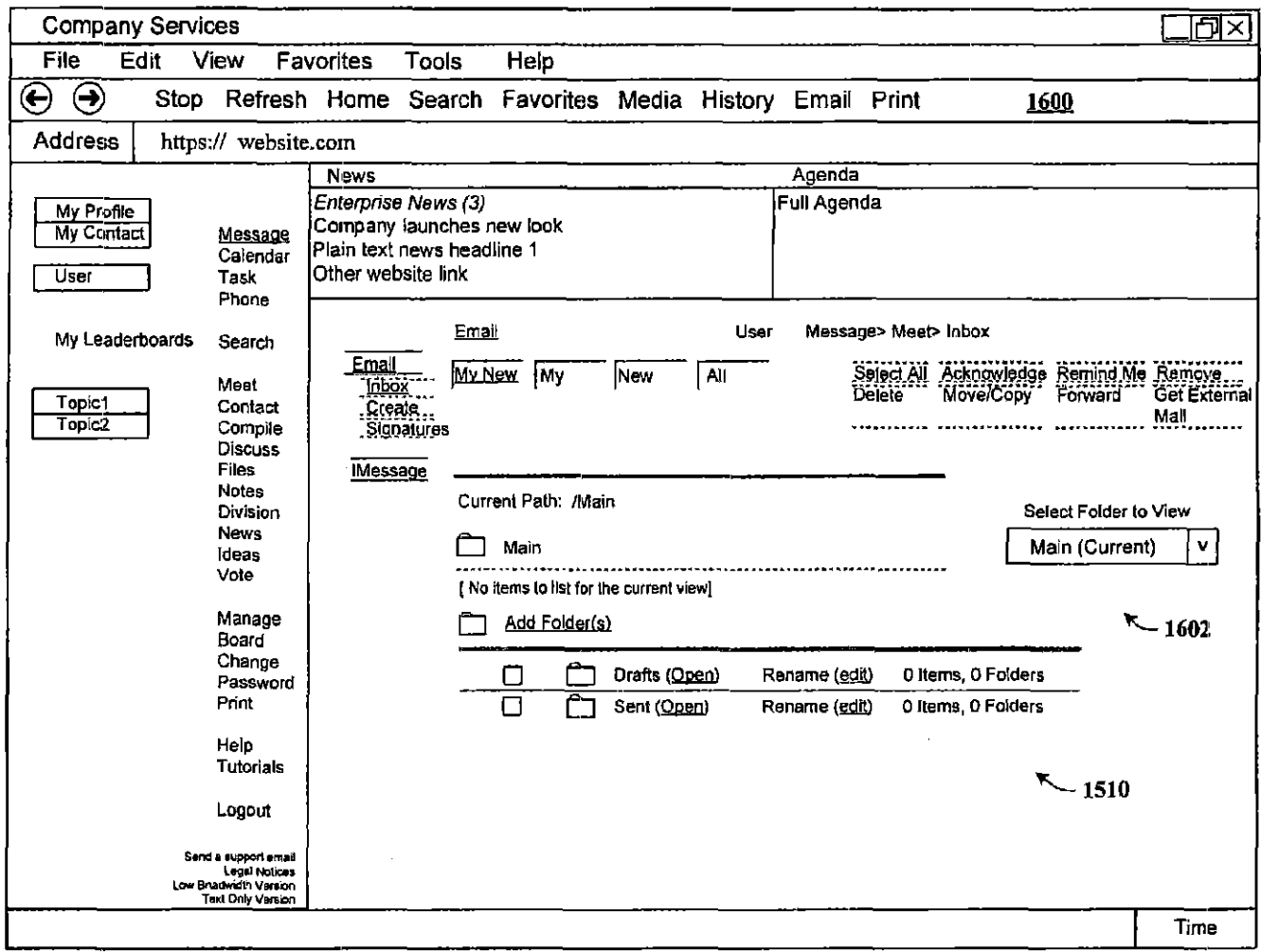


FIG. 16

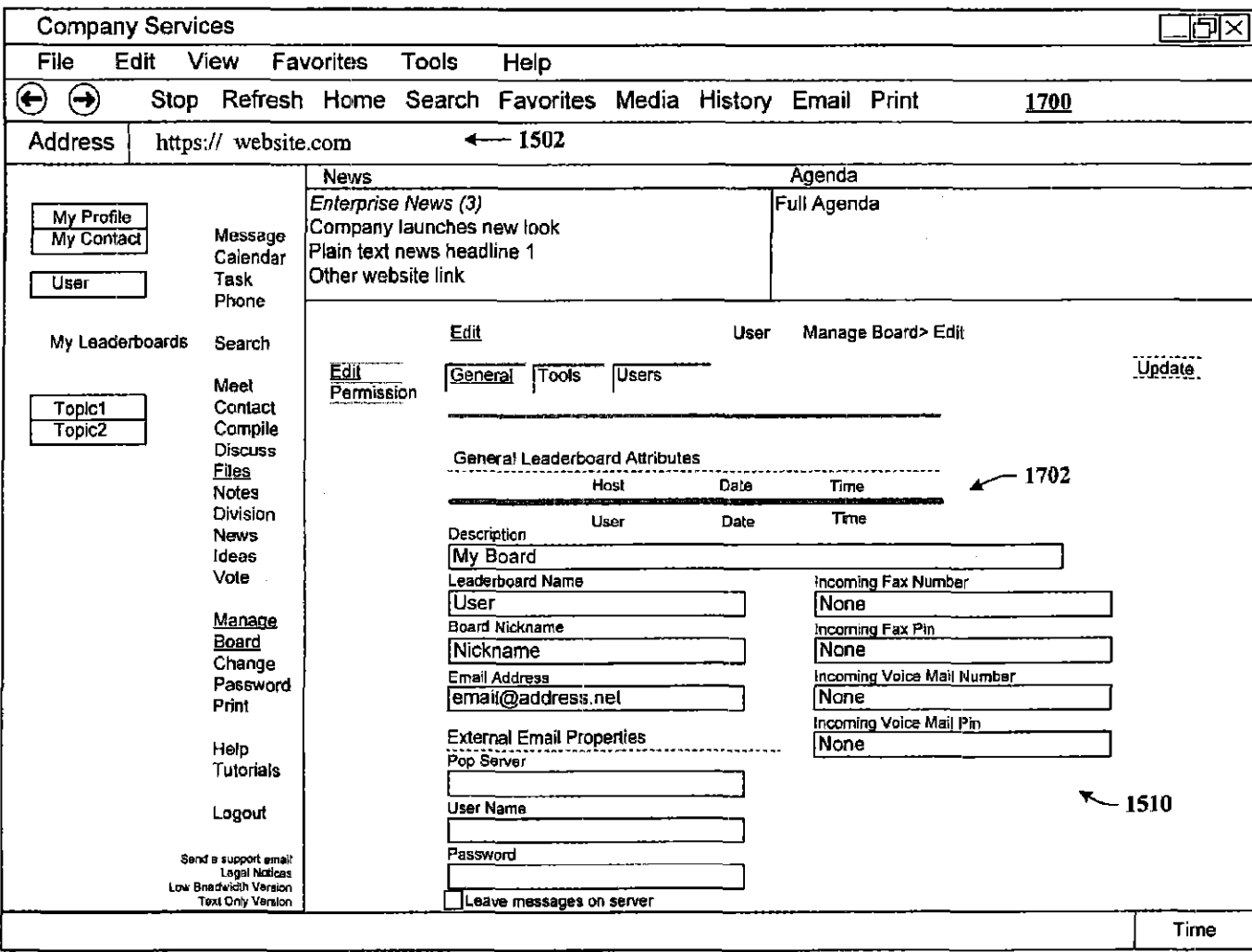


FIG. 17

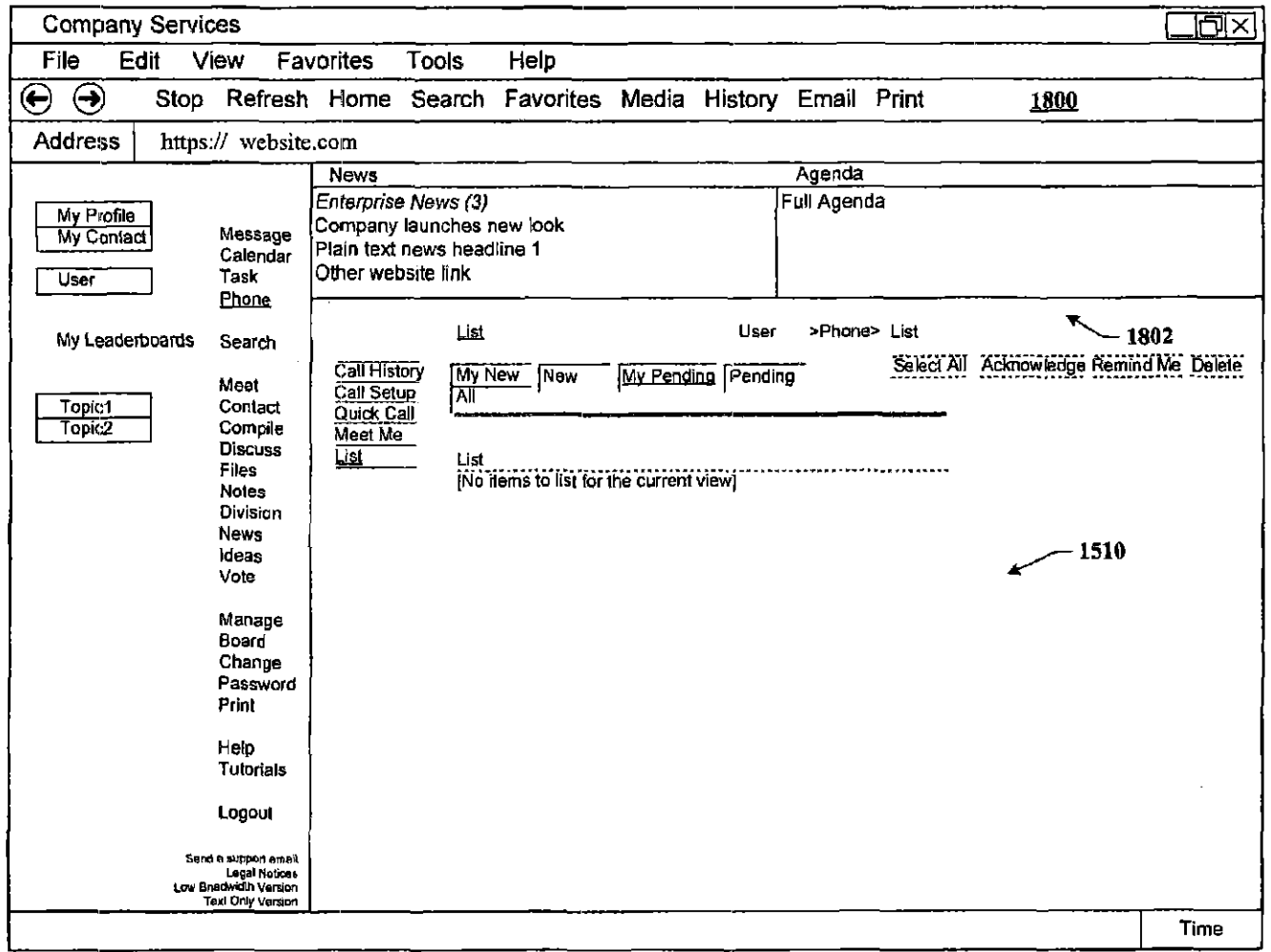


FIG. 18

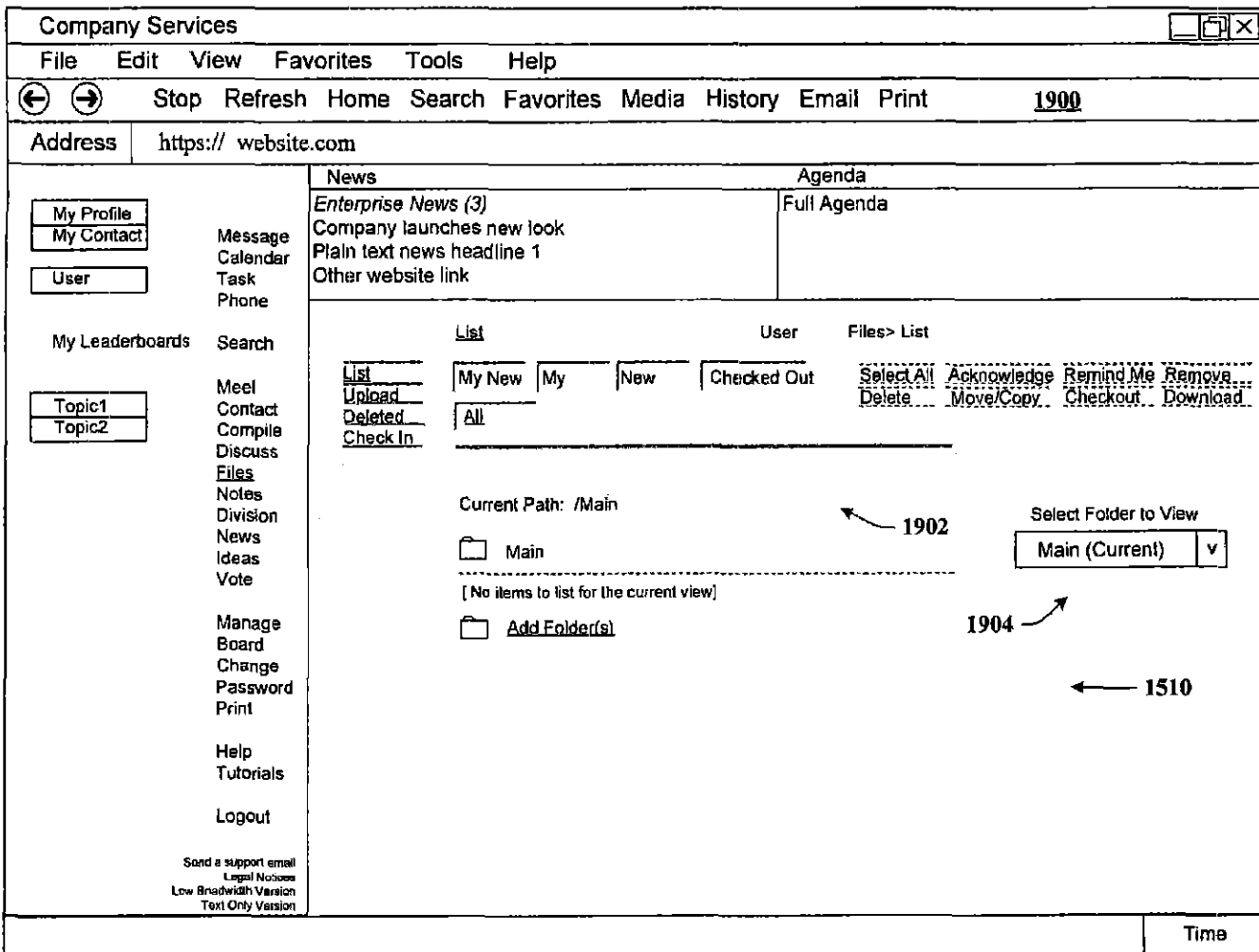


FIG. 19

Company Services [min] [max] [close]
File Edit View Favorites Tools Help

2000
Stop Refresh Home Search Favorites Media History Email Print

Address https:// website.com

My Profile

My Contact

User

My Leaderboards

Topic1

Topic2

Send a support email
Legal Notices
Low Bandwidth Version
Text Only Version

News
Agenda

Enterprise News (3)
Full Agenda

Company launches new look
Plain text news headline 1
Other website link

List	User	Meet>	List								
<div style="display: flex; justify-content: space-between;"> <u>List</u> <u>Create</u> </div>	<div style="display: flex; justify-content: space-between;"> My New My My Pending Pending </div>	<div style="display: flex; justify-content: space-between;"> Join My To Arch. Select All Acknowledge </div>	<div style="display: flex; justify-content: space-between;"> Remind Me Delete </div>								
All											
My Contact											
My Boards											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Board Name</th> <th style="text-align: left; border-bottom: 1px solid black;">Host</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">Board1</td> <td style="border-bottom: 1px solid black;">User</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Board2</td> <td style="border-bottom: 1px solid black;">User2</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Board3</td> <td style="border-bottom: 1px solid black;">User2</td> </tr> </tbody> </table>		Board Name	Host	Board1	User	Board2	User2	Board3	User2	1510	
Board Name	Host										
Board1	User										
Board2	User2										
Board3	User2										
Web Name											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Parent</th> <th style="text-align: left; border-bottom: 1px solid black;">Child</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">Admin</td> <td style="border-bottom: 1px solid black;">Administration</td> </tr> </tbody> </table>		Parent	Child	Admin	Administration						
Parent	Child										
Admin	Administration										
Special Projects Web											
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Parent</th> <th style="text-align: left; border-bottom: 1px solid black;">Child</th> </tr> </thead> <tbody> <tr> <td style="border-bottom: 1px solid black;">Board6</td> <td style="border-bottom: 1px solid black;">Board4</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Board4</td> <td style="border-bottom: 1px solid black;">Board2</td> </tr> </tbody> </table>		Parent	Child	Board6	Board4	Board4	Board2				
Parent	Child										
Board6	Board4										
Board4	Board2										

FIG. 20

LTI 000018

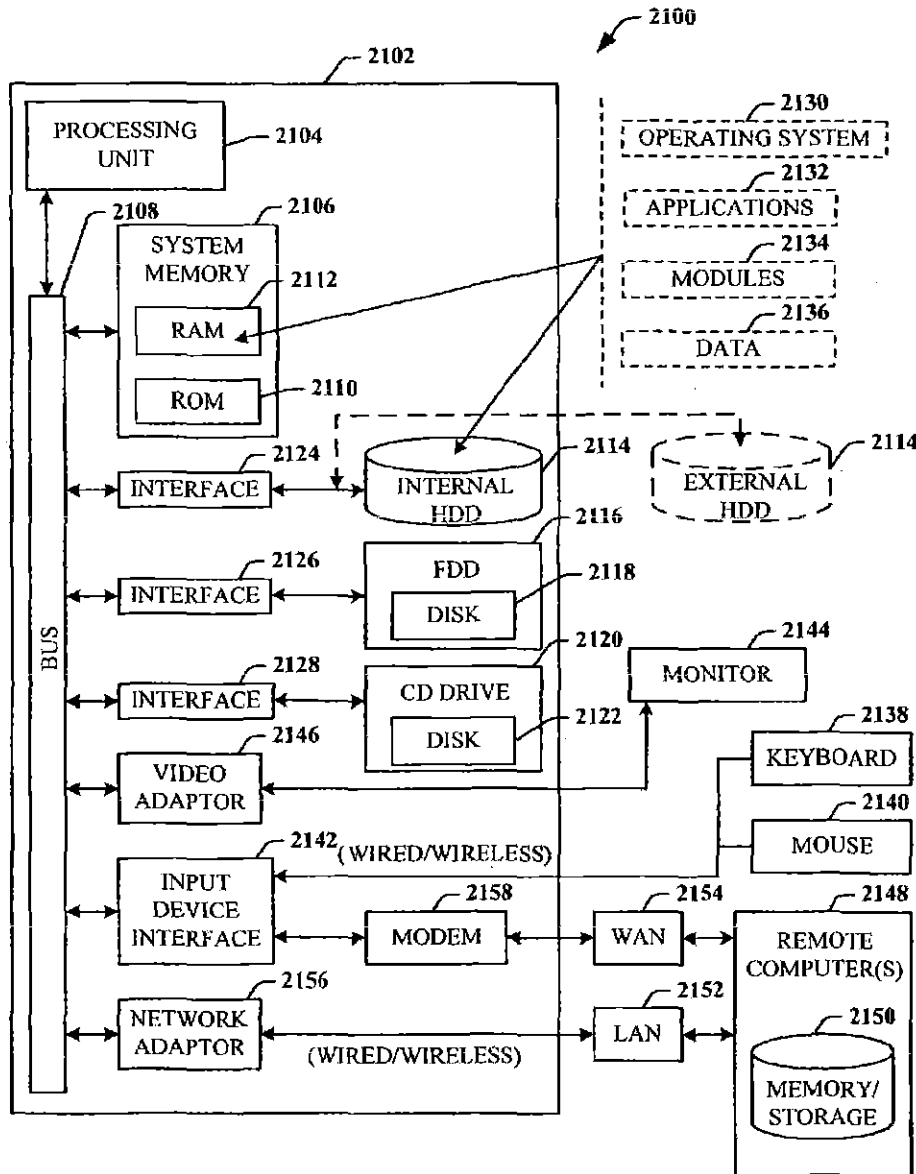


FIG. 21

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**DYNAMIC ASSOCIATION OF
ELECTRONICALLY STORED
INFORMATION WITH ITERATIVE
WORKFLOW CHANGES**

CROSS-REFERENCE TO RELATED
APPLICATIONS

This application claims the benefit of U.S. Provisional Patent application Ser. No. 60/432,255 entitled "METHOD FOR DYNAMIC ASSOCIATION OF ELECTRONICALLY STORED INFORMATION WITH ITERATIVE WORKFLOW CHANGES", filed Dec. 11, 2002; and is related to U.S. patent application Ser. No. 10/731,906 entitled "CONTEXT INSTANTIATED APPLICATION PROTOCOL" filed on Dec. 10, 2003.

TECHNICAL FIELD

This invention is related to management and storage of electronic information. More particularly, this invention relates to new structures and methods for creating relationships between users, applications, files, and folders.

BACKGROUND OF THE INVENTION

Digital communications presently supply solutions to users in ways that are completely divorced from their business context. A particular item of communication provides little or no inherent understanding of how that communication furthers the purpose and intent of the group or enterprise. In other words, an email (electronic mail) inbox collects email messages about all topics, both business and personal. The email application itself is not discerning about topic, priority, or context beyond perhaps rudimentary "message filters" that will look for certain key words or people, and then place those items in target folders. Generally, the application simply presents a sequential list of messages received. Similarly, a fax machine receives fax pages in sequence. The fax machine is not discerning about topic, priority, or context, and simply outputs fax pages. Once received, it remains the task of the recipient to sort, categorize, and organize these items of communication in ways most meaningful to that person. The organization part of the task generally occurs outside the context of the particular communications tool itself.

Typical methods for organization of communications are limited and fragmented. For example, for an email, the recipient may either leave all the email in the inbox or move it to another electronic folder. For a fax, the recipient is likely to place that received fax in a file folder that is identified by project name or name of recipient. These typical methods of organizing communications are wholly inadequate for a number of reasons. The recipient must do all the work of organization and categorization of the communications rather than the system itself do that work. Automation of the organization of communications is non-existent. The linkage between business strategy and an individual act of communication, a leadership priority, is non-existent. With respect to categorization, the items themselves rarely apply to only one topic of interest. As such, under current systems, the items would need to be manually stored in multiple locations (either electronic or "brick and mortar" folders). For example, a letter faxed to a sales manager may contain information about contact addresses, market intelligence data, specific product requests, and financial accounting.

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Data items often relate to organizational issues for which one or more work groups need access; access that is denied when the recipient "buries" that item in his/her personal filing system, electronic or otherwise. Thus, the sharing of knowledge in this context is prohibitive.

Prior art communications tools do not know the business and/or personal context(s) within which files are created and used. For example, a person may create three files in a word processor, one relating to sales, the second relating to operations, and the third relating to a son's football team. However, the word processor itself has no way of knowing to automatically store those three files in at least three different places. Insofar as security and privacy are concerned, the applications and associated file storage methods are generally insecure, not conforming to a single, dependable security model.

Known software applications create and store files outside of a contextual framework. For example, when a user creates a word processing file using a conventional word processor application, the user typically must select a single folder within which to store that file. The file may be stored in an existing folder or the user may create a new folder to receive the file. This file management method is known as Lightweight Directory Application Protocol (LDAP). LDAP borrowed the physical world paper file management scheme where a machine/application creates files, stores those files in individual folders, and stores those folders in cabinets. Under this scheme, context is completely independent of the application. File context is limited to the decision made by the user about the folder in which the file should be stored. The user decision does not adequately represent or reflect the true context of the file given that the file may contain information that could reasonable be stored in multiple folders.

LDAP systems are suited for smaller one-to-many and many-to-one relationships. For example, an e-mail message to ten recipients is a one-to-many relationship, while ten customers sending orders to a single vendor exemplifies a many-to-one relationship. In the case of the former, the e-mail is stored in an Outbox, and the ten recipients store the received message in their respective folders, called an Inbox. In the latter case, the ten received orders are placed in an Orders folder for the associated the product.

Conventional systems are designed to allow multiple users to access the same file for collaboration purposes; however, this feature does not change the basic one-to-many and many-to-one storage paradigm. Conventional systems only attempt to optimize it.

Another limitation of LDAP is that little or no information is contained within the file about the user and, the context and circumstances of the user at the time the file was created. The people elements of an organization are simply too multi-dimensional for the limitations of conventional systems. Current processes designed to add context to files, such as a metadata tagging approach, involve having a knowledge officer view files after they have been stored and create metadata tags with additional key words associated with the file for search purposes.

The best that existing technology has done is to respond to niche requirements where automation made sense: telephone switching, voice mail, e-mail, file transfer, paging, and file storage, for example. The trend is toward a convergence of the technologies, but convergence becomes an enormous problem with these legacy systems that are now encumbered by outdated data handling and storage models that are mainframe and/or hierarchical in nature.

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Notwithstanding the usefulness of the above-described methods, a need still exists for a communications tool that associates files generated by applications with individuals, groups, and topical context automatically.

SUMMARY OF THE INVENTION

The following presents a simplified summary of the invention in order to provide a basic understanding of some aspects of the invention. This summary is not an extensive overview of the invention. It is not intended to identify key/critical elements of the invention or to delineate the scope of the invention. Its sole purpose is to present some concepts of the invention in a simplified form as a prelude to the more detailed description that is presented later.

The present invention disclosed and claimed herein, in one aspect thereof, is a data management tool that is a unified, horizontal system for communications, organization, information processing, and data storage. The tool installs on existing platforms, and is a common workflow layer that is automated with a scalable, relational database. The tool includes a relational database engine that facilitates many-to-many relationships among data elements, in addition to, one-to-many and many-to-many relationships.

The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity that consists of one or more users. The data storage model first assumes that files are associated with the user. Thus, data generated by applications is associated with an individual, group of individuals, and topical content, and not simply with a folder, as in traditional systems.

When a user logs in to the system that employs the tool, the user enters into a personal workspace environment. This workspace is called a board, and is associated with a user context. From within this board, the tool makes accessible to the user a suite of applications for creating and manipulating data. Any user operating within any board has access to the suite of applications associated with that board, and can obtain access to any data in any form (e.g., documents and files) created by the applications and to which he or she has permission. Moreover, thereafter, the user can then move to shared workspaces (or boards), and access the same data or other data.

Data created within the board is immediately associated with the user, the user's permission level, the current workspace, any other desired workspace that the user designates, and the application. This association is captured in a form of metadata and tagged to the data being created. The metadata automatically captures the context in which the data was created as the data is being created. Additionally, the data content is indexed to facilitate searching for the content in a number of different ways in the future by the user or other users. This tagging process is universal, in that, the data model allows for any binary data (e.g., files), as well as any set of definable data to be accepted into the system. The system is not restricted to processing e-mail, faxes, calendar events, meetings, phone calls, etc., that are included in the bundled system, but can also accommodate whatever data the user chooses to use. The system is also universal insofar as its user interaction can be through a browser that is pervasively employed for use with conventional operating systems.

In that the tool supports multiple users, there can be multiple boards. Two or more boards (or workspace environments) can be grouped as a collection of boards, also called a web. Boards can exist in any number of different webs. The association of webs and boards is stored in a table.

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As a user creates a context, or moves from one context to at least one other context, the data created and applications used previously by the user automatically follows the user to the next context. The change in user context is captured dynamically. All files and groups of files can be associated with any other file in the system, allowing a system user the flexibility in determining dynamic associations.

In addition to the macro view provided by webs and boards, the user can also create the more familiar hierarchical folders within any board. These are virtual folders, and nothing is physically stored in these folders.

In another aspect of the present invention, the tool provides the seamless facilitation, collection, compilation, and distribution of data.

In yet another aspect of the present invention, the tool provides links to enterprise leadership priorities.

In still another aspect of the present invention, the tool performs communications tasks while simultaneously reminding the user of his/her individual work priorities.

In another aspect thereof, the tool automatically stores contextual information relating to an item of communication and utilizes that contextual information in performance of communication tasks.

In yet another aspect thereof, the tool integrates two or more different applications such as telephony, unified messaging, decision support, document management, portals, chat, collaboration, search, vote, relationship management, calendar, personal information management, profiling, directory management, executive information systems, dashboards, cockpits, tasking, meeting, conferencing, etc., into a common application.

In another aspect thereof, the tool provides a structure for defining relationships between complex collections of data.

In still another aspect of the present invention, the tool provides a process for automating workflow between multiple entities.

To the accomplishment of the foregoing and related ends, certain illustrative aspects of the invention are described herein in connection with the following description and the annexed drawings. These aspects are indicative, however, of but a few of the various ways in which the principles of the invention may be employed and the present invention is intended to include all such aspects and their equivalents. Other advantages and novel features of the invention may become apparent from the following detailed description of the invention when considered in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 illustrates a block diagram of a system that facilitates the management of data in accordance with the present invention.

FIG. 2 illustrates a flow chart of a process of the present invention.

FIG. 3 illustrates a system employing a board and a web in accordance with the present invention.

FIG. 4A illustrates a diagram of board relationships.

FIG. 4B illustrates board/web relationship diagram.

FIG. 5 illustrates a flow chart of a process for board and web generation in accordance with the present invention.

FIG. 6 illustrates a sample webs-and-boards table used in accordance with the present invention.

FIG. 7 illustrates a block diagram of system in accordance with the present invention.

FIG. 8 illustrates a more detailed block diagram of a system of the present invention.

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FIG. 9 illustrates a diagram of a general structure of the management tool system.

FIG. 10 illustrates a level flow diagram of the hierarchy of the present invention for associating one or more users, context, applications, and folders with data.

FIG. 11 illustrates a system operational in accordance with the present invention.

FIG. 12 illustrates a design integration chart of the disclosed invention.

FIG. 13 illustrates one implementation of a platform system accordance with the present invention.

FIG. 14 illustrates a general system configuration of the present invention.

FIG. 15 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with meeting information in accordance with the present invention.

FIG. 16 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with e-mail information in accordance with the present invention.

FIG. 17 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a board management option in accordance with the present invention.

FIG. 18 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a phone option in accordance with the present invention.

FIG. 19 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a files option in accordance with the present invention.

FIG. 20 illustrates a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a user context in accordance with the present invention.

FIG. 21 illustrates a block diagram of a computer operable to execute the disclosed architecture.

DETAILED DESCRIPTION OF THE INVENTION

The present invention is now described with reference to the drawings, wherein like reference numerals are used to refer to like elements throughout. In the following description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It may be evident, however, that the present invention may be practiced without these specific details. In other instances, well-known structures and devices are shown in block diagram form in order to facilitate describing the present invention.

As used in this application, the terms "component" and "system" are intended to refer to a computer-related entity, either hardware, a combination of hardware and software, software, or software in execution. For example, a component may be, but is not limited to being, a process running on a processor, a processor, an object, an executable, a thread of execution, a program, and/or a computer. By way of illustration, both an application running on a server and the server can be a component. One or more components may reside within a process and/or thread of execution and a component may be localized on one computer and/or distributed between two or more computers.

As used herein, the term "inference" refers generally to the process of reasoning about or inferring states of the

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system, environment, and/or user from a set of observations as captured via events and/or data. Inference can be employed to identify a specific context or action, or can generate a probability distribution over states, for example.

The inference can be probabilistic—that is, the computation of a probability distribution over states of interest based on a consideration of data and events. Inference can also refer to techniques employed for composing higher-level events from a set of events and/or data. Such inference results in the construction of new events or actions from a set of observed events and/or stored event data, whether or not the events are correlated in close temporal proximity, and whether the events and data come from one or several event and data sources.

Referring now to FIG. 1, there is illustrated a block diagram of a system 100 that facilitates the management of data in accordance with the present invention. The data management tool includes a novel architecture where the highest contextual assumption is that there exists an entity that consists of one or more users. The data management and storage model first assumes that data is associated with the user. Thus, data generated by an application employed by the user is associated with the user, groups of users, and topical content; and not simply with a folder, as in traditional systems.

In support thereof, when a user logs-in to the system 100, user data 102 is generated and associated with at least the user and the login process. The user automatically enters into a user workspace or a first context 104 (also denoted $CONTEXT_1$) or environment. This environment can be a default user workspace, or workspace environment pre-designated by the user or an administrator after login, for example. After login, the user can perform data operations (e.g., create and manipulate) on a data 106 in any number of ways, including, but not limited to, viewing, editing, copying, moving, and deleting the data. Such data operations can be performed using at least one application 108. For example, where the data 106 is text data, a text editing or word processing application can be employed. Many different text editor and/or word processing applications exist that can be used to create, view, edit, copy, and move the data 106, to name just a few of the operations. Where the data 106 is program code, the application 108 is one that is suitable for providing user access and interaction therewith. Where the data 106 is a voice file, the application 108 can be an application suitable for playing the voice file. This all occurs in association with the first context 104.

The system 100 also includes a context component 110 in association with the first context 104 to monitor and generate context data 112 associated with data operations of the user in the first context 104. The context data 112 includes at least data representative of the user (e.g., some or all of the user data 102), data representative of the first context 104, data representative of the data 106, and data representative of the application 108. The context data 112 can be stored in the form of a table (or any other suitable data structure) for access and processing, and at any location, as desired.

The system 100 can include a plurality of the contexts, denoted as $CONTEXT_1, \dots, CONTEXT_N$. Thus, in addition to the first context 104, there is at least a second context 114 with which the context component 110 is associated. This is because the user of the first context 104 can move to the second context 114, and perform many different data operations therein which will then be associated with that user in that second context 114. The data operations performed in the second context 114 are also

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associated with the user and stored automatically. Such user activities and data operations in the one or more contexts of the system 100 and movement of the user between contexts are tracked using a tracking component 116. Thus, data generated by applications is associated with an individual, group of individuals, and topical content; and not simply with a folder, as in traditional systems.

Referring now to FIG. 2, there is illustrated a flow chart of a process of the present invention. While, for purposes of simplicity of explanation, the one or more methodologies shown herein, e.g., in the form of a flow chart, are shown and described as a series of acts, it is to be understood and appreciated that the present invention is not limited by the order of acts, as some acts may, in accordance with the present invention, occur in a different order and/or concurrently with other acts from that shown and described herein. For example, those skilled in the art will understand and appreciate that a methodology could alternatively be represented as a series of interrelated states or events, such as in a state diagram. Moreover, not all illustrated acts may be required to implement a methodology in accordance with the present invention.

At 200, a user is associated with a first context. This can occur by the user logging in to a system and automatically entering a user workspace, which workspace is associated with the first context. At 202, the user assigns applications for use in the user context. This can occur explicitly by the user manually selecting the application(s) for association with the context, or implicitly by the user launching an application and performing data operations within the context. At 204, the user performs a data operation. At 206, the user changes context from the first context to a second context. At 208, the data and application(s) are then automatically associated with the second context. The process then reaches a Stop block.

As the user performs data operations in the first and second contexts, the system automatically creates and updates context data, as indicated at 210. This occurs transparently to the user, as indicated by the dashed line.

Referring now to FIG. 3, there is illustrated a system 300 employing a board 302 and a web 304 in accordance with the present invention. In the past, intuitive, dynamic, and changeable workflow processes have proved to be too dynamic and expensive for automation. Boards and webs are used to automate workflow processes and define relationships between data and applications. As users create and change their contexts, the data (e.g., files) and applications automatically follow, the shifts in context being captured dynamically in the context data. As used herein, a "board" is defined as a collection of data and application functionality related to a user-defined topic. For example, a user-defined topic may be a department of a company or a project that involves the company. In the case of a project, the board preferably includes all of the data relating to that project including email, tasks, calendar events, ideas, discussions, meetings, phone calls, files, contact records, people, etc. Data and applications may be grouped in a board based on the identity of the tag. As used herein, the term "web" refers to a collection of interrelated boards.

As implemented, the web 304 of the system 300 can include a plurality 306 of the boards 302 (also denoted as BOARD₁, BOARD₂, . . . , BOARD_N). The plurality of boards 306 can each be associated with a single user, one with a single user, and others with multiples users, including or not including the user. The system 300 can also employ a plurality of webs 308 (also denoted WEB₁, WEB₂, . . . , WEB_X). The many boards 306 can be grouped in different

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combinations as webs. For example, BOARD₁, and BOARD₂ can be grouped as WEB₂. Thus, where WEB₁ includes three boards all related to a single project, the boards 306 can include finance, accounting, and resources, for example.

Referring now to FIG. 4A, there is illustrated a diagram 400 of board relationships. Boards in a web may have, for example, a parent-child relationship, although this is not required. A given board can have more than one parent and more than one child. A board cannot be its own child or its own parent. However, boards can have various relationships to each other. For example, a board may be part of a circular relationship of any complexity. Illustrated herein, a first board, BOARD₁, is parent to a second board, BOARD₂. The second board, BOARD₂, is parent to a third board, BOARD₃, and BOARD₃ is parent to the first board, BOARD₁.

Referring now to FIG. 4B, there is illustrated board/web relationship diagram 402. Boards can exist in any number of webs. Many boards will exist in more than one web. The web represents a certain view of the relationships among boards. That is, the view can be hierarchical, or the view can be in the form of a work-flow. Additionally, the relationship between two boards on one web is independent of the relationship between those same two boards on other webs. As shown, in a first web, WEB₁, BOARD₁ is a parent to BOARD₂. Yet, in a second web, WEB₂, BOARD₁ is a child to BOARD₂. In a third web, WEB₃, BOARD₁ and BOARD₂ have no relationship, but exist independent of one another. In a fourth web, WEB₄, BOARD₁ exists, but BOARD₂ does not. These are but a few examples of the web/board relationships that can exist in accordance with the present invention.

In accordance with the invention, webs may be used to maintain the location of content within a complex and changing set of boards and support automation of a workflow process. One example of automation of a changing workflow process can be illustrated where the workflow process to be automated initially is represented by A→B→C, and ultimately changed to A→B/C→D. Three different groups of people are assigned to each item, where the resulting distribution is A(1, 2, 3)+B(4, 5, 6)+C(7, 8, 9).

In the known LDAP environment, it is necessary for the automation sequence to predetermine how work data flows from A to B and C. Then the automation module for inputs to D must be spelled out and rewritten to consolidate the split inputs from B and C. As such, the automation support for this workflow change will always lag behind the ability of the people involved to start working with the new workflow assumptions.

In contrast, and in accordance with the present invention, webs and boards are the context for applications, files, and folders. Hence, the workflow process may be readily reorganized by making a change to one or more of the webs and boards. By simply adding the board D and rearranging some of the relationships of A, B, and C, the workflow is quickly reorganized and implemented.

The disclosed system has associated therewith a routing algorithm, referred to herein as a "webslice." A webslice is a relationship rule that defines a relationship between a web and one or more boards of that web. If the web changes (e.g., a board is added), and meets the criteria of the rule, the content will be on the new board as well. For example, the rule can include a web ID, a starting board ID, and "transversal" data (i.e., the relationship rule), in the following format:

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webslice (target board)=<webID; starting board ID; transversal data>.

Thus, if a system includes two webs, W1 and W2, where web W1 includes five boards: A (the starting board), B, C, D, and E, with each subsequent board a child to the previous board (i.e., B is child of A, C is child of B, etc.), the webslice data "slicing" to board E will be similar to the following:

webslice (board E)=<W1; board A; A→B→C→D→E>.

It is to be appreciated that where a child board has at least two parent boards, the webslice data can include at least two paths. For example, consider that A is the parent to both B and C, with B and C the parents to D. A webslice to D can be obtained in one of two ways:

webslice (board D)=<W1; board A; A→B→D>, or

webslice (board D)=<W1; board A; A→C→D>.

Moreover, since the webslice to a given board of a web can take at least two different paths, one path can be longer than the other to the desired board. Consider that A is the parent to both B and C, with B the parent to D, and C the parent to E, and E the parent to D. A webslice to D can be obtained in one of two ways:

webslice (board D)=<W1; board A; A→B→D>, or

webslice (board D)=<W1; board A; A→C→E→D>.

These examples are only but a few of the relationships that can be extracted using a webslice. The webslice can also take the forms of the following: "Just the board I started from" (a default); "All child boards"; "All sibling boards"; and, "All descendant boards", for example.

Thus, by using at least these three basic entities for the webslice (i.e., the web ID, the starting board ID, and the transversal data), the boards associated with a given content can be ascertained. Since content is associated with context, and the board is used in part to define the context, the system knows the content associations whereupon a change of web structure, the system knows with which board(s) the content is associated, both before and after the structure change. In keeping with one aspect of the invention, the location of the content may be determined dynamically at runtime using the webslice. Alternatively, the associated location of content may be determined by detecting changes in structure, detecting the temporary location of the content on the boards in the routing algorithm before and after the change, and adjusting the location of the affected content as part of the change in structure. Of course, the webslice data is not limited to the three aspects indicated hereinabove, but may include further information, such as at least one application ID and user ID (that uniquely identifies the creator of the content), for example.

Data created while the user is in the board is immediately associated with the user, the current workspace, any other desired workspace that the user designates, and the application. This association is captured in a form of metadata and tagged to the data being created. The metadata automatically captures the context in which the data was created as the data is being created. Additionally, the data content is indexed to facilitate searching for the content in number of different ways in the future by the user or other users. This tagging process is universal, in that, the data model allows for any binary data (e.g., files), as well as any set of definable data to be accepted into the system. The system is not restricted to processing e-mail, faxes, calendar events, meetings, phone calls, etc., that are included in the bundled system, but can also accommodate whatever data the user chooses to define. The system is also universal insofar as user interaction can be through a browser that is pervasively employed for use with conventional operating systems.

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Referring now to FIG. 5, there is illustrated a flow chart of a process for board and web generation in accordance with the present invention. At 500, a webs-and-boards table is created to track the relationship of said aspects. At 502, a user creates a board. This can be via an administrator initially configuring a person's user workspace, or thereafter, a user creating another workspace, for example, a shared workspace. At 504, the user performs data operations while in the board. The data and applications employed to operate on the data are then included as content associated with the user in this particular context. Given that there can be multiple users, there can be a corresponding one or more webs associated with the one or more users. A BOARD(S) column lists the number of boards, and select numbers of the boards can now be grouped in collections or webs, as indicated at 506, to facilitate workflow, for example. For any number of reasons, the web and board relationships can be changed, as indicated at 508. At 510, the webs-and-boards table is automatically updated as these changes occur. The process then reaches a Stop block.

Referring now to FIG. 6, there is illustrated a sample webs-and-boards table 600 used in accordance with the present invention. The table 600 includes a user information column related to a number of users (1-3 and 6-8), under the heading of USER(S). This is because the novel invention first begins by associating all aspects with the user. The table 600 also includes a WEB(S) column that associates one or more webs (W1, W2, and W3) with the one or more users. A BOARD(S) column lists the lists the boards (e.g., B11, B12, and B14) with a given web. Here the users 1, 2 and 3 are associated with a web W1 that comprises a collection boards B11, B12, and B14 (where the first digit is the associated web number, and the second digit is the board number). The table 600 also includes a parent/child relationships column (denoted as BOARD(S) P/C RELATION). Here, board B11 is the parent, and board B12 is a child, and a parent to board B14. The table 600 is not limited to the columns provided, but can include more information, as desired.

Referring now to FIG. 7, there is illustrated a block diagram of system 700 in accordance with the present invention. Generally, the system 700 includes an internal network 702 on which is disposed a services system 704 and one or more users 706 seeking use of the services system 704. The services system 704 further includes a services component 708 and an associated data storage system 710 for storing data and programs. The services system 704 includes the data management tool of the present invention.

A user at one of the user nodes 706 can access the services system 704 via a browser over a wired/wireless communication link. Given that a browser is a principal means for access, the user node can be any type of computing device and operating system that supports a browser, whether the browser is a full-blown program typically used on a desktop computing system, or a modified or slimmed down browser interface employed in a portable computing device, e.g., a personal data assistant (PDA), wireless computing tablet, and cellular/digital telephone. As illustrated, the user nodes 706 also have direct access to the data storage system 710.

The user nodes 706 can also access a global communications network 712, e.g., the Internet, using conventional communication means, thereby providing a second path for accessing the services system 704, that further facilitates direct access to the services 708 and/or the storage system 710. This second path is most important, since a user can access the system 704 from essentially anywhere.

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The services system 704 can be utilized internal to a corporate environment operating on, for example, an intranet, and providing such services only to corporate users. In another implementation, the system 704 can be disposed external to the corporate environment such that the company 5 subscribes to the system services via a vendor.

Referring now to FIG. 8, there is illustrated a more detailed block diagram of a system 800 of the present invention. The system 800 includes the internal network 702 on which is disposed the services system 704 and the one or more users 706 seeking use of the services of the services component 708 provided thereby. The services of the services component 708 facilitate the use of the data management tool, which employs one or more webs 802 and boards 804. The tool further provides portal services 806 for 15 accessing the services from various internal and external network locations using the TCP/IP suite of protocols. Other services provided include, but are not limited to, voice services 808 and outside services 810. Outside services 810 facilitate including non-employees and the use of third-party applications in specific projects in the system by providing various levels of access to any number of data locations and services. Read/write permissions can be granularized to the file level, if desired.

The data storage system 710 includes a number of storage methodologies 812 for handling and processing data. For example, one methodology enables large numbers of users to organize files and documents around many projects simultaneously. Data of any kind and size can be uploaded to a common shared workspace or board. Varying levels of access can be provided to the uploaded data. Other methodologies are associated with storing the data, archiving the data, data warehousing, library data, and an idea registry for tracking that aspect of the companies intellectual capital. The storage system 710 facilitates the storage and access of 25 metadata libraries that link hierarchical and non-hierarchical LDAP folders.

As indicated hereinabove, the management tool operates seamlessly with existing computing system applications, and existing system services. For example, the conventional system services can include at least the following: e-mail, collaboration and groupware services 814 having an associated e-mail, collaboration and groupware storage system 816, voice switching services 818 (e.g., telephone and paging functions) having an associated voice data storage system 820; and multimedia services 822 having an associated multimedia storage system 824. The storage systems 816, 820, and 824 can connect to the storage system 710 to facilitate data transfer and storage in accordance with the various methodologies of the storage system 710. 30

A user of the users node 706 can also access the e-mail/collaboration/groupware services 814, voice switching services 818, and multimedia services 822 indirectly through the services system 704 using a multi-user data manipulation engine, e.g., OLAP (On-Line Analytical Processing). Alternatively, the user can access these services 814, 818, and 822 directly over the network 702, but shown separately as a communication link 826, and through the services 708 without using the multi-user engine. 35

The user can also access the services 704, other services 814, 818, and 822, and data storage system 710 over the global communications network 712 via a link 828. This is facilitated through the user browser by directing the browser to a website using a URL (Uniform Resource Locator) or through an alternative Link 830. 40

The management tool is browser-based and incorporates a strong-encryption scheme (e.g., using 128-bit SSL (secure

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socket layer) protocol). This means that data transmitted between the user computer and the services server is substantially secure. Furthermore, data shall not be cached, which means that there is no information footprint left on the user computer after the user logs off. The user can access data securely from virtually any network node using any type of browser. The data is stored encrypted on the storage system 710.

Referring now to FIG. 9, there is illustrated a diagram of a general structure of the management tool system 900. The structure starts at a high level with the user at a user level 902. The user level 902 is next associated with a context level 904 that defines all contexts in which the user can be included. Under the context level 904 is a web level 906 that associates one or more of the webs with one or more of the contexts of the context level 904. A boards level 908 underlies the webs level 906 and provides associations of the many boards with one or more of the webs. An applications level 910 facilitates associating one or more applications with a board designated at the board level 908. A database/folders level 912 underlies the applications level 910, and facilitates storing at least data, tables, and context information generated from the upper levels in folders, in the form of, e.g., files, at an associated underlying file level 914. A linking protocol 916 provides cross-level communication for facilitating all aspects of data processing and communication at all levels of the data management system 900. 45

Referring now to FIG. 10, there is a level flow diagram 1000 illustrating the hierarchy of the present invention for associating one or more users 1002, context 1004, applications 1006, and folders 1008 with data 1010. The approach is for file storage pointers of an application to be dynamic, governed initially by the folder within which the application is launched. Additionally, the file storage pointers are then accessible and acted upon by the same application from any folder in the system. This is a dynamic non-linear implementation. 50

Traditional collaborative technologies, like groupware, allow groups of users to take action on the same file substantially simultaneously. However, in preparation for such capabilities, all users must have compatible versions of the same application that is to be used for working with the file. The context for any folder is limited to a one-to-many and many-to-one relationship. Essentially, the folder possesses a singular context to the directory tree in which it resides. 55

In contrast, the disclosed architecture assumes that the highest contextual level is that of an entity consisting of a group of users forming a many-to-many architecture. The users create and use the files within the context of the workspaces or boards of one or more users, which may or may not have web relationships. In this implementation, the board is similar in function to a folder in conventional LDAP systems. 60

The user then uses a suite of applications within a board, with any file created being immediately associated with the user, that board, any other board desired, and the application. In other words, by the person doing simply his/her work, an enormous amount of metadata about the context(s) for that work is captured automatically. Additionally, the system indexes the content to facilitate the other ways in which the users of the system might want to search on that file in the future—ways and future contexts which are not and cannot be known by the users in advance and certainly are not facilitated by conventional systems. 65

The system facilitates the use of an array of applications that act independently of the boards from which they were

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launched, and those boards are capable of being ordered in a myriad of collections of relationships (i.e., webs). The applications can traverse the webs to the boards associated with the information.

In addition to a macro view obtained by webs and boards, the user can also create familiar hierarchical folders within any board. These are virtual folders, in that their storage is governed by the process described above. No data is physically stored in these folders. Finally, any file or group of files can be associated with any other file in the system, allowing the users of the system infinite flexibility in determining dynamic associations among the macro/micro components of the system.

Referring now to FIG. 11, there is illustrated a system 1100 operational in accordance with the present invention. The system 1100 includes a data management platform 1102 suitable for accommodating any number conventional operating systems (OS) 1104 (also denoted OS₁, OS₂, OS₃, . . . , OS_N). The system 1100 also facilitates the use of a single data storage system 1106 suitable for use with any of the operating systems 1104, whereas conventionally, a given OS may require a certain data storage file structure. The platform 1102 is OS-independent, and provides a single point of contact for multiple users and resources 1108.

Referring now to FIG. 12, there is illustrated a design integration chart 1200 of the disclosed invention. At the core of the system is a data management tool 1202 that facilitates all of the outlying features and capabilities. The tool 1202 facilitates, at a second layer 1204, one interface (via a browser), one application (the tool itself), one data store (associate with the management tool), and one search mechanism for finding any data element of the data store. Of course, any third party applications typically have their own search tool to search for files and folders that may also be used. At a third layer 1206, the system 1200 facilitates a secure operating environment, a scalable environment, and web-based. Moreover, the system 1200 can be implemented on any software and/or hardware platform, accommodate access from any device, and bridge to third party applications and devices. At an outer layer 1208, the system 1200 facilitates one or more instances of the following: users, contexts, workflows, projects, user-defined topics, priorities, file types, and tools. The system 1200 also is suitable for use with e-mail, facsimile, and instant messaging subsystems, multimedia services, and voice systems (e.g., phone and paging data).

The system 1200 captures and catalogs data automatically. Users, projects, permissions and communication tools can be readily configured, along with the exchange of voice information, data, and video data, seamlessly. As users collaborate, the system 1200 captures context information, and automatically records when and how data is shared, who updated the data, how often the data was accessed, what additional information the data was linked to, etc. Meeting information can be stored automatically, including, but not limited to, who attended, the documents shared, instant messages captured, handouts used, slides presented, etc. A later search can retrieve this information along with the context(s) within which the data was generated and used.

The system 1200 enables larger numbers of users to organize communications around many projects substantially simultaneously. It can relate those projects to one another using whatever workflow model(s) are required, and dynamically assign modular communications tools (e.g., e-mail, voice mail, fax, teleconferencing, document sharing, etc.) to those many projects as desired. The system 1200 automatically indexes that information within the context(s)

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in which it is received and used. This way, when a user searches the system 1200 for information, the user not only gets the information sought, but also can see how the information is currently being used by other users and project groups in the whole system. Traditionally, if a document was to be associated with seven different projects, for example, the document would be stored in seven different file locations and version control could be a significant problem. In accordance with the present invention, the document is seamlessly linked to all seven projects. Thus, only one version exists, and version control is much easier to address.

The disclosed system architecture is suited to relational and object database structures for use on a large scale. The data management tool uses both relational and object storage approaches to facilitate at least Internet-based data communications.

Referring now to FIG. 13, there is illustrated one implementation of a platform system 1300 in accordance with the present invention. The platform system 1300 includes the capability of third-party application integration, security cameras and other devices for data input, project and workflow management and, file and document sharing. The platform system 1300 also accommodates online meetings between logged-in users, and teleconferencing between the users, if desired. The teleconferencing can be initiated using the platform system 1300.

Referring now to FIG. 14, there is illustrated a general system configuration 1400 of the present invention. The system 1400 includes a platform 1402 that hosts at least the data management tool, here called a web application server 1404. The server 1404 provides a common layer to underlying services that include a database server 1406, a VRU (voice response unit) 1408 (also called an interactive VRU or IVRU) and mass storage system 1410. The VRU 1408 facilitates interactive calling features for a user via remote touchtone signals and to voice data to the caller such that the caller can make choices in response to predetermined options presented by the system.

The platform 1402 can utilize at least one multi-channel data communication connection 1412 (e.g., T1, DS3) into the VRU subsystem 1408 for communicating voice information and interacting with features of the platform 1402. As indicated previously, the invention can accommodate user communication from virtually any accessible network node. To facilitate such an interface, the platform 1402 can include a processor 1414 suitable for XML (eXtensible Markup Language), XSLT (XML Stylesheet Language: Transformations), and SSL processing. The processor 1414 can also access web-based services utilizing SOAP (Simple Object Access Protocol). SOAP employs XML syntax to send text commands across the network using HTTP (Hypertext Transport Protocol). Thus, there is a high-speed connection 1416 (e.g., broadband) that interfaces to the processor layer 1414 for use with multiple communication exchanges with remote users disposed on the global communication network 712. The remote users can access the platform system 1402 via a SSL connection 1418 using portable wired/wireless devices 1420, and by way of the associated browsers 1422.

Referring now to FIG. 15, there is illustrated a screenshot of a management tool window 1500 of a browser (e.g., Internet Explorer by Microsoft Corporation) used as a user interface to facilitate user interaction with meeting information in accordance with the present invention. The window 1500 includes an address field 1502 that indicates the default protocol and URL address for accessing the data manage-

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ment system of the present invention. Here, HTTP is used to access the server via network. The "https:" indicates the connection will be to a secure port instead of a default web port. The window 1500 also includes a user area 1504 that indicates the name of the user logged into the system. There is also provided a topic area 1506 that lists the various boards associated with the user-defined topics. Here, the user has defined two topics: a Topic 1 and a Topic 2.

The window 1500 also includes an application (or services) area 1508 that lists many applications selectable by the user while in this particular window 1500. The applications presented to the user from this window 1500 include but are not limited to the following: Message, Calendar, Task, Phone, Search, Meet, Contact, Compile, Discuss, Files, Notes, Division, News, Ideas, Vote, Manage Board, Change, Password, Print, Help, Tutorial, and Logout. Depending on the user permissions provided by an administrator, the user may see more or fewer applications.

Here, the Meet application option is selected to allow user interaction with setting up a meeting related to projects of the user. The Meet application option further includes List and Create sub-options. When the List sub-option is selected, a center viewing area 1510 is used to present board, context, web address and other information so that the user can review the existing board and context information related to setting up a meeting. Selection the Create sub-option allows the user to create a meeting in association with one or more of the boards and make changes to existing board relationships and contexts. Other user-selectable options are provided such that the user can Join in a session with one or more other users, Move data to Archive, Select all objects, set a Reminder for himself or herself, and Delete boards.

The Messaging option allows the user to give out an e-mail address of a project work area, enabling senders to send the messages to right place. Thus, the user no longer needs to manually move the messages to the appropriate folders once received in a personal message inbox. Additionally, incoming faxes are routed to the appropriate board for storage and review. Keywords and phrases in the fax are automatically indexed. Later retrieval is accommodated simply by performing a search for the keywords or phrases. Moreover, a given board can be assigned a fax number. Thus, all faxes coming in can be routed to that number, and on to the associated board.

The Vote option allows the company and organizations to communicate and gather opinions by way of voting. A question can be entered, and the users selected to whom the question(s) should be posed.

Referring now to FIG. 16, there is illustrated a screenshot of a management tool window 1600 of a browser used as a user interface to facilitate user interaction with unified messaging, including e-mail, voice mail and fax information in accordance with the present invention. The window 1600 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the Message option is selected to allow user interaction with various forms of messaging support by the disclosed management architecture. The Message option further includes an instant messaging (IMessage) sub-option, in this particular implementation.

When the Email-Inbox sub-option is selected, the center viewing area 1510 is used to present the user's messaging inbox folders. The user can then open these folders to view the e-mail, voice mail and fax messages stored therein. The center viewing area 1510 also includes a drop-down menu

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1602 that allows the user to select from a variety of different folders (e.g., Main, Drafts) of the e-mail system. The user can also create and sign messages with a digital signature.

As before, other user-selectable options are provided such that the user can manipulate messaging information, including, but not limited to, Select All, Delete, Acknowledge, Remind Me, Remove, Move/Copy, Forward, and Get External Mail.

There is also provided a News link that allows the user to link to the latest corporate and/or division news.

Referring now to FIG. 17, there is illustrated a screenshot of a management tool window 1700 of a browser used as a user interface to facilitate user interaction with a board management option in accordance with the present invention. The window 1700 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the Manage Board option is selected to allow user interaction with various forms of user management of boards. The associated sub-options allow the user to Edit the board attributes, and set permission levels thereto, in this particular implementation. Of course, many different additional or different options can be provided (in this window and other windows), at the discretion of the administrator. The system allows for new attributes to be added to this option as the need arises.

The center viewing area 1510 presents general board attributes 1702 of the user (e.g., user name, data, and time), and several fields for entering user information, including in this implementation, but not limited to, board description, board name, board nickname, board e-mail address, external e-mail properties (e.g., POP server, user name, and password), fax information (e.g., incoming fax number for the board and incoming fax PIN), and voice mail information (e.g., incoming voice mail number and incoming voice mail PIN).

Referring now to FIG. 18, there is illustrated a screenshot of a management tool window 1800 of a browser used as a user interface to facilitate user interaction with a phone option in accordance with the present invention. The window 1800 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). The sub-options include Call History, Call Setup, Quick Call, Meet Me, and List. The central viewing area 1510 for this window 1800 simply includes a listing of phone-related events for the given user.

As before, other user-selectable options are provided such that the user can manipulate phone information, including, but not limited to, Select All, Delete, Acknowledge, and Remind Me. In addition, as with the other windows, there is include an Agenda area 1802 for presenting any agenda information of a meeting or upcoming event.

Referring now to FIG. 19, there is illustrated a screenshot of a management tool window 1900 of a browser used as a user interface to facilitate user interaction with a files option in accordance with the present invention. The window 1900 includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the sub-options include List, Upload, Deleted, and Check In. Thus, data can at least be listed, uploaded to the system and/or a board, deleted from the system and/or board, and checked in from a previous checkout process.

The window 1900 includes the central viewing area 1510 for viewing information requested or selected for presentation. There is also a user control area 1902 that facilitates

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listing user documents that are checked out of the system or board. There is also provided a dropdown menu 1904 for selecting from a number of folder viewing options.

Other user-selectable options are provided such that the user can manipulate documents, including, but not limited to, Select All, Delete, Acknowledge, Remind Me, Remove, Move/Copy, Check Out and Download.

Referring now to FIG. 20, there is illustrated a screenshot of a management tool window of a browser used as a user interface to facilitate user interaction with a user context in accordance with the present invention. Here, the My Context option was selected while in the Meet application option. Thus, the context information of the user is posted within the meeting space. The window 2000 also includes many of the same fields and informational areas of the previous windows (e.g., areas 1502, 1504, 1506, and 1508 of window 1500 of FIG. 15). Here, the sub-options associated with Meet include List and Create. Thus, data can at least be listed and created in accordance with the associated need. Note that other data can also be accessed and presented within an application option, for example, My Profile will show the user profile data.

The window 2000 includes the central viewing area 1510 for viewing information requested or selected for presentation. Here, the user has selected the presentation of the user context information, which also includes board information and relationships. For example, board names Board1, Board2, and Board3 are listed, along with the hosts, User (the current user) for Board1, and User2 for both boards Board2 and Board3. The web name is also listed for the collection of these three boards.

There is a Special Projects Web listed, and the associated parent/child relationships of the associated boards. For example, Board6 is a parent to Board4, and Board4 is also a parent to Board2.

Other user-selectable options are provided for the Meet option, such as Join, Move to Archive, Select All, Delete, Acknowledge, and Remind Me.

These are but only a few of the numerous windows employed to facilitate user interaction, input, and control of the management tool system. Many other windows are provided to support, for example, printing, user help, communications security, presenting user documents to other users, metering user performance, dialog and discovery forums, calendar functions, task functions, leadership tools, file system management, user context, telephone services, e-mail, voicemail, faxes, video conferencing, web conferencing, security video, reverse 911, voice broadcasting, first response unified messaging capabilities, specialized APIs, software development kit, conduct and store meetings, organizing personal contact information, enterprise webs, chat sessions, intellectual notes and ideas, workflows, compilations, user profiles, news, searching, user alerts, integration of third-party users and resources, multimedia information, user permissions, system configuration, and wireless portable device interfaces, just to name a few.

Referring now to FIG. 21, there is illustrated a block diagram of a computer operable to execute the disclosed architecture. In order to provide additional context for various aspects of the present invention, FIG. 21 and the following discussion are intended to provide a brief, general description of a suitable computing environment 2100 in which the various aspects of the present invention may be implemented. While the invention has been described above in the general context of computer-executable instructions that may run on one or more computers, those skilled in the art will recognize that the invention also may be imple-

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mented in combination with other program modules and/or as a combination of hardware and software.

Generally, program modules include routines, programs, components, data structures, etc., that perform particular tasks or implement particular abstract data types. Moreover, those skilled in the art will appreciate that the inventive methods may be practiced with other computer system configurations, including single-processor or multiprocessor computer systems, minicomputers, mainframe computers, as well as personal computers, hand-held computing devices, microprocessor-based or programmable consumer electronics, and the like, each of which may be operatively coupled to one or more associated devices.

The illustrated aspects of the invention may also be practiced in distributed computing environments where certain tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices.

A computer typically includes a variety of computer-readable media. Computer-readable media can be any available media that can be accessed by the computer and includes both volatile and nonvolatile media, removable and non-removable media. By way of example, and not limitation, computer readable media can comprise computer storage media and communication media. Computer storage media includes volatile and nonvolatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules or other data. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital video disk (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by the computer.

With reference again to FIG. 21, there is illustrated an exemplary environment 2100 for implementing various aspects of the invention that includes a computer 2102, the computer 2102 including a processing unit 2104, a system memory 2106 and a system bus 2108. The system bus 2108 couples system components including, but not limited to, the system memory 2106 to the processing unit 2104. The processing unit 2104 may be any of various commercially available processors. Dual microprocessors and other multiprocessor architectures may also be employed as the processing unit 2104.

The system bus 2108 can be any of several types of bus structure that may further interconnect to a memory bus (with or without a memory controller), a peripheral bus, and a local bus using any of a variety of commercially available bus architectures. The system memory 2106 includes read only memory (ROM) 2110 and random access memory (RAM) 2112. A basic input/output system (BIOS) is stored in a non-volatile memory 2110 such as ROM, EPROM, EEPROM, which BIOS contains the basic routines that help to transfer information between elements within the computer 2102, such as during start-up. The RAM 2112 can also include a high-speed RAM such as static RAM for caching data.

The computer 2102 further includes an internal hard disk drive (HDD) 2114 (e.g., EIDE, SATA), which internal hard disk drive 2114 may also be configured for external use in a suitable chassis (not shown), a magnetic floppy disk drive (FDD) 2116, (e.g., to read from or write to a removable diskette 2118) and an optical disk drive 2120, (e.g., reading

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a CD-ROM disk 2122 or, to read from or write to other high capacity optical media such as the DVD). The hard disk drive 2114, magnetic disk drive 2116 and optical disk drive 2120 can be connected to the system bus 2108 by a hard disk drive interface 2124, a magnetic disk drive interface 2126 and an optical drive interface 2128, respectively. The interface 2124 for external drive implementations includes at least one or both of Universal Serial Bus (USB) and IEEE 1394 interface technologies.

The drives and their associated computer-readable media provide nonvolatile storage of data, data structures, computer-executable instructions, and so forth. For the computer 2102, the drives and media accommodate the storage of any data in a suitable digital format. Although the description of computer-readable media above refers to a HDD, a removable magnetic diskette, and a removable optical media such as a CD or DVD, it should be appreciated by those skilled in the art that other types of media which are readable by a computer, such as zip drives, magnetic cassettes, flash memory cards, cartridges, and the like, may also be used in the exemplary operating environment, and further, that any such media may contain computer-executable instructions for performing the methods of the present invention.

A number of program modules can be stored in the drives and RAM 2112, including an operating system 2130, one or more application programs 2132, other program modules 2134 and program data 2136. All or portions of the operating system, applications, modules, and/or data can also be cached in the RAM 2112.

It is appreciated that the present invention can be implemented with various commercially available operating systems or combinations of operating systems.

A user can enter commands and information into the computer 2102 through one or more wired/wireless input devices, e.g., a keyboard 2138 and a pointing device, such as a mouse 2140. Other input devices (not shown) may include a microphone, an IR remote control, a joystick, a game pad, a stylus pen, touch screen, or the like. These and other input devices are often connected to the processing unit 2104 through an input device interface 2142 that is coupled to the system bus 2108, but may be connected by other interfaces, such as a parallel port, an IEEE 1394 serial port, a game port, a USB port, an IR interface, etc.

A monitor 2144 or other type of display device is also connected to the system bus 2108 via an interface, such as a video adapter 2146. In addition to the monitor 2144, a computer typically includes other peripheral output devices (not shown), such as speakers, printers, etc.

The computer 2102 may operate in a networked environment using logical connections via wired and/or wireless communications to one or more remote computers, such as a remote computer(s) 2148. The remote computer(s) 2148 may be a workstation, a server computer, a router, a personal computer, portable computer, microprocessor-based entertainment appliance, a peer device or other common network node, and typically includes many or all of the elements described relative to the computer 2102, although, for purposes of brevity, only a memory storage device 2150 is illustrated. The logical connections depicted include wired/wireless connectivity to a local area network (LAN) 2152 and/or larger networks, e.g., a wide area network (WAN) 2154. Such LAN and WAN networking environments are commonplace in offices, and companies, and facilitate enterprise-wide computer networks, such as intranets, all of which may connect to a global communication network, e.g., the Internet.

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When used in a LAN networking environment, the computer 2102 is connected to the local network 2152 through a wired and/or wireless communication network interface or adaptor 2156. The adaptor 2156 may facilitate wired or wireless communication to the LAN 2152, which may also include a wireless access point disposed thereon for communicating with the wireless adaptor 2156. When used in a WAN networking environment, the computer 2102 can include a modem 2158, or is connected to a communications server on the LAN, or has other means for establishing communications over the WAN 2154, such as by way of the Internet. The modem 2158, which may be internal or external and a wired or wireless device, is connected to the system bus 2108 via the serial port interface 2142. In a networked environment, program modules depicted relative to the computer 2102, or portions thereof, may be stored in the remote memory/storage device 2150. It will be appreciated that the network connections shown are exemplary and other means of establishing a communications link between the computers may be used.

The computer 2102 is operable to communicate with any wireless devices or entities operably disposed in wireless communication, e.g., a printer, scanner, desktop and/or portable computer, portable data assistant, communications satellite, any piece of equipment or location associated with a wirelessly detectable tag (e.g., a kiosk, news stand, restroom), and telephone. This includes at least Wi-Fi and Bluetooth™ wireless technologies. Thus, the communication may be a predefined structure as with conventional network or simply an ad hoc communication between at least two devices.

Wi-Fi or Wireless Fidelity, allows connection to the Internet from a couch at home, a bed in a hotel room or a conference room at work, without wires. Wi-Fi is a wireless technology like a cell phone that enables such devices, e.g., computers, to send and receive data indoors and out, and anywhere within the range of a base station. Wi-Fi networks use radio technologies called IEEE 802.11 (a, b, g, etc.) to provide secure, reliable, fast wireless connectivity. A Wi-Fi network can be used to connect computers to each other, to the Internet, and to wired networks (which use IEEE 802.3 or Ethernet). Wi-Fi networks operate in the unlicensed 2.4 and 5 GHz radio bands, with an 11 Mbps (802.11a) or 54 Mbps (802.11b) data rate or with products that contain both bands (dual band), so the networks can provide real-world performance similar to the basic 10BaseT wired Ethernet networks used in many offices.

What has been described above includes examples of the present invention. It is, of course, not possible to describe every conceivable combination of components or methodologies for purposes of describing the present invention, but one of ordinary skill in the art may recognize that many further combinations and permutations of the present invention are possible. Accordingly, the present invention is intended to embrace all such alterations, modifications and variations that fall within the spirit and scope of the appended claims. Furthermore, to the extent that the term "includes" is used in either the detailed description or the claims, such term is intended to be inclusive in a manner similar to the term "comprising" as "comprising" is interpreted when employed as a transitional word in a claim.

What is claimed is:

1. A computer-implemented network-based system that facilitates management of data, comprising:
a computer-implemented context component of the network-based system for capturing context information associated with user-defined data created by user inter-

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action of a user in a first context of the network-based system, the context component dynamically storing the context information in metadata associated with the user-defined data, the user-defined data and metadata stored on a storage component of the network-based system; and

a computer-implemented tracking component of the network-based system for tracking a change of the user from the first context to a second context of the network-based system and dynamically updating the stored metadata based on the change, wherein the user accesses the data from the second context.

2. The system of claim 1, the context component is associated with a workspace, which is a collection of data and application functionality related to the user-defined data.

3. The system of claim 1, the context component is associated with a web, which web is a collection of inter-related workspaces, the web maintains a location of data of the respective interrelated workspaces when one or more of the interrelated workspaces are moved into a different workspace interrelationship.

4. The system of claim 1, the context information includes a relationship between the user and at least one of an application, application data, and user environment.

5. The system of claim 1, the context component captures context information of the first context and context information related to at least one other context.

6. The system of claim 5, the context information of the at least one other context is at least one of stipulated by the user and suggested automatically by the system based upon search and association criteria set by the user.

7. The system of claim 1, wherein data created in the first context is associated with data created in the second context.

8. The system of claim 1, the context information is tagged to the user-defined data via the metadata when the user-defined data is created.

9. A computer-implemented method of managing data, comprising computer-executable acts of:

creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application, the data in the form of at least files and documents;

dynamically associating metadata with the data, the data and metadata stored on a storage component of the web-based computing platform, the metadata includes information related to the user, the data, the application, and the user environment;

tracking movement of the user from the user environment of the web-based computing platform to a second user environment of the web-based computing platform; and

dynamically updating the stored metadata with an association of the data, the application, and the second user environment wherein the user employs at least one of the application and the data from the second environment.

10. The method of claim 9, further comprising capturing context information of the user.

11. The method of claim 9, further comprising indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments

12. The method of claim 9, the least one of the data and the application is associated automatically with the second user environment.

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13. The method of claim 9, further comprising accessing the user environment and the second user environment using a browser.

14. The method of claim 9, further comprising communicating with the user environment using a TCP/IP communication protocol.

15. The method of claim 9, further comprising locating the user environment from a remote location using a URL address.

16. The method of claim 9, further comprising accessing the user environment via a portable wireless device.

17. A computer-implemented method of managing data, comprising computer-executable acts of:

generating a plurality of user environments in a web-based system;

ordering two or more of the plurality of user environments according to different arrangements of the user environments;

providing a plurality of applications for generating and processing data in the user environments, data of a user environment is dynamically associated with the user environment in metadata that corresponds to the data; creating an association of the data with a second user environment when the data is accessed from the second user environment;

dynamically storing the association of the data and the second user environment in the metadata;

storing in a storage component ordering information related to the ordering of the two or more of the plurality of user environments; and

traversing the different arrangements of the user environments with one or more of the applications based on the ordering information to locate the data associated with the user environments.

18. The method of claim 17, the act of traversing is performed using a webslice that includes traversal information for locating the data associated with a given user environment.

19. The method of claim 18, the traversal information includes at least a collection ID, a user environment ID, and a routing path to the location of the environment data.

20. The method of claim 17, the different arrangements, user environments, and associated data carry both hierarchical and non-hierarchical associations simultaneously within the plurality of applications.

21. A computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:

creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;

dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform, the metadata includes information related to the user of the user workspace, to the data, to the application and to the user workspace;

tracking movement of the user from the user workspace to a second user workspace of the web-based computing platform;

dynamically associating the data and the application with the second user workspace in the metadata such that the user employs the application and data from the second user workspace; and

indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces.

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22. A computer-implemented system that facilitates management of data, comprising:

computer-implemented means for creating data by interaction of a user within a user workspace of a server using an application;

computer-implemented means for associating metadata with the data, the metadata stored in association with the data on storage means of the server, the metadata includes information related to a user of the user workspace, to the data, to the application and to the user workspace;

computer-implemented means for tracking movement of the user from the user workspace to a second user workspace of the server; and

computer-implemented means for dynamically associating the data and the application with the second user workspace in the metadata such that the user can employ the application and data from the second user workspace.

23. A computer-implemented system that facilitates management of data, comprising:

a computer-implemented context component of a web-based server for defining a first user workspace of the web-based server, assigning one or more applications to the first user workspace, capturing context data associated with user interaction of a user while in the first user workspace, and for dynamically storing the context data as metadata on a storage component of the web-based server, which metadata is dynamically associated with data created in the first user workspace; and
a computer-implemented tracking component of the web-based server for tracking change information associated with a change in access of the user from the first user workspace to a second user workspace, and dynamically storing the change information on the storage component as part of the metadata, wherein the user accesses the data from the second user workspace.

24. The system of claim 23, wherein the tracking component automatically creates the metadata when the user accesses the first user workspace.

25. The system of claim 23, wherein the context component captures relationship data associated with a relationship between the first user workspace and at least one other user workspace.

26. The system of claim 23, wherein an application associated with the first user workspace is automatically

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accessible via the second user workspace when the user moves from the first user workspace to the second user workspace.

27. The system of claim 23, wherein context data relating to an item of communication is automatically stored and used in performance of communication tasks.

28. The system of claim 23, wherein the context component captures data and application functionality related to a user-defined topic of the first user workspace, and includes the data and application functionality in the metadata.

29. The system of claim 23, wherein when the data created in the first user workspace is accessed from the second user workspace, in response to which the context component adds information to the metadata about the second user workspace.

30. The system of claim 23, wherein the first user workspace is associated with a plurality of different applications, the plurality of different applications comprising telephony, unified messaging, decision support, document management, portals, chat, collaboration, search, vote, relationship management, calendar, personal information management, profiling, directory management, executive information systems, dashboards, cockpits, tasking, meeting and, web and video conferencing.

31. The system of claim 23, wherein the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology.

32. The system of claim 23, wherein storing of the metadata in the storage component in association with data facilitates many-to-many functionality of the data via the metadata.

33. The system of claim 23, wherein the first user workspace provides access to at least one communications tool, which includes e-mail, voicemail, fax, teleconferencing, instant message, chat, contacts, calendar, task, notes, news, ideas, vote, web and video conferencing, and document sharing functionality.

34. The system of claim 23, wherein one or more applications include file storage pointers that are dynamic and associated with the first user workspace.

35. The system of claim 23, wherein the context component facilitates encryption of the data generated in the first user workspace.

* * * * *

EXHIBIT 25

EXHIBIT B-9

EXHIBIT NO. 16
SAUL GREENBERG, PH.D.
APRIL 30, 2010
J.W. HARBIDGE, CSR.

DEFENDANT'S EXHIBIT
DTX 0919
CASE NO. 1:08-CV-00862-LPS



US006236994B1

(12) **United States Patent**
Swartz et al.

(10) Patent No.: **US 6,236,994 B1**
(45) Date of Patent: **May 22, 2001**

(54) **METHOD AND APPARATUS FOR THE INTEGRATION OF INFORMATION AND KNOWLEDGE**

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(73) Assignee: **Xerox Corporation**, Stamford, CT (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/106,335**

(22) Filed: **Jun. 29, 1998**

Related U.S. Application Data

(60) Provisional application No. 60/062,933, filed on Oct. 21, 1997.

(51) Int. Cl.⁷ **G06F 17/30**

(52) U.S. Cl. **707/6; 707/101; 707/102; 707/104**

(58) Field of Search **707/101, 6, 102, 707/104; 706/50, 59, 61**

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Primary Examiner—Thomas Black

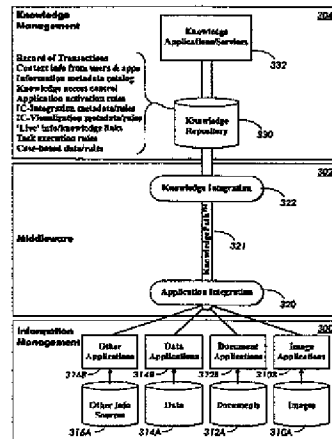
Assistant Examiner—Diane D. Mizrahi

(74) *Attorney, Agent, or Firm*—William F. Eipert; Duane C. Basch

(57) **ABSTRACT**

The present invention is a method and apparatus for first integrating the operation of various independent software applications directed to the management of information within an enterprise. The system architecture is, however, an expandable architecture, with built-in knowledge integration features that facilitate the monitoring of information flow into, out of, and between the integrated information management applications so as to assimilate knowledge information and facilitate the control of such information. Also included are additional tools which, using the knowledge information enable the more efficient use of the knowledge within an enterprise, including the ability to develop a context for and visualization of such knowledge.

20 Claims, 17 Drawing Sheets



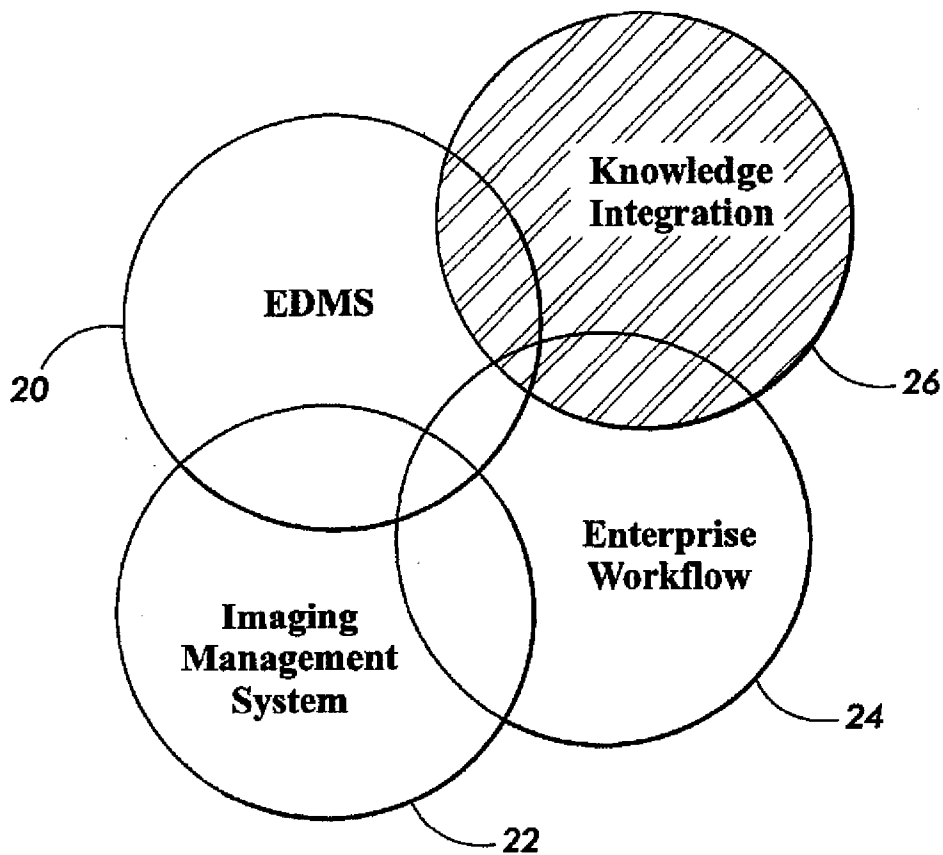


FIG. 1

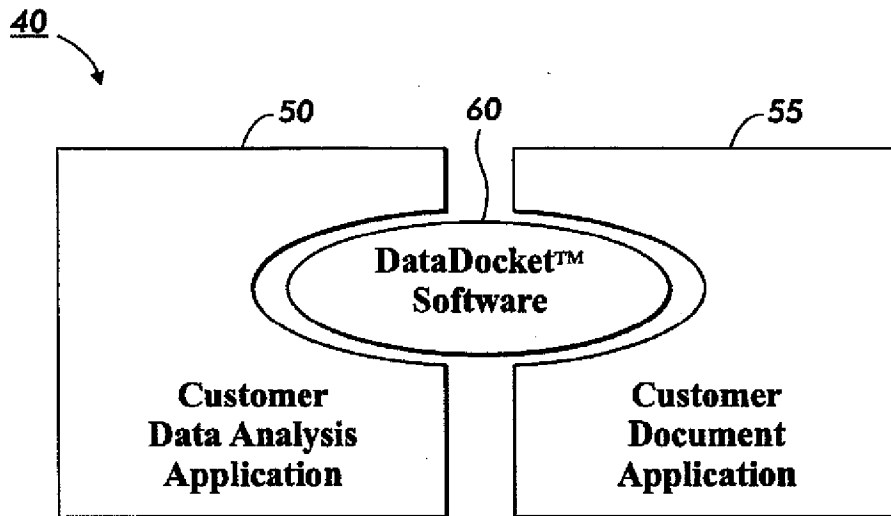


FIG. 2A

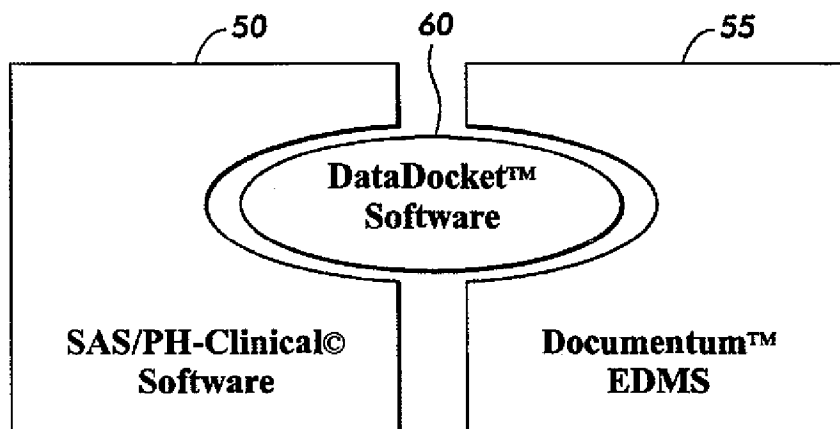


FIG. 2B

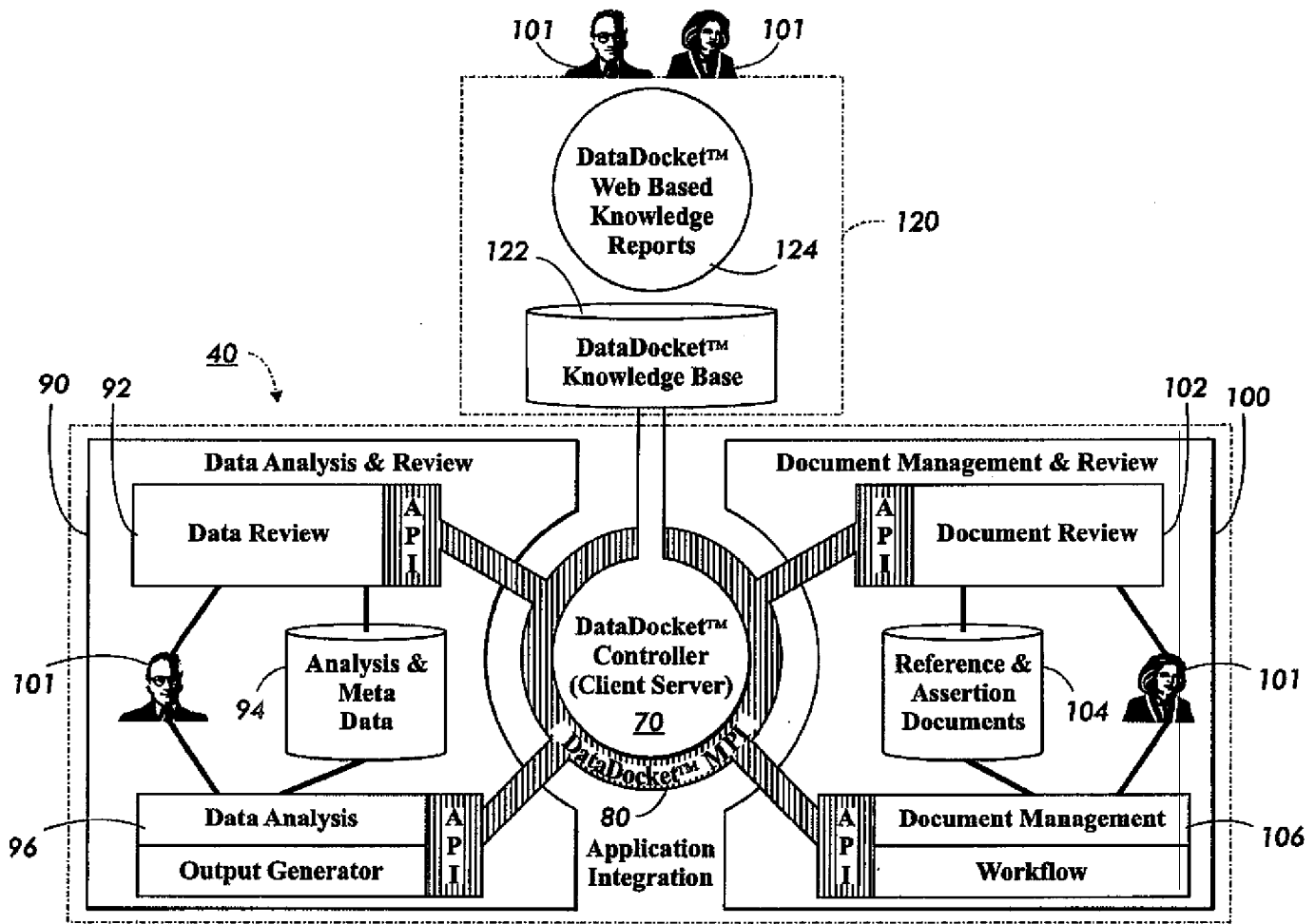


FIG. 3

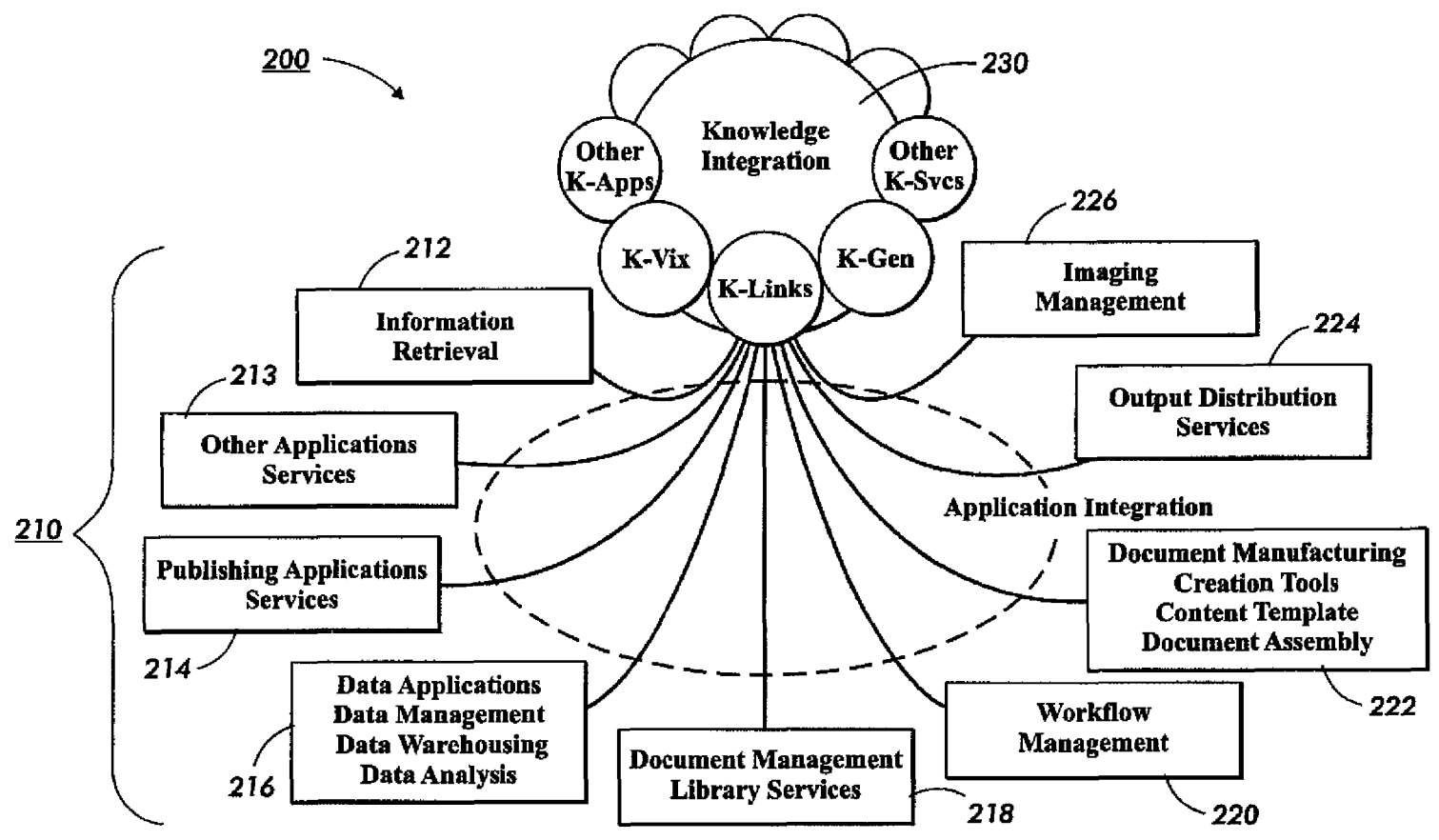


FIG. 4

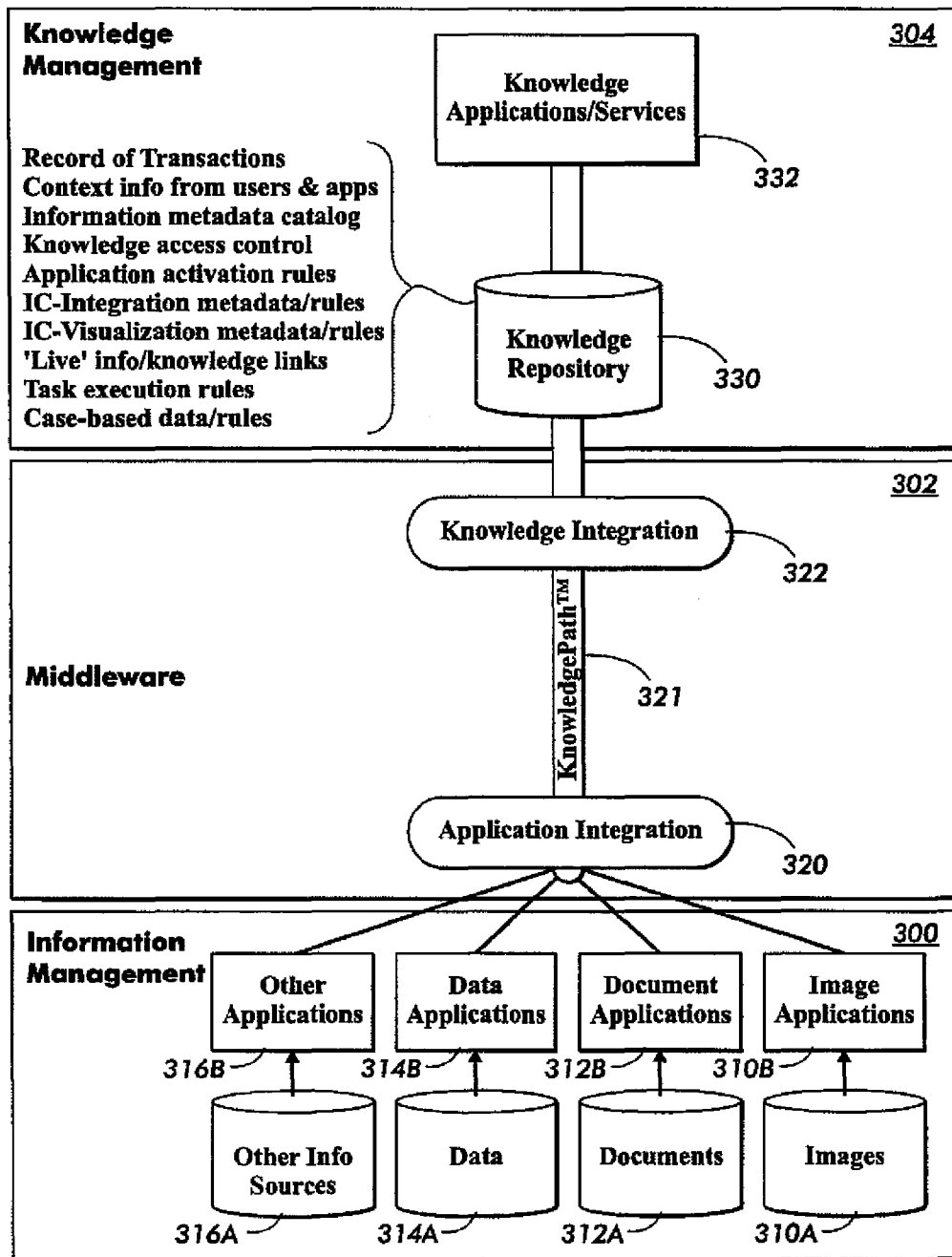


FIG. 5

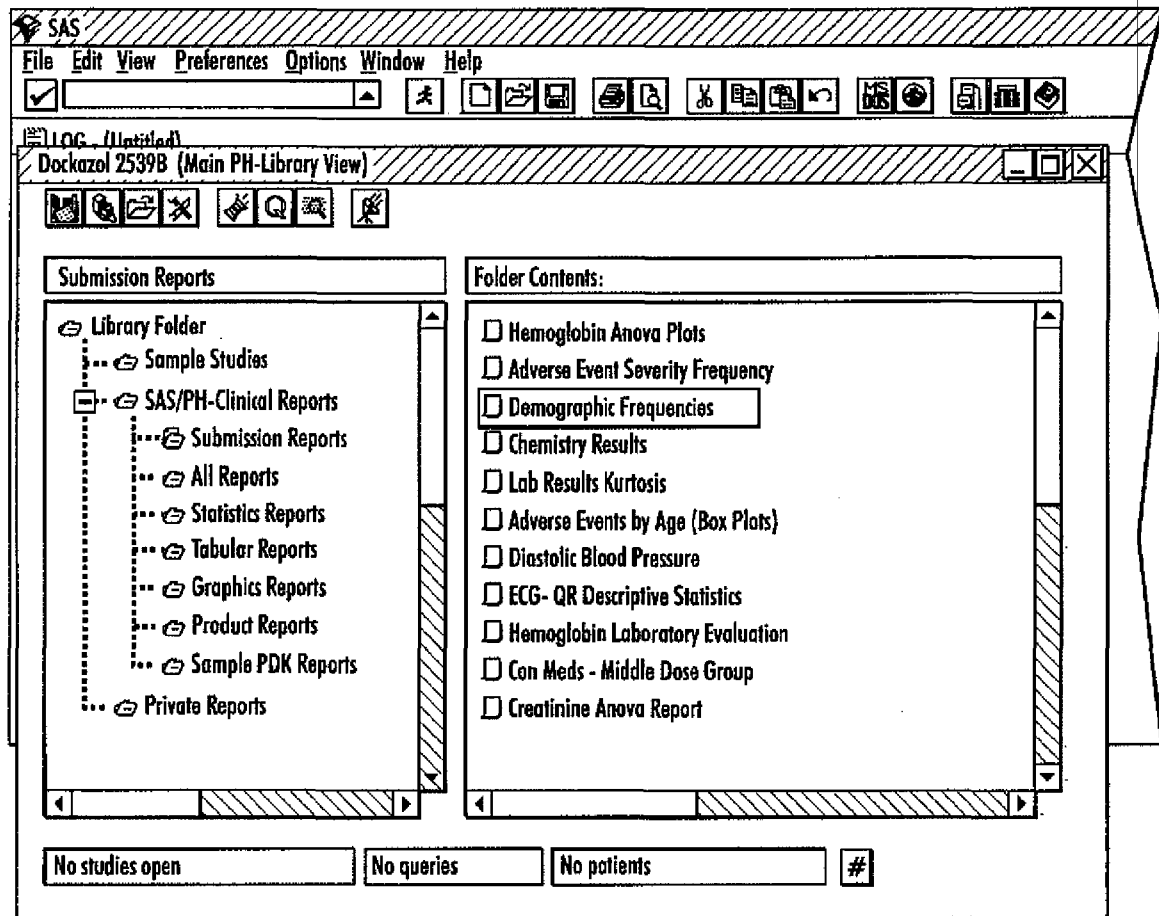


FIG. 6

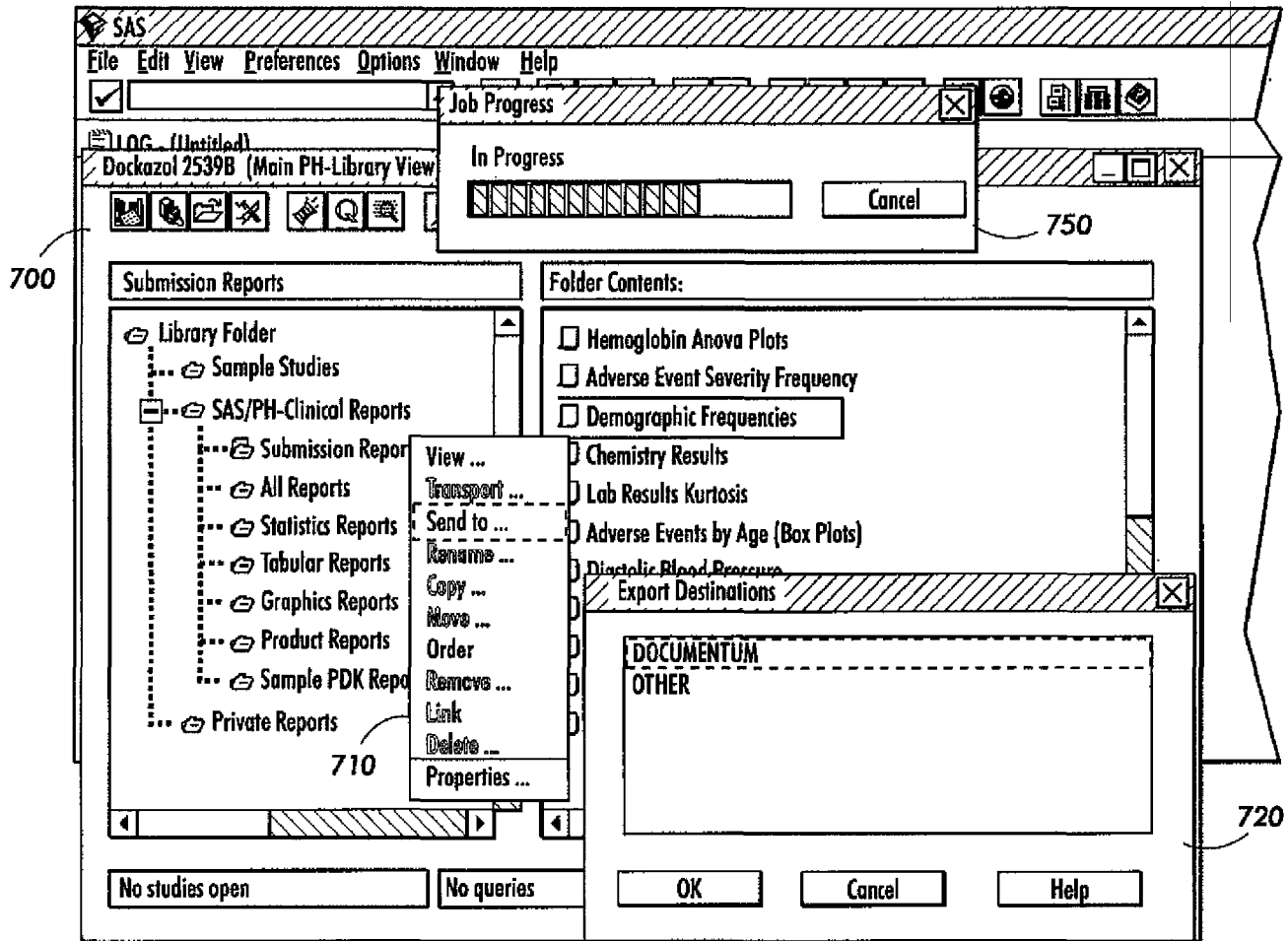


FIG. 7

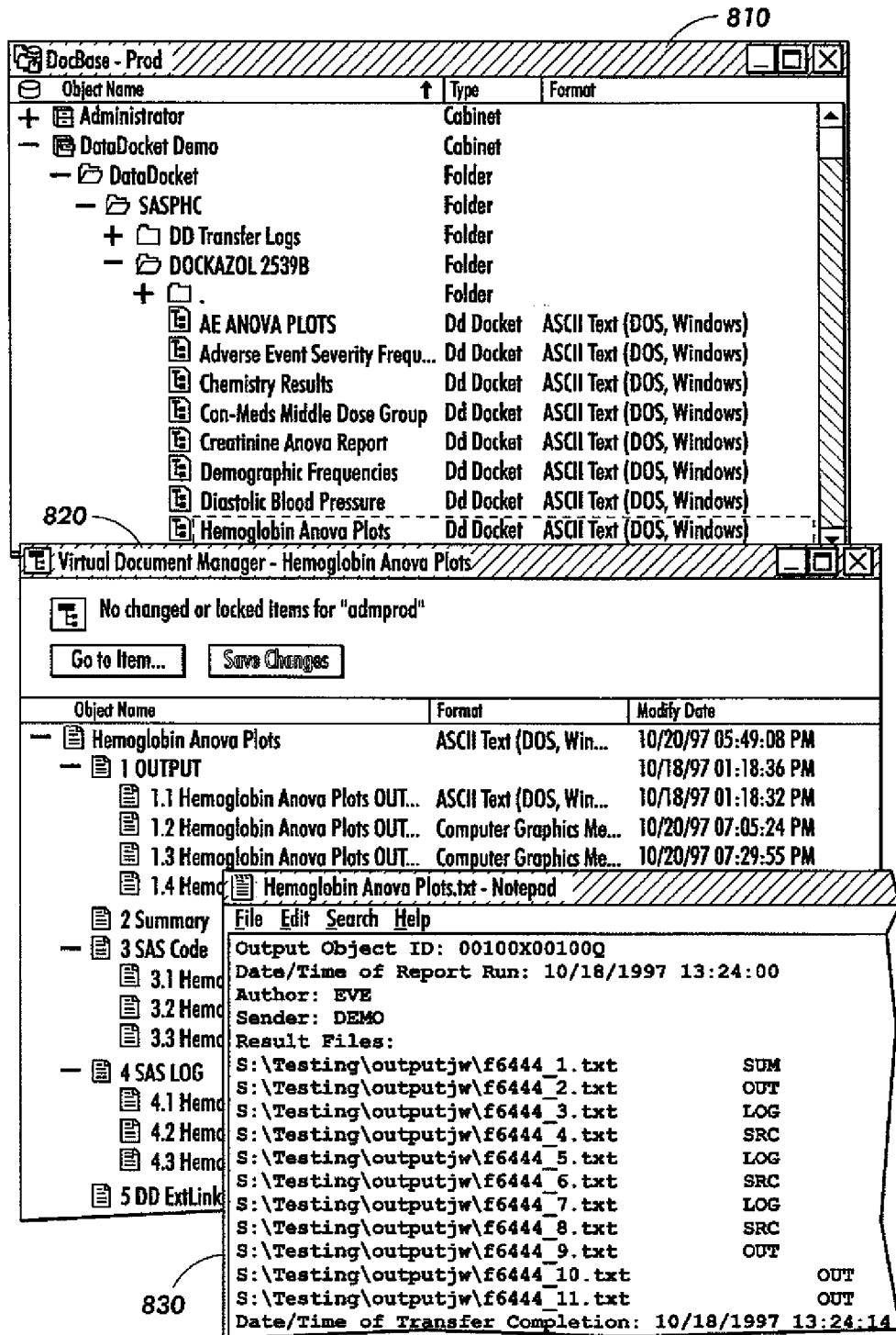


FIG. 8

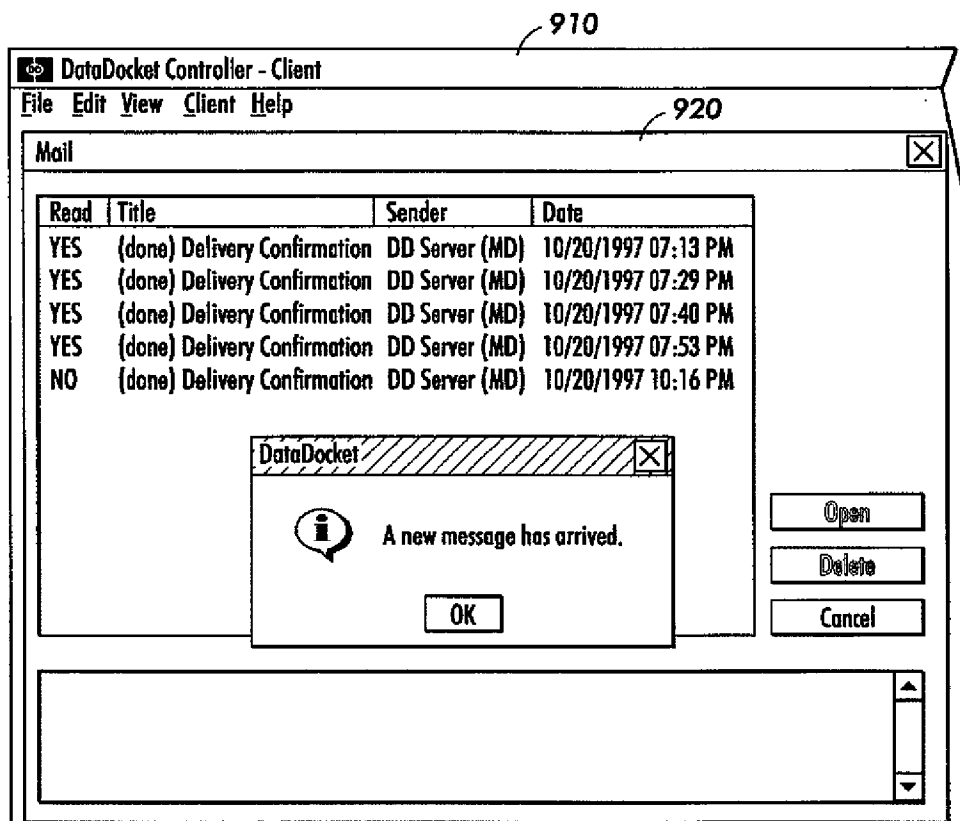


FIG. 9

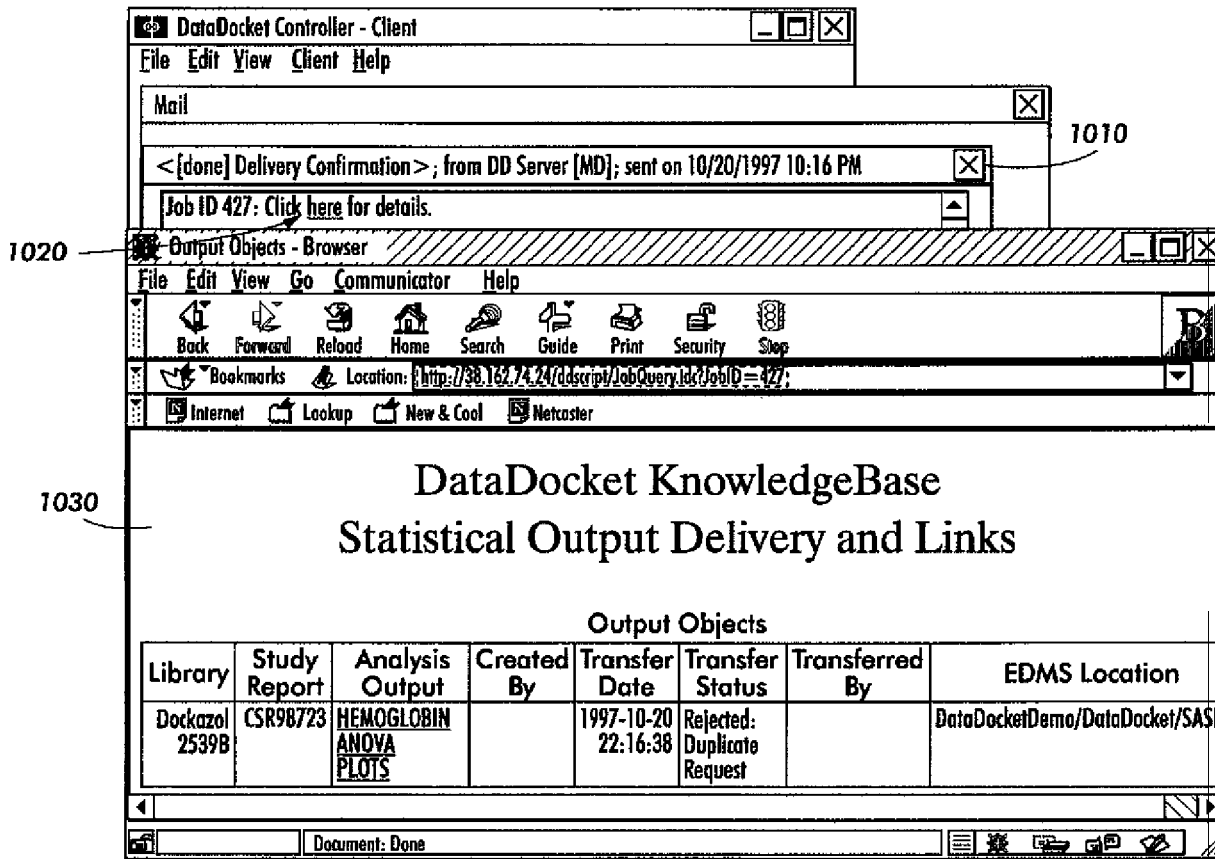


FIG. 10

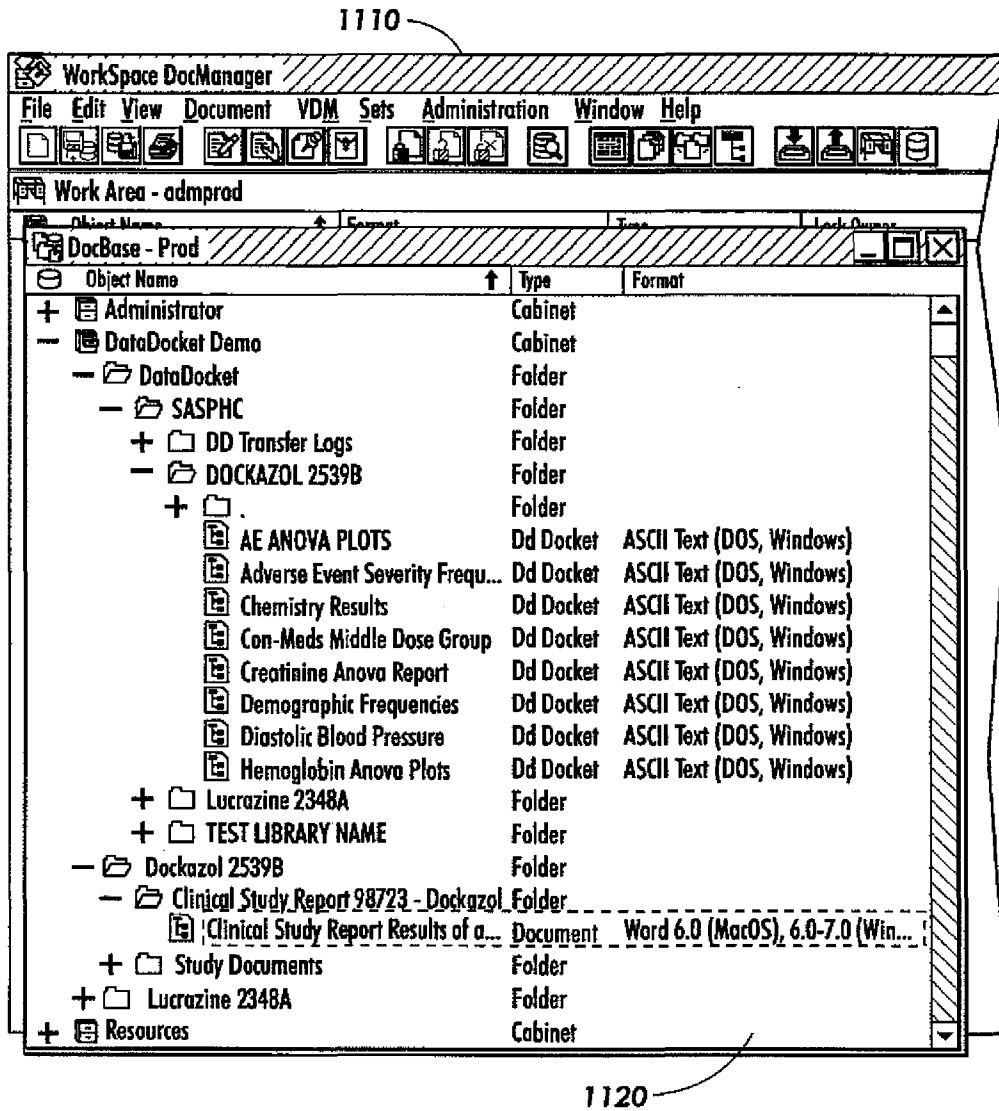


FIG. 11

1210

Object Name	Format	Modify Date
— [X] Clinical Study Report Results of a phase I T...	Word 6.0 (MacOS), 6...	10/20/97 10:06:23 AM
— [X] 1 Chemistry Section.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:51 PM
[X] 1.1 Chemistry Section - A.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:49 PM
[X] 1.2 Chemistry Section - B.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:50 PM
[X] 1.3 Chemistry Section - C.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:50 PM
— [X] 2 Case report forms.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:48 PM
[X] 2.1 Case report tabulations.doc	Word 6.0 (MacOS), 6...	10/20/97 03:20:49 PM
— [X] 3 Statistical section.doc	Word 6.0 (MacOS), 6...	10/20/97 03:21:06 PM
[X] 3.1 Clinical Statistical Summary	Word 6.0 (MacOS), 6...	10/20/97 09:05:17 PM
— [X] 4 Statistical Appendices	Word 6.0 (MacOS), 6...	10/20/97 05:31:03 PM
[X] 4.1 Clinical Data Section	Word 6.0 (MacOS), 6...	10/20/97 07:25:44 PM
[X] 4.1.1 AE ANOVA PLOTS OUTP...	ASCII Text (DOS, Win...	10/20/97 02:07:48 PM
[X] 4.1.2 Demographic Frequency	ASCII Text (DOS, Win...	10/20/97 07:24:27 PM
[X] 4.1.3 Diastolic Blood Pressure	ASCII Text (DOS, Win...	10/20/97 07:23:44 PM
[X] 4.2 Adverse Event Listings & Tabul...	Word 6.0 (MacOS), 6...	10/20/97 05:31:11 PM
[X] 4.2.1 AE ANOVA PLOTS OUTP...	ASCII Text (DOS, Win...	10/20/97 12:47:38 PM
[X] 4.3 Laboratory Results	Word 6.0 (MacOS), 6...	10/18/97 07:18:32 PM
[X] 4.3.1 Hemoglobin Anova Plot...	ASCII Text (DOS, Win...	10/18/97 07:18:32 PM
[X] 4.3.2 Hemoglobin Anova Plot...	Computer Graphics Me...	10/20/97 07:05:24 PM
[X] 4.3.3 Hemoglobin Anova Plot...	Computer Graphics Me...	10/20/97 07:29:55 PM
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[X] 4.3.5 Creatinine Anova Plots	ASCII Text (DOS, Win...	10/20/97 07:22:46 PM
[X] 4.4 Efficacy Analysis	Word 6.0 (MacOS), 6...	10/20/97 05:31:34 PM

FIG. 12

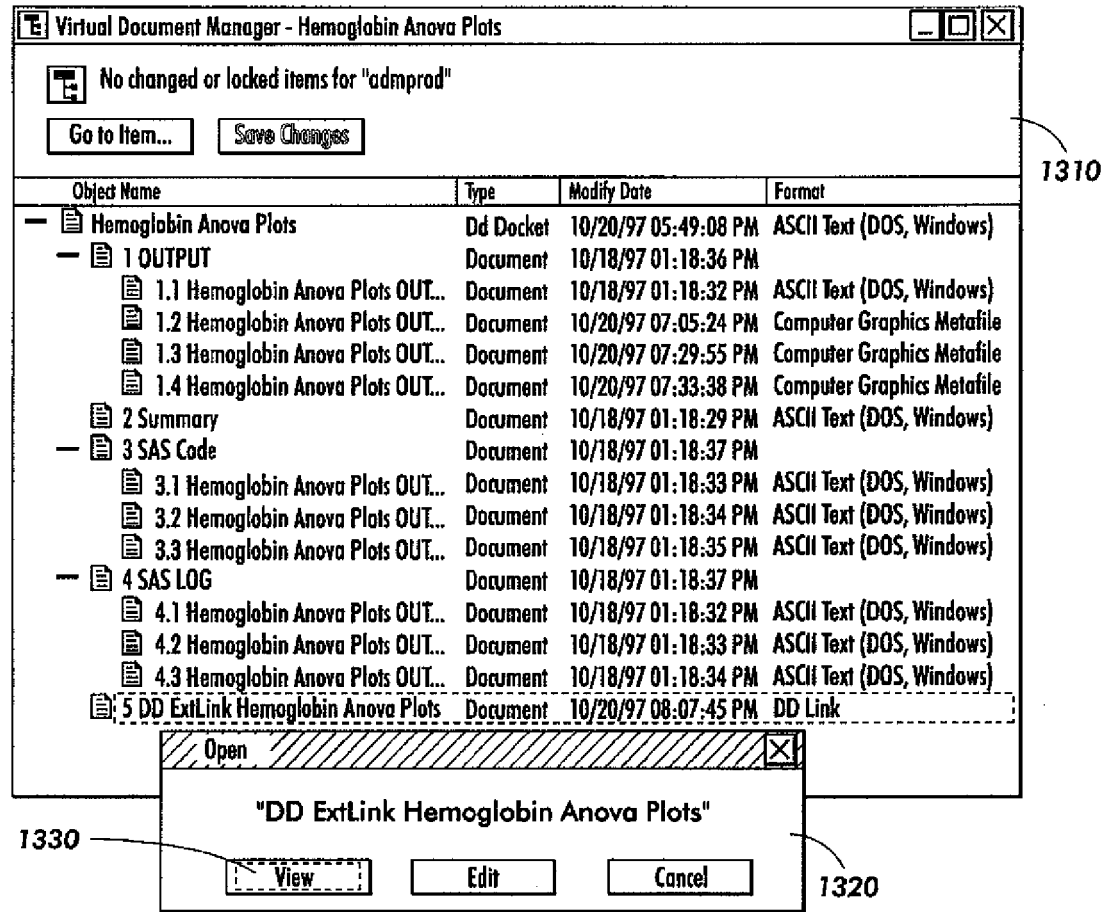


FIG. 13

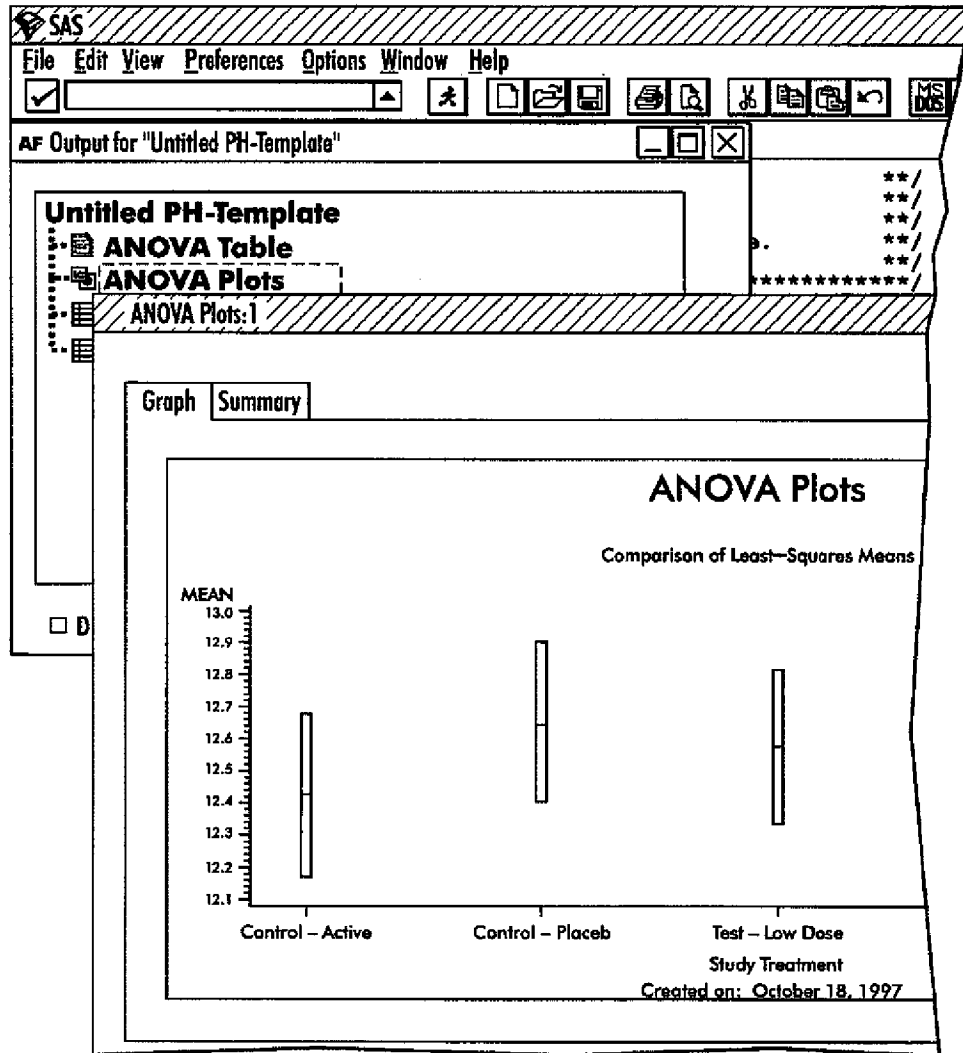


FIG. 14

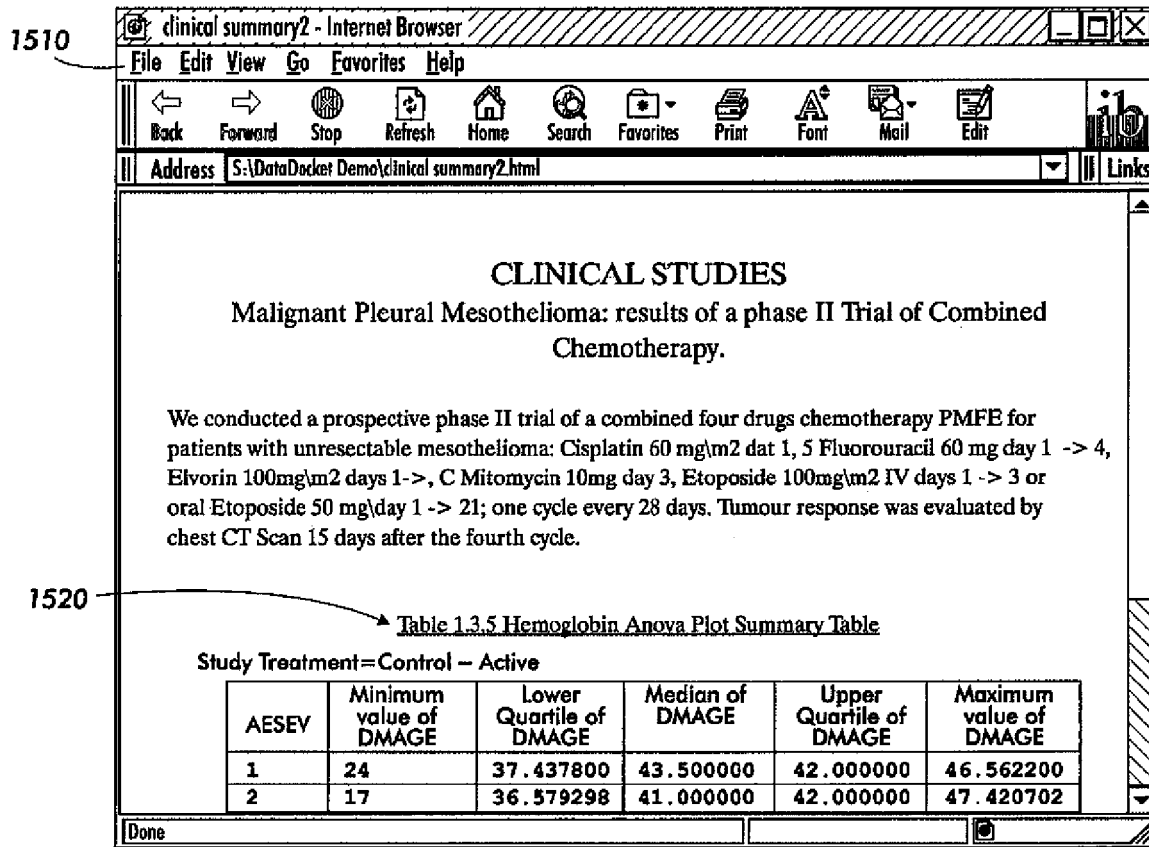


FIG. 15

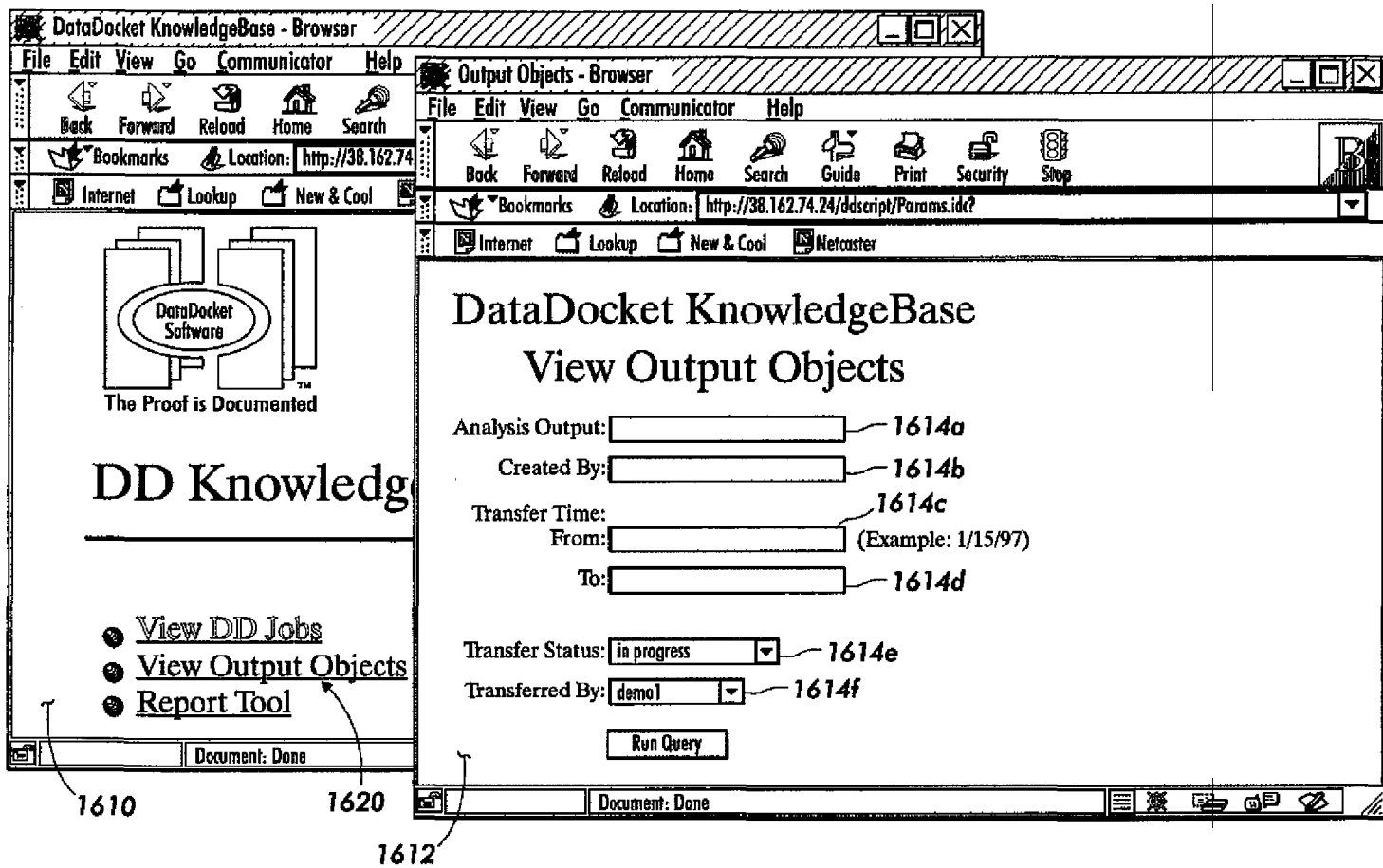


FIG. 16

DataDocket KnowledgeBase
Statistical Output Delivery and Links

Output Objects

Library	Study Report	Analysis Output	Created By	Transfer Date	Transfer Status	Transferred By	EDMS Location
Dockazol 2539B	CSR98723	ae report #1		1997-10-13 12:46:50	complete	demo	DataDocketDemo/DataDocket/SASP
Dockazol 2539B	CSR98723	ae report #1		1997-10-13 14:41:22	in progress	demo	DataDocketDemo/DataDocket/SASP
Dockazol 2539B	CSR98723	ae report #1		1997-10-13 14:50:58	pending	demo	DataDocketDemo/DataDocket/SASP
Dockazol	CSR98723	ae report #1		1997-10-13	pending	demo	DataDocketDemo/DataDocket/SASP

Stop the current transfer

FIG. 17

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METHOD AND APPARATUS FOR THE INTEGRATION OF INFORMATION AND KNOWLEDGE

PRIORITY TO PRIOR PROVISIONAL APPLICATION

Priority is claimed to Provisional Application Ser. No. 60/062,933, filed on Oct. 21, 1997 Pending.

This invention relates generally to an architecture for the integration of data, information and knowledge, and more particularly to a method and apparatus that manages and utilizes a knowledge repository for the purpose of enabling easy access, manipulation and visualization of synchronized data, information and knowledge contained in different types of software systems.

SOURCE CODE APPENDIX

This patent document contains a source code appendix, including a total of 542 pages.

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BACKGROUND AND SUMMARY OF THE INVENTION

Companies operating in regulated industries (e.g., aerospace, energy, healthcare, manufacturing, pharmaceuticals, telecommunications, utilities) are required to manage and review large amounts of information that is frequently generated over the course of several years. The principal components of this information are the structured numerical data and the unstructured textual documents. The data are collected and run through complex statistical analyses that are then interpreted and reported by industry experts to meet stringent requirements for regulatory review. Separate groups or organizations produce multiple iterations of these data and documents, with potentially thousands of statistical data analysis files linked to thousands of dependent documents. Often such groups have independently evolved specialized and often incompatible procedures and work practices. Correspondingly, separate software systems for data analysis and document management have been adopted as discrete solutions. The dichotomy existing in both the information sources and work groups jeopardizes the common goal. Hence, the challenge is to integrate and synchronize the flow of all information, processes and work practices necessary for making better and faster decisions within an enterprise.

Currently the process of integrating data and data analysis reports with regulatory documents can be characterized as (a) an entirely manual process (i.e., paper is copied and collated into a hard copy compilation), (b) a multi-step electronic process (i.e., files are placed into a central file location by one department and retrieved by another), or (c) an internally developed, custom solution that is used to automate portions of the process. Problems with such processes typically include:

complexity and error prone nature of the systems needed to manage the process(es) (e.g., manual updates to related documents and data, demands for maintaining a "mental" mapping of these objects to each other (i.e., a

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meta information catalogue) and enforcing the integrity of the defined object "linkages" throughout the business process);

difficulty in locating and working with interrelated documents and data throughout the information generation lifecycle (a lack of integrated textual and numerical information severely constrains enterprise information workflow and decision making);

a lack of an efficient mechanism, in the current document management and data analysis systems, for locating and working with the many different types of information maintained in separate systems;

a failure to recognize, appreciate and enable the dependencies between data and documents throughout the information generation lifecycle—a complex information workspace topology exists that is known only intrinsically by the users who must maintain the referential integrity of these related information objects; and inflexibility of a process, during the information generation lifecycle, to handle situations where data changes force a series of document changes, which may in turn require modifications of other documents.

On the other hand, the present invention will alleviate such problems using an architecture that includes a knowledge repository for the purpose of enabling easy access, manipulation and visualization of complete and synchronized information contained on a plurality of software platforms.

Heretofore, a limited number of patents and publications have disclosed certain aspects of knowledge management systems, the relevant portions of which may be briefly summarized as follows:

U.S. Pat. No. 5,644,686 to Hekmatpour, issued Jul. 1, 1997, discloses a domain independent expert system and method employing inferential processing within a hierarchically-structured knowledge base. Knowledge engineering is characterized as accommodating various sources of expertise to guide and influence an expert toward considering all aspects of the environment beyond the individual's usual activities and concerns. This task, often complicated by the expert's lack of analysis of their thought content, is accomplished in one or more approaches, including interview, interaction (supervised) and induction (unsupervised). The expert diagnostic system described by Hekmatpour combines behavioral knowledge presentation with structural knowledge presentation to identify a recommended action.

U.S. Pat. No. 5,745,895 to Bingham et al, issued Apr. 28, 1998, discloses a method for associating heterogeneous information by creating, capturing, and retrieving ideas, concepts, data, and multi-media. It has an architecture and an open-ended-set of functional elements that combine to support knowledge processing. Knowledge is created by uniquely identifying and interrelating heterogeneous datasets located locally on a user's workstation or dispersed across computer networks. By uniquely identifying and storing the created interrelationships, the datasets themselves need not be locally stored. Datasets may be located, interrelated and accessed across computer networks. Relationships can be created and stored as knowledge to be selectively filtered and collected by an end user.

FileNet's "Foundation for Enterprise Document Management Strategy White Paper", Sep. 1997, suggests a major industry trend that is being generated by users: the convergence of workflow, document-imaging, electronic document management, and computer output to laser disk into a family of products that work in a common desktop PC environment. FileNet's foundation is a base upon which companies can easily build an enterprise-wide environment to access and

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manage all documents and the business processes which utilize them. FileNet's architectural model is based on the client/server computing paradigm. Four types of generic client applications are described, the four main elements include:

Searching—the ability to initiate and retrieve information that “indexes” documents across the enterprise by accessing industry standard databases and presenting the results in an easy to use and read format.

Viewing—the ability to view all document types and work with them in the most appropriate way, including viewing, playing (video or voice), modifying/editing, annotating, zooming, panning, scrolling, highlighting, etc.

Development tools—industry-standard based development tool sets (e.g. Active X, PowerBuilder) that allow customers or their selected application development or integration partners to create specific applications that interface with other applications already existing in the organization.

Administrative applications—applications that deliver management and administrative information to users, developers, or system administrators that allow them to optimize tasks, complete business processes or receive data on document properties and functions.

SAS Institute's Peter Villiers has described, in a paper entitled “New Architecture for Linkages of SAS/PH-Clinical® Software with Electronic Document Management Systems” (June 1997, SAS Institute), an interface between SAS Institute's pharmaceutical technology products and document management systems (e.g., Documentum™ Enterprise Document Management System). In the described implementation, a point-to-point system (PH—Document Linker Interface and Documentum to SAS/PH-Clinical link back) is established to enable two-way transfer of information between the statistical database and the document repository.

While application integration solutions are being used to link major information management components, such as imaging, document management and workflow, none of the available integration methods manage the information overload or the contextual complexities characteristic of the regulatory application process. In order to make informed decisions, all information sources that are part of this process must be coalesced as part of a knowledge management architecture.

In the example of a regulated industry (e.g., pharmaceuticals), the primary problem is generally viewed as how to synthesize all the information to prove a regulatory application case as quickly as possible while not losing the context. Automating and synchronizing the flow of all information helps expedite the review process. But the bigger challenge is to preserve the context necessary for applying knowledge. A system is needed that enables users to put their knowledge to work; to answer such questions as: Are the documents consistent with the data? Were iterations of the data and documents synchronized? What was done to preserve the integrity of the data? Who performed the work and what were their qualifications? Appropriate answers to these questions will influence reviewer/regulator confidence in the data and assertions; yet in current systems, the information gets buried, lost or is never recorded. The present invention is directed to a system, architecture and associated processes that may be used to identify, confirm, integrate and enable others to follow the “path” that was used in meeting the regulatory approval requirements.

In accordance with the present invention, there is provided a knowledge integration system for providing application interoperability and synchronization between heterogeneous document and data sources, comprising: a first database memory; a data source suitable for independently performing data analysis operations using data stored within the first database to generate data and analysis results; a

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document source, including a document database memory, for capturing knowledge and storing the knowledge in the form of documents, validating the accuracy of the knowledge, and making the captured knowledge available across a network; and a knowledge integration application, running on a client/server system having access to the data source and the document source, for managing the flow of information between the data source and the document source, thereby enabling the integration of data and analysis results with the documents and provide links to automatically update the documents upon a change in the data or analysis results.

The present invention represents an architecture, embodied for example in a software product suite, that manages and utilizes a knowledge repository, via knowledge integration middleware (KIMW), for the purpose of enabling easy access, manipulation and visualization of complete and synchronized information contained in different software systems. Aspects of the present invention include:

the use of knowledge integration middleware in conjunction with traditional application integration middleware to build and manage an integration knowledge repository;

providing a generic mechanism for bridging structured and unstructured data with uniform access to information;

the specification of four integrated knowledge-based software applications (described below) that collectively enable information integration with knowledge linkage, visualization and utilization of structured, unstructured and work practice data and metadata produced by knowledge workers in an enterprise;

use of a knowledge repository containing record of integration transactions, context information from users and applications, information metadata catalog, knowledge access control, application activation rules, metadata and rules for knowledge integration, knowledge generation, knowledge visualization, “live” knowledge links, task execution, and case-based data for regulatory review;

use of a three dimensional (3D) interface in conjunction with a user-specific conceptual schema providing access to enterprise information wherever it is stored and managed; and

implementation of a rule-based paradigm for filing marketing applications to regulatory agencies that uses hypothesis/proof/assertion structures.

The present invention will provide application interoperability and synchronization between heterogeneous document and data sources such as those currently managed by disparate enterprise document management and data analysis systems. Initially, the invention will allow users to establish and utilize “live” links between an enterprise document management system and a statistical database. Alternative or improved embodiments of the invention will enable users to define and execute multiple tasks to be performed by one or more applications from anywhere within a document.

Users of knowledge management systems desire an integrated and flexible process for providing Integrated Document Management, Image Management, Workflow Management and Information Retrieval. Aspects of the present invention focus on the added insight that a majority of the same customers want their data integrated in this document lifecycle platform as well as where the flow of textual and numerical analysis information are systematically synchronized. Such a system will enable decision makers to have complete information.

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One aspect of the invention is based on the discovery that data on the use of documents stored in an enterprise document management system (EDMS) provides insight into the flow of knowledge within the enterprise. This discovery avoids problems that arise in conventional document or knowledge management systems, where the flow of information must be rigorously characterized before or at the time the document is stored into the EDMS.

Another aspect of the present invention is based on the discovery of techniques that can automate the process of transferring data analysis reports to a document management system for regulatory document production, synchronize information flow between data and documents, and provide linkages back to data analysis software. Yet another aspect of the invention embeds and executes "live" knowledge links stored in documents and associated analysis data—allowing users to define and execute multiple tasks to be performed by one or more data or document applications within the information content. Another aspect of the present invention visualizes objects and linkages maintained in the integration knowledge base, preferably using a 3D interface and conceptual schema for access and manipulation of the enterprise information. A final aspect of the present invention generates knowledge documents that are employed to manage a regulatory marketing application process.

The techniques described herein are advantageous because they are flexible and can be adapted to any of a number of knowledge integration needs. Although described herein with respect to preparation of regulatory agency submissions, the present invention has potential use in any enterprise seeking to understand and utilize the information acquired by the enterprise as knowledge. The techniques of the invention are advantageous because they permit the efficient establishment and use of a knowledge repository. Some of the techniques can be used for bridging structured and unstructured data. Other techniques provide for information integration with knowledge linkage, visualization and utilization of structured, unstructured and work practice data and metadata produced by knowledge workers in an enterprise. As a result of the invention, users of the method and apparatus described herein will be able to accurately understand the who, why, when, where and how questions pertaining to information and document use within an enterprise.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a general representation of various components that comprise a knowledge integration system in accordance with the present invention;

FIGS. 2A and 2B depict block diagrams representing those components of an embodiment of the present invention;

FIG. 3 is a detailed representation of the components necessary to implement a fully functional embodiment of the present invention;

FIG. 4 is a depiction of the general architecture of a knowledge integration system in accordance with aspects of the present invention;

FIG. 5 is a representation of the hierarchical levels of software in one embodiment of the knowledge integration system depicted in FIG. 4; and

FIGS. 6-17 are illustrative representations of user interface screens depicting aspects of the present invention.

The present invention will be described in connection with a preferred embodiment, however, it will be understood that there is no intent to limit the invention to the embodiment described. On the contrary, the intent is to cover all alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

For a general understanding of the present invention, reference is made to the drawings. In the drawings, like reference numerals have been used throughout to designate identical elements. In describing the present invention, the following term(s) have been used in the description.

Knowledge, in an organizational or enterprise sense, reflects the collective learning of the individuals and systems employed by the organization. As used herein, the term "knowledge" reflects that portion of the organizational know-how that may be reflected, recorded or characterized in a digital electronic format. A "knowledge repository" is any physical or virtual, centralized or decentralized system suitable for the receipt or recording of the knowledge of any portion of the enterprise.

As used herein, the term "knowledge integration middleware" represents any software used to assist in the integration of disparate information sources and their corresponding applications for the purposes of recording, distributing, and activating knowledge, knowledge applications, or knowledge services. More specifically, knowledge integration middleware is preferably employed to identify (including tracking, monitoring, analyzing) the context in which information is employed so as to enable the use of such context in the management of knowledge.

"Document management" refers to processes, and apparatus on which such processes run, that manage and provide administrative information to users, that allow them to optimize tasks, complete business processes or receive data on document properties and functions. The phrase "Integrated Document Management" refers to a process or system capable of performing document management using multiple independent software applications, each optimized to perform one or more specific operations, and to the process by which information may flow from one application to be incorporated or cause an action within one or more of the other document management processes. An "enterprise document management system" is a document management system implemented so as to capture and manage a significant portion, if not all, of the documents employed within an enterprise.

"Image Management" is a technology to specifically manage image documents throughout their lifecycle; an image management system typically utilizes a combination of advanced image processing and pattern recognition technologies to provide sophisticated information retrieval and analysis capabilities specific to images.

"Workflow Management" is a technology to manage and automate business processes. Workflow is used to describe a defined series of tasks, within an organization, that are used to produce a final outcome.

"Information Retrieval" is a technology to search and retrieve information from various information sources; the term generally refers to algorithms, software, and hardware that deal with organizing, preserving, and accessing information that is primarily textual in nature.

A "regulatory agency" is any organization or entity having regulatory control or authorization over a particular industry, market, product or service. Examples of industries subject to review by a regulatory agency include aerospace, energy, healthcare, manufacturing, pharmaceuticals, telecommunications, and utilities.

"Data" refers to distinct pieces of information; "analytical data" refers to the numerical information created during the statistical analysis of data. "Metadata" refers to data about data; as used herein, Metadata characterizes how, when and by whom a particular set of data was collected, and how the data is formatted. "Information" means data that has been

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analyzed, processed or otherwise arranged into meaningful patterns, whereas "knowledge" means information that can or has been put into productive use or made actionable.

"Live" as used in the phrase "enabling live links" between objects in data analysis and document management systems, means enabling seamless control and functionality between different applications managing such objects.

The following description characterizes an embodiment of the present invention in the context of a pharmaceutical approval process. The description is not intended to in any way limit the scope of the invention. Rather the pharmaceutical embodiment is intended to provide an exemplary implementation to facilitate an understanding of the advantages of the present invention in the context of a regulatory review process.

To further characterize the features of the present invention, consider a pharmaceutical research company that has initiated a large, international clinical study. The study protocol, that defines the conduct of the study (for a new chemical entity), was written by study clinicians (M.D.s). Four years and several millions of dollars later, the statistical analysis failed to support the argument for regulatory application approval. The irony is that the drug was known to be safe and effective. The failure was totally due to a faulty protocol design. This represents a significant monetary loss for the organization—one that might have been avoided with the appropriate knowledge base and tools. At the very least, it should be avoided in the future.

In the scenario presented, and in many regulated industry organizations, teams of experts for all groups 1-5 below made what they believed were appropriate choices at the time.

Expert group 1—Protocol design

Expert group 2—Case Report Form design

Expert group 3—Database design

Expert group 4—Statistical analysis

Expert group 5—Clinical review

There was no "tool" in place to allow any of these teams to visualize and understand the chain of dependent decisions made by fellow group members or members of any of the other groups—let alone the reasoning behind those decisions. As is often the case with regulatory processes, when the statistical analyses were performed, the original teams were not only no longer intact, but there were no representatives left in the company. While preparation of the final submission may uncover errors—why the analysis wasn't working (e.g., missing collection of correct data points), however, the errors are not communicated to the entire set of expert groups since the project was terminated and people were not motivated to dwell on the experience.

Some key advantages of the present invention are the saving of "context" and having ability to visualize and explore past, present and potential decisions, infrastructure setup for individual and enterprise learning, structuring processes, practices, and applications and the interactions between them, that to date has been mostly unstructured and unrecorded. The lessons learned from the scenario described above would suggest there are at least three levels of value in pursuing implementation of a system to solve this type of problem:

1. **ABILITY TO AVOID COMPLETELY:** If an appropriate tool had been in place whereby the original team would have had the opportunity to "see" or visualize the structure of the work they were planning, including dependencies of various information sources, decision points, etc.

2. **ABILITY TO RECOGNIZE EARLY:** At the very least if the team had been able to relate the choices they made in the early stages, then there would be at least some chance the teams would have identified problems early on and had the option to correct them.

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3. **ABILITY TO REFLECT ON PAST:** In the worst case, the company loses its monetary investment but at least they would have a well documented case of what not to do. This ultimately could save multiple projects time and money in the future. The next protocols they designed would be less apt to have the same or similar problems; they are building on their experience.

As noted in the scenario described above, companies operating in regulated industries are required to manage and review large amounts of information, frequently information for which generation and analysis occurs over the course of several years. The major components of this information are the structured, numerical data and the unstructured textual documents. The data are collected and put through complex statistical analyses which are interpreted and reported as analytical data by industry experts to meet stringent government requirements for regulatory application and approval. In a typical organization, several disparate groups produce multiple iterations of these data and documents, with thousands of statistical data analysis files linked to thousands of dependent documents. Often, the groups have independently evolved specialized and incompatible procedures and work practices. Correspondingly, separate software systems for data analysis and document management were adopted as discrete solutions. The dichotomy existing in both the information sources and work groups jeopardizes the common goal of regulatory approval.

To facilitate the integration and synchronization of all information, processes and work practices necessary for making better and faster decisions in the enterprise, aspects of the present invention are embodied in a common architecture. In a simplified representation, the knowledge of an enterprise may be represented in a document life cycle diagram such as that depicted in FIG. 1. For example, the enterprise document management system (EDMS) 20, the imaging management system 22 and the enterprise workflow system 24 are portions of an knowledge management system that are currently available as stand-alone systems. For example, Documentum™ and PC Docs™ provide document management systems, FileNet® has described imaging management and enterprise workflow solutions, and InConcert® workflow management software. In a preferred embodiment of the present invention, the system employed by the enterprise would not only enable portions 20, 22 and 24 of the enterprise-wide system to be integrated, but would further include the functionality represented by the knowledge integration portion 26.

In a preferred embodiment, the present invention would be implemented in one or more phases of complexity, each building on the functionality of the prior by adding more value and addressing a more complex facet of the knowledge integration problem. At a first or basic level, the DataDocket phase automates the process of transferring data analysis reports to a document management system for document production (e.g., regulatory approval submission), synchronizes information flow between a data repository and document repository (and respective documents therein), and provides linkages from the documents back to the data analysis software. Such a system also preferably captures metadata associated with the information shared, stored and accessed by the users of the data so as to characterize the "context" in which the information is being used. As depicted, for example in FIGS. 2A and 2B, the customer data analysis software application (e.g., SAS/PH-Clinical) 50 is separate and distinct from the enterprise document management system (e.g., Documentum or PC Docs) 55. There is no mechanism for communication of information between the two applications. In a simplified form, the communication may be implemented in a point-to-point system 60, where customized software is designed to provide for the transfer and incorporation of data from the

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database/analysis application 50 to the documents stored in the document repository software 55. Such a system is, however, of little value beyond solving the problem of communicating from one software application to another.

The preferred DataDocket architecture, depicted in FIGS. 2A or 2B, is characterized by "middleware" 60 that manages the flow of information between two or more applications that comprise the information system of an enterprise. The software is preferably implemented as object oriented code (e.g., Visual C++ code) and may employ prototyped modules generated in Visual Basic. The software will run on a client server system (e.g., Windows NT) as depicted in FIG. 3 to provide web-based operability and users will operate PC client systems having Windows NT/95 operating system software. The functionality of the DataDocket phase includes:

- (a) the integration of independent data analysis and document management software applications;
- (b) menu-based selection or batch processing of commands;
- (c) generation of an audit trail to represent the flow of data;
- (d) versioning of analysis data;
- (e) enabling linkage between data analysis software and EDMS;
- (f) updating a knowledge base which stores dynamic information about integration transactions;
- (g) enabling "live" links between objects in data analysis and document management systems;
- (h) using stored context information, provides access to historical information about how a report was created, who did the work, and when it was completed; and
- (i) triggering workflow events as part of an integration transaction (e.g., email notification, rendition generation request, etc.). Advantages derivable from the DataDocket phase include: improved information integration processes and practices; a reduction of the error rate typically encountered with manual processes, and an assurance of the quality of the work processes and practices—enabling better, faster business decisions, and easier access to both text and numerical information sources from a user's desktop.

The DataDocket architecture is depicted in more detail in FIG. 3, where the software components necessary to enable the functionality noted above are represented. In particular, the architecture is comprised of a series of interrelated

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software components. At the center of the architecture is the DD-Controller component 70 consisting of Client and Server subcomponents (DD-Client and DD-Server). The DataDocket Controller component controls communications and operations of all DataDocket components. It consists of a multi-threaded server with concurrently operating client software, DD-Server and DD-Client respectively. Design features/objects preferably will include: Maitre d-, Database Communicator, Workhorse, Client, Logger, Administrator, Socket Communicator, JobQueue, ClientMailer, Auditor, Job/Object Status, Transaction Feedback, synchronous/asynchronous operation modes, versioning, etc., the source code for which may be found in the attached Source Code Appendix.

For the client/server component 70 to interface with the various independent applications that may be linked by DataDocket, the system preferably employs a DataDocket application programming interface (API) 80. API 80 is responsible for communications external to the DD-Controller, enabling the integration between independent software applications (e.g., data analysis software and document management software).

As illustrated in FIG. 3 data analysis and review block 90 includes a data review subcomponent having access to the analysis results & meta data stored in database 94, and providing access to such information to the user 101. The analysis results, and output thereof, are provided by subcomponent 96, which processes the meta data stored in the database at the direction of the user 101. API 80 is employed as the means by which the data review, data analysis and output generation is initiated and controlled by the DD-Controller 70.

Similarly, the document management and review block 100 preferably contains a document review subcomponent 102, that enables a user 101 to review reference and assertion documents stored in the document database 104. The document management and workflow subcomponent 104 also interfaces to the document database 104 at the behest of the user to create, manage or update the documents. As with the data analysis and review functionality, the interface between the subcomponents of the document management and review block 100 and DD-Controller 70 are accomplished via API 80. Having described the general operation of the various components in the basic DataDocket embodiment, attention is now turned to characterizing the subcomponents in more detail.

The client subcomponent of DD-Controller 70 will operate concurrently with the DD-Server. The client subcomponent is characterized by the following pseudocode:

```

Client Startup Tasks (assumption: know username, whether from PHC or
command line), and the PHC send output directory. If being invoked for
real, know if job is batch.
Attempt to log on to the server [Verb: LogOn. Handoff area should come back
in the login reply]
  - check that it's alive
  - compatible versions of classes that are sent back/forth
  - if incompatible versions, present info and fail.
Check Msgs ( verb: GetMsgList )
  If not batch then, show any pending, unread msgs to the user.
Ideally, don't block job processing
while reading.
Check that root file [handoff_area] area matches where server is looking,
and being used . . . convert to UNC
naming convnetions to avoid drive mapping.
Read job file
Protect files (by rename/move) from SAS overwrite
(update file paths in job directions, send to server)
>> how?

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Try to send job (verb: QueueJob)
If not accepted:
  If interactive, show queue status message. [In reply, server should give status of queue.
Example: "Documentum down for a backup"]
  Else (batch) Send mail to user with queue status message.
  WriteSasLog ( "queue not accepting"), quit.
Sync/Async issues:
Sync: track job status . . . show progress [Try to show context/summary info to identify the job specifics (if
possible) [Use date/time for Oct. 31]]
  - get 'stillAlive' pings from server.
  - If not frequent enough, WriteSasLog ("serverDied") and quit
  - Incoming message: jobHasMoved status__inQueue
  - jobHasMoved status__inQueue
  - jobHasMoved status__inProcess
  - Accept user input
    - Read messages, if any.
    - Cancel button
    - If clicked, send RequestCancel to server
  - Completion:
    - Incoming message: Get job status with status__done
    - Send GetSASLogFile (jobID) msg to server, returns SAS log
    - If not batch, maybe show log to user
    - Query DB to construct SASLog file. Write and exit program
    - Send ClientQuitting

Msgs received by Client
CmailBox {
  CmailBox ( int myID ); // pass user id of owner.
  CMsg *GetMsg ( int msgID );
  BOOL HaveUnread();
  BOOL MarkAsRead ( CMsg *theMsg ); // should check that users match?
Private:
Int m_myID;
};
Menu Items
Preferences
- Set IP address for server
Config
IP for server

```

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Similarly, the server subcomponent of DD-Controller 70 operates in accordance with the following pseudocode, and preferably includes the Admin, Workhorse, Maitre d- func-

tionality that is characterized in the attached Source Code Appendix:

```

Server Startup
? Admin: make a service?
MD [Instance vars: WH list, Queue status, User List, Cdatabase m_db];
Single Instance on a machine: exit quickly if there's already a copy
running.
Connect to DB
  SCREAM LOUDLY if that's not possible -- (how?)
Load configuration info
  - quit if machine IP address doesn't match thCConfig.Server_IP
PreFlight
  - file_root area visible accessible
  - if can't connect, send mail msg to admin (high priority)
Startup:
Start Workhorses
For (max_workhorses) { WHTable.LaunchNewWH }. Assume that .exe is called
"DDWork.exe" in same
folder as MD .exe.
Build Job Queue
  Query DB for jobs of status "preparing". Set them back to status of
"pending". Send admin a msg that the job was aborted, and is being
restarted.
  Query DB for jobs of status "inwork". Send admin a msg that the job
was aborted, and is being restarted (and at which output object).
  Query DB for pending jobs (order by job id). Build list in memory.
Send JobHasMoved msg to
  any logged in users to reestablish connection / status.
  - Accept incoming msgs:
    - Login [NB: user can be logged onto 2 different PC's at the same time.] :
      - if user isn't already logged in, allow the
login . . . record IP address. [DISC]

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- Compare versions of classes
- Send reply with success / failure. (send queue status
also?)
- If user has jobs in process, send JobHasMoved for them.
- GetSASLogFile [jobID] [Need to monitor time taken to process these requests.]
  - build log file. Return text, and
  - int errCount;
  - BOOL foundJobID;
  - CString logfileText;
- RequestCancel [jobID]
  - If [jobID] is found, and has status of pending...
    - BEGIN_MUTEX(job).
    - Set Status to Cancel, committing to DB
    - Remove from Job Queue in memory
    - Delete {JobInfo} and SAS Files // Should be a
subroutine call
  - END_MUTEX
  - RefreshJobStatus(); // sends JobHasMoved to
clients in line.
- QueueJob [Note: should watch how long this takes... need to be careful that it doesn't tie up the CPU
and block incoming client requests.]
  - Associated class: CJobInfo
  - If no errors, and queue is accepting job
    - Put into list in memory, and update DB creating a
JobQueue entry.
  - Create {JobInfo} file (Carchive) from parsed job
data. Save to a
  - 'temp' file, put
  - into JobQueue record.
  - Return JobID to client
  - Else
    - Return error code / string to client.
- WH messages:
  - StillAlive
  - Set WhTable [procID].lastAlive = time
- Idle loop
  - If Wh [x] died, requeue its job.
  - Restart WH's if needed
  - If WhTable.LiveSessions() < Max_workhorses ]
    - WhTable.LaunchNewWH
- Methods available to WH:
  - PeekNextQueueItem()
  - May return a job with status of pending, or InProcess.
  - SetJobStatus ( jobID, newStatus [Preparing/inwork/done] )
  - Change JobQueue.Status in DB
  - Triggers JobMoved Messages to be sent
  - Shouldn't assume that it's the first, if multiple wh's
WH [2 threads: 2nd one has job of sending 'still alive' to MD every 10 seconds]:
Connect to MD (could be on another machine).
Connect to DB
  - read config for database / target folder info
- Preflight:
  - verify DCTM connectivity
  - > could send msg to admin
  - if you can't connect, try again after tbConfig. EDMS_Retry
seconds.
  - connect to DocBase as DDWriter
  - create output folders if necessary
  - verify that they can be found / created
- Main Processing LOOP
  - BeginTrans [Important: don't change status to in process until/unless OutputQueue objects have
been created, and the {JobInfo} file has been deleted]
  - Look at front job in Queue, with MD. PeekNextQueueItem
().
  - MD.SetJobStatus (id,preparing)
  - BEGIN_MUTEX(job). // we're working on the job, and may
change its status. This blocks anyone else from touching
it.
  - If ( status == pending [Job may have already been InWork, and DB records
created] )
    {
    Data Members:
    Cdatabase m_db;
    - Create OutputQueue objects for the job from {JobInfo}
file
    - mark all as pending. There's a transaction around
all OO objects if
    the process fails.
    - MD. SetJobStatus ( InWork )
    - }

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```

- END_MUIEX
- EndTrans
- CUserInfo ActiveClient (job.UserID); // may not be logged on,
or may be at >1 PC.
- LOOP over OO's in ActiveJob
  - For each output object:
    - If HasBeenSent(Source_Object_ID) // no
versioning, so don't send twice.
      - Next OO
    - BeginTrans
      - LOOP over files
        Check file into DocBase
      ENDLLOOP
      Update OO.Status field
      Populate OO.Destination (
      Check log files into docbase
      Attach audit info
    EndTrans
  - MD.SendMsg (ActiveClientJob,JobHasMoved). // ignore
comm error
- ENDLLOOP // ActiveJob
- Post CMailMsg to client, telling them that the job has been
completed.
- MD.SendMsg (ActiveClientJob, PostedMsg )
- Delete {JobInfo} file
- Delete SAS Content files (always, even if errors / cancel )
  - MD.SetJobStatus (status__done) [Will send a JobHasMoved msg to client]
// ignore comm error
- Ping Thread
  - If (time_elapsed > 10 secs) MD.StillAlive (processID)
  - Ping Active Client . . . let them know we're alive.

```

The following pseudocode represents an implementation of the client/server model without separating the client from the server. In other words, the pseudocode is written with a client and server in mind—and appropriately abstracted—

however, they may reside in the same executable and may be run from the client PC. In a preferred embodiment, these object sets would be split apart.

```

Config Info Needed
In Registry/INI
  DB_Path          DB location
  Max_workhorses   Max # of workhorses
In DB
  Target docbase
  [handoff_area] Root folder for passing off files (UNC conventions)
??
  password for signing into DCTM
Server Menu Functions:
Broadcast Message
  Asks for a message . . . sends it to all users
Queue Status
  Allows Setting Queue Status to either:
    () Accept New Jobs
    () No New Jobs
Choose Docbase [And choose destination folder. Must have DDWRiter account set up. May have work to do to set up
formats, and prepare docbase.]
  - only allow if WH's aren't running
Kill Workhorses-
Preferences
  Root Folder
    pick folder used to hand off stuff from PRC.
    Shouldn't be changeable if workhorses are going, or users are logged on.
Job Statuses
Pending
  Job description is in {JobInfo} file
  OutputQueue Records haven't been created
Preparing
  Begin Trans
  Creates DB Records

```

-continued

EndTrans
Deletes (JobInfo) file
InWork
Done

As previously described, the DD-Application Programming Interface (API) is responsible for communications external to the DD-Controller, enabling the integration between a plurality of independent software applications (e.g., data analysis software and document management software).

Also depicted in FIG. 3 is a knowledge management block or level 120. Knowledge management level 120 includes DataDocket Knowledge Base (DD-KB) 122, a specialized database within the DataDocket Architecture that is designed to capture knowledge by storing information necessary to identify, "live" link, track, and record all transactions associated with business processes and work practices, as well as other functionality that might be enabled in a second or more advanced embodiment of the basic DataDocket system. Knowledge management level 120 also includes DataDocket Web-Based Knowledge Reporter (DD-KRPT) 124, a component that will preferably enable queries and reporting of information managed in the DataDocket KnowledgeBase via a web browser interface.

Turning next to FIG. 4, depicted therein is a generalized three-dimensional view of a knowledge integration system 200. In particular, system 200 is able to integrate the operation of a series of information related applications 210, including: information retrieval 212, other applications/services 213, publishing applications and services 214, data applications (management, warehousing, analysis) 216, document management and library services 218, workflow management 220, document manufacturing creation tools (including content templates and document assembly) 222, output and distribution services 224, and imaging management 226. At a higher level, beyond that of integrating the various information related applications, the system integrates the knowledge contained in the respective applications, as represented by the knowledge integration sphere 230. Similarly, once the integrated knowledge is obtained, additional functionality, examples of which are generally characterized below, may be added to the system.

Referring also to FIG. 5, illustrated is an upper level software architecture for the knowledge integration system 200 of FIG. 4. In the architecture of FIG. 5, the system has been divided into 3 distinct software levels—information management 300, middleware 302 and knowledge management 304. Within information management level 300 reside the plurality of independent information management applications controlled by the DataDocket system, for example, image data and associated image applications (reference numerals 310A, 310B).

As previously described, the DataDocket system employs an API layer (not shown) to interface to and between these various information management applications in level 300. The API, and the DD-Controller component that controls the functionality of the API, are generally characterized as middleware 321—falling into level 302. The functionality enabled by the middleware 321, not only enables the integration of the functionality of the various information management applications (application integration, 320), but also provides added resources so as to monitor the flow of information into, out of, and amongst the various information management applications (knowledge integration, 322). The knowledge integration block 322, in turn, provides input and receives instructions from, the knowledge management level 304 via knowledge repository 330.

As inputs, the knowledge integration block supplies records of transactions, context information from users and applications, and information to populate an information metadata catalog in the knowledge repository 330. The knowledge applications/services are a potentially broad range of features that enable the efficient use and extraction of the integrated knowledge residing in the system. For example, the "KnowledgeLink (K-Link)" feature embeds and executes "live" knowledge links stored in documents and analysis data. Users will be able to define and execute multiple tasks to be performed by one or more information management (data or document) applications from anywhere within the actual information content. More specifically, a knowledge link may be specified from within either a source document or published document, linking back to a related object in the data analysis system. Any source document links (defined at anchors within document content; i.e., at a specific place on a page) will be preserved when the document is published into a particular format (e.g., Adobe® PDF). The user would then have the ability to invoke a knowledge link, thereby accessing information within the knowledge repository and elicit a defined set of tasks that may initiate a set of transactions with assorted applications.

The "KnowledgeViz" (K-Viz) feature would enable a user to visualize objects and linkages maintained in the integration knowledge base, using a three dimensional interface and conceptual schema for access and manipulation of enterprise information wherever it is stored and managed. In particular, the knowledge visualization vehicle will provide a graphical front end to the knowledge management system described herein and enable the exploration, access, and use of knowledge via a user-specific taxonomy/classification hierarchy. For example, it may be employed to create a familiar regulatory environment, using a 3-D workspace, containing all of the data and information repositories (statistical data, documents, images, etc.), their buildings, people, regulatory submission objects/products, printers, etc. for simulation and real-time status of those objects and linkages between them. Examples of such visualization vehicles are currently described as product offerings from InXight, Inc., and include Hyperbolic Tree, Perspective Wall, Table Lens and Cone Tree. Additionally, the "KnowledgeGen" (K-Gen) feature would generate knowledge documents used to manage the regulatory marketing application process. A rule-based approach would be used, enabling specification of hypotheses, assertions and explanations consisting of structured and unstructured data.

The preferred embodiment would be an integrated system and framework for assisting "regulatory" knowledge workers who are responsible for making and supporting conclusions based on a complete and synchronized set of information sources. Implementation of such a framework necessarily includes tools that, as described above, provide: a mechanism to automatically build an integration knowledge base; augment an integration knowledge base based on user-specified linkages useful for processing information in support of analysis and decision making; graphically represent the integration knowledge base; and enable the construction of a regulatory proof (a logical argument based on assertions that support some hypotheses—the goal is to help clarify the "reasoning" used to reach the conclusion—and

should be useful throughout the knowledge generation life-cycle by enabling identification of the existence or lack of supporting data, contradictory data, and facilitating exploration on the impact of new data). A further enhancement to such a system could include a mechanism for identifying information with highest significance for evaluation, whereby automated "agents", under a knowledge worker's control, continuously review and scrutinize the integration knowledge base for trends, anomalies, linkages, etc. Such a system would enable a comparison of new data to previous information and arguments.

The features and functionality in the architecture described herein are preferably integrated to allow the knowledge worker to interact smoothly between tools so as not to impact the efficiency of the integrated analysis and decision making process. Vital to the design and implementation of the mechanisms specified in this architecture is the capturing of the "knowledge path" of all the work required as part of building the proof for filing a regulatory application. Ultimately, anyone reviewing the proof should be able to retrace all steps taken from the finished application, back to the generation of the arguments and assertions made during analysis, and finally back to the original data. Accordingly, the capturing of the context for all transactions supporting the decisions made is essential. Such functionality is likely to require recording a textual account of the transaction—such as a knowledge worker indicating "why" they are doing something. However, whenever possible, the recording of information should be done electronically, automatically, with dynamic (or "live") linkages to the source information and the system that manages such information. As an example, when related publications, managed by an electronic literature indexing and distribution system, are used as part of a particular decision process in support of some assertion, then the items referenced from this system should be uniquely identified, including how to retrieve them from the system. Also of importance is one of the primary goals of the system described herein—to enable knowledge workers to base their conclusions on a more complete set of information from all sources.

Referring next to the various illustrative user-interface screen representations found in FIG. 6 through 17, a narrative description of various aspects of an embodiment of the DataDocket system will be presented. One feature of the present invention is the automated exportation of analysis output to an EDMS. FIG. 6 is a representation of the user interface for an exemplary system employing SAS/PH-Clinical™ software for managing clinical data. In particular, the figure shows the folder structure of data and reports managed for an imaginary drug "Dockazol". Along the left of the window are the various submission reports, and along the right column are the contents of a particular folder, all displayed in a MS-Windows® based environment as is proposed for the SAS/PH-Clinical software environment. The transfer of analysis data from the SAS/PH-Clinical database or repository is initiated upon selection of the "Send to . . ." option displayed in pop-up window 710. Upon selection of the "Send to . . ." option 712, window 720 is opened to indicate the desired destination for the exported analytical data. Selection of the "Send to . . ." option invokes the DD-API as characterized above, to initiate the transfer. The transfer is monitored to ensure a successful transaction and progress is displayed via the bar chart in a progress box 750. Once completed, the information exported can be found in the Documentum™ workspace results illustrated in FIG. 8 (e.g., DocBase 810); particularly the Virtual Document Manager folder, 820.

Another aspect of the present invention is the ability to trigger workflow events. For example, illustrated in FIG. 9 is a DataDocket Controller status window 910, showing the status of mail in sub-window 920, and a notification window

930 that provides the user with an indication that an email transaction has completed. As represented in FIG. 10, the user may also query the status of the job by selecting a link 1020 in confirmation window 1010. Once the link is selected by the user, browser window 1030 is opened to display the status of the transfer (e.g., completed).

Referring next to FIG. 11, displayed therein is a portion of the workspace document manager window 1110, showing within it the document database window 1120. As indicated by the highlighted text, a user may use the analysis output to build reports. For example, selecting the highlighted entry results in the display of the Virtual Document Manager window 1210 in FIG. 12.

Another aspect of the present invention is the establishment of dynamic links from documents back to the data analysis system. For example, as illustrated by FIG. 13, a user may, from the Documentum EDMS interface, drill down into the supporting source data. More specifically, a user may, by double-clicking to select the highlighted object in Virtual Document Manager window 1310, initiate the option of viewing the selected object. If the "view" button 1330 is selected in window 1320, the object is displayed by linking to the analysis database and invoking, in one embodiment, the SAS/PH-Clinical environment, where the Anova plots can be displayed as shown by FIG. 14. Similar functionality can be enabled from a web-based environment through a browser window 1510 as illustrated in FIG. 15. Moreover, certain of the references may include further links to other data, for example, the location 1520.

The recordation of context information or metadata in the knowledgebase is illustrated by FIGS. 16 and 17. In particular, FIG. 16 illustrates a pair of windows 1610 and 1612. In browser window 1610, a user may select the "View Output Objects" link 1620 to invoke window 1612. Window 1612 enables a user to initiate a web-based query from his/her desktop to view those knowledgebase records having particular characteristics indicated as fields 161a-161f, for example, the name of the analysis output (text field; 1614a), or transfer status (pull-down field; 1614e). Referring to FIG. 17, displayed therein is a representation of exemplary results that may be obtained in response to an Analysis Output search (e.g., search on "ac report #1").

In recapitulation, the present invention is a method and apparatus for first integrating the operation of various independent software applications directed to the management of information within an enterprise. The system architecture is, however, an expandable architecture, with built-in knowledge integration features that facilitate the monitoring of information flow into, out of, and between the integrated information management applications so as to assimilate knowledge information and facilitate the control of such information. Also included are additional tools which, using the knowledge information enable the more efficient use of the knowledge within an enterprise.

It is, therefore, apparent that there has been provided, in accordance with the present invention, a method and apparatus for managing and utilizing a knowledge repository for the purpose of enabling easy access, manipulation and visualization of complete and synchronized information contained in different types of software systems. While this invention has been described in conjunction with preferred embodiments thereof, it is evident that many alternatives, modifications, and variations will be apparent to those skilled in the art. Accordingly, it is intended to embrace all such alternatives, modifications and variations that fall within the spirit and broad scope of the appended claims.

What is claimed is:

1. A knowledge integration system for providing application interoperability and synchronization between heterogeneous document and data sources, comprising:

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- a first database memory;
 a data source suitable for independently performing data analysis operations using data stored within the first database to generate data and analysis results;
 a document source, including a document database memory, for capturing knowledge and storing the knowledge in the form of documents, validating the accuracy of the knowledge, and making the captured knowledge available across a network; and
 a knowledge integration application, running on a client/server system having access to the data source and the document source, for managing the flow of information between the data source and the document source, thereby enabling the integration of data and analysis results with the documents and provide links to automatically update the documents upon a change in the data or analysis results.
2. The knowledge integration system of claim 1, wherein the knowledge integration application generates an audit trail to represent the flow of data.
3. The knowledge integration system of claim 1, wherein the knowledge integration application allows the versioning of data and analysis results, and the selection of a version for subsequent use.
4. The knowledge integration system of claim 1, wherein the knowledge integration application provides live linkages between data source objects and documents associated therewith.
5. The knowledge integration system of claim 1, further comprising a knowledge base that dynamically stores information about integration transactions.
6. The knowledge integration system of claim 5, wherein the information about integration transaction includes historical information characterizing the method of creation, the author and the completion date.
7. The knowledge integration system of claim 5, wherein the knowledge integration application, in response to information stored in the knowledge bank, automatically signals the initiation of work flow events as a part of the integration transaction.
8. The knowledge integration system of claim 6, wherein the information about integration transaction is displayed in a three-dimensional manner for a user.
9. A method for providing application interoperability and synchronization between heterogeneous document and data sources, comprising the steps of:
 storing data in a first database memory;
 performing data analysis operations using the data stored in the first database to generate data and analysis results;
 independently storing knowledge, in the form of documents, in a document database, including validating the accuracy of the knowledge and making the stored knowledge available across a network;
 managing the flow of information between the first database and the document database to enable the integration of the data and analysis results with the documents and to automatically update the documents upon the occurrence of a change in the data or analysis results.
10. The method of claim 9 further comprising embedding and executing "live" knowledge links stored in said documents and associated analysis data thereby allowing users to define and execute multiple tasks to be performed by one or more data or document applications within information content.
11. The method of claim 10 further comprising visualizing objects and linkages maintained in said first database and said document database, using a 3D interface and conceptual schema for access and manipulation of the enterprise information.

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12. A knowledge integration system, comprising:
 an application integration module for providing application interoperability and synchronization between heterogeneous document and data sources; and
 a knowledge integration module for facilitating archiving of knowledge-related context and providing the ability to access and assess past, present and potential decisions, infrastructural setup, structuring processes, practices, and applications and the interactions between them.
13. The system of claim 12, further comprising:
 a database memory for archiving of knowledge-related context, past, present and potential decisions, infrastructural setup, structuring processes, and practices.
14. The system of claim 13 further comprising a data source suitable for independently performing data analysis operations using data stored within said database to generate data and analysis results; and
 a document source, including a document database memory, for capturing knowledge and storing the knowledge in the form of documents, validating the accuracy of the knowledge, and making the captured knowledge available across a network.
15. The system of claim 14 wherein said knowledge integration module further comprises a knowledge integration application, running on a client/server system having access to the data source and the document source, for managing the flow of information between the data source and the document source, thereby enabling the integration of data and analysis results with the documents and provide links to automatically update the documents upon a change in the data or analysis results.
16. A knowledge integration system for providing application interoperability and synchronization between heterogeneous document and data sources, comprising:
 a computer programmed for the utilization of knowledge integration middleware in conjunction with traditional application integration middleware to build and manage an integration knowledge repository;
 a mechanism for bridging structured and unstructured data with uniform access to information;
 integrated knowledge-based software applications that collectively enable information integration with knowledge linkage, visualization and utilization of structured, unstructured and work practice data and metadata produced by knowledge workers in an enterprise; and
 a knowledge repository containing record of integration transactions, context information from users and applications, information metadata catalog, knowledge access control, application activation rules, metadata and rules for knowledge integration, knowledge generation, knowledge visualization, "live" knowledge links, task execution, and case-based data for regulatory review.
17. The system of claim 16 further comprising a three dimensional (3D) interface in conjunction with a user-specific conceptual schema providing access to enterprise information wherever it is stored and managed.
18. A method of providing application interoperability and synchronization between heterogeneous document and data sources such as those currently managed by disparate enterprise document management and data analysis systems, comprising:

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establishing and utilizing "live" links between an enterprise document management system and a statistical database;

enabling users to define and execute multiple tasks to be performed by one or more applications from anywhere within a document where the flow of textual and numerical analysis information are systematically synchronized;

automating the process of transferring data analysis reports to a document management system for document production, synchronize information flow between data and documents, and provide linkages back to data analysis software.

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19. The method of claim 18 further comprising embedding and executing "live" knowledge links stored in documents and associated analysis data thereby allowing users to define and execute multiple tasks to be performed by one or more data or document applications within information content.

20. The method of claim 19 further comprising visualizing objects and linkages maintained in the integration knowledge base, using a 3D interface and conceptual schema for access and manipulation of the enterprise information.

* * * * *

EXHIBIT 24


 Keep me logged in

[Forgot your password?](#)

Facebook's Privacy Policy

Date of last revision: December 9, 2009.

We want to earn your trust by being transparent about how Facebook works. You should read this policy in its entirety, but should pay particular attention to these four highlights:

- Facebook is designed to make it easy for you to share your information with anyone you want. You decide how much information you feel comfortable sharing on Facebook and you control how it is distributed through your privacy settings. You should review the default privacy settings and change them if necessary to reflect your preferences. You should also consider your settings whenever you share information.
- Facebook is not just a website. It is also a service for sharing your information on Facebook-enhanced applications and websites. You can control how you share information with those third-party applications and websites through your application settings and you can learn more about how information is shared with them on our About Platform page. You can also limit how your friends share your information with applications through your privacy settings.
- Certain categories of information such as your name, profile photo, list of friends and pages you are a fan of, gender, geographic region, and networks you belong to are considered publicly available to everyone, including Facebook-enhanced applications, and therefore do not have privacy settings. You can, however, limit the ability of others to find this information through search using your search privacy settings.
- Facebook is a free service supported primarily by advertising. We will not share your information with advertisers without your consent. We allow advertisers to select characteristics of users they want to show their advertisements to and we use the information we have collected to serve those advertisements.

This policy contains eight sections, and you can jump to each by selecting the links below:

- [1. Introduction](#)
- [2. Information We Receive](#)
- [3. Information You Share With Third Parties](#)
- [4. How We Use Your Information](#)
- [5. How We Share Information](#)
- [6. How You Can View, Change, or Remove Information](#)
- [7. How We Protect Information](#)
- [8. Other Terms](#)

1. Introduction

Questions. If you have any questions or concerns about our privacy policy, contact our privacy team through this help page. You may also contact us by mail at 1601 S. California Avenue, Palo Alto, CA 94304.

TRUSTe Program. Facebook is a certified licensee of the TRUSTe Privacy Seal Program. This means that our privacy policy and practices have been reviewed by TRUSTe, an independent organization focused on reviewing privacy and security policies and practices, for compliance with its strict program requirements. This privacy policy covers the website www.facebook.com. The TRUSTe program covers only information that is collected through this Web site, and does not cover other information, such as information that may be collected through software downloaded from Facebook.

If you have any complaints about our policy or practices please let us know through this help page. If you are not satisfied with our response, you can contact TRUSTe.



Safe Harbor. Facebook also adheres to the Safe Harbor framework developed by the U.S. Department of Commerce and the European Union. As part of our participation in the Safe Harbor, we agree to resolve all disputes you have with us in connection with our policies and practices through TRUSTe. To view our certification, visit the U.S. Department of Commerce's Safe Harbor Web site.

Scope. This privacy policy covers all of Facebook. It does not, however, apply to entities that Facebook does not own or control, such as Facebook-enhanced applications and websites. By using or accessing Facebook, you agree to our privacy practices outlined here.

No information from children under age 13. If you are under age 13, please do not attempt to register for Facebook or provide any personal information about yourself to us. If we learn that we have collected personal information from a child under age 13, we will delete that information as quickly as possible. If you believe that we might have any information from a child under age 13, please contact us through this help page.

Parental participation. We strongly recommend that minors 13 years of age or older ask their parents for permission before sending any information about themselves to anyone over the Internet and we encourage parents to teach their children about safe internet use practices. Materials to help parents talk to their children about safe internet use can be found on this help page.

2. Information We Receive

Information you provide to us:

Personal information. When you sign up for Facebook you provide us with your name, email, gender, and birth date. During the registration process we give you the opportunity to provide

Plaintiff's Trial Exhibit

PTX-1001

Case No. 08-CV-00862

LTI 157158

additional profile information, such as where you went to school and where you work, and to add a picture of yourself, to help your friends connect with you. In some cases we may ask for additional information for security reasons or to provide specific services to you. Once you register you can visit your profile at any time to add or remove personal information about yourself. You can add basic information about yourself, such as information about your hometown, family, relationships, and your political and religious views. You can also add other information about yourself including your activities, interests, contact information, as well as more information about your education and job history.

Content. One of the primary reasons people use Facebook is to share content with others. Examples include when you update your status, upload or take a photo, upload or record a video, share a link, create an event or a group, make a comment, write something on someone's Wall, write a note, or send someone a message. If you do not want us to store metadata associated with content you share on Facebook (such as photos), please remove the metadata before uploading the content.

Transactional Information. We may retain the details of transactions or payments you make on Facebook. However, we will only keep your payment source account number with your consent.

Friend Information. We offer contact importer tools to help you upload your friends' addresses so that you can find your friends on Facebook, and invite your contacts who do not have Facebook accounts to join. If you do not want us to store this information, visit this help page. If you give us your password to retrieve those contacts, we will not store your password after you have uploaded your contacts' information.

Location Information. When you share your location with others or add a location to something you post, we treat that like any other content you post (for example, it is subject to your privacy settings). If we offer a service that supports this type of location sharing we will present you with an opt-in choice of whether you want to participate.

Information we collect when you interact with Facebook:

Site activity information. We keep track of the actions you take on Facebook, such as adding a friend, becoming a fan of a Facebook Page, joining a group or an event, creating a photo album, sending a gift, poking another user, indicating you "like" a post, attending an event, or authorizing an application. In some cases you are also taking an action when you provide information or content to us. For example, if you share a video, in addition to storing the actual content you uploaded, we might log the fact you shared it.

Access Device and Browser Information. When you access Facebook from a computer, mobile phone, or other device, we may collect information from that device about your browser type, location, and IP address, as well as the pages you visit.

Cookie Information. We use "cookies" (small pieces of data we store for an extended period of time on your computer, mobile phone, or other device) to make Facebook easier to use, to make our advertising better, and to protect both you and Facebook. For example, we use them to store your login ID (but never your password) to make it easier for you to login whenever you come back to Facebook. We also use them to confirm that you are logged into Facebook, and to know when you are interacting with Facebook Platform applications and websites, our widgets and Share buttons, and our advertisements. You can remove or block cookies using the settings in your browser, but in some cases that may impact your ability to use Facebook.

Information we receive from third parties:

Facebook Platform and Facebook Connect. We do not own or operate the applications that you use through Facebook Platform (such as games and utilities) or the websites that you interact with through Facebook Connect. We refer to them as "Facebook-enhanced" applications and websites because they use our Platform to provide you with social features. Whenever you authorize a Facebook-enhanced application or website, we will receive information from them, including information about actions you take. In some cases, in order to personalize the process of connecting, we may receive a limited amount of information even before you authorize the application or website.

Information from other websites. We may institute programs with advertising partners and other websites in which they share information with us:

- We may ask advertisers to tell us how our users responded to the ads we showed them (and for comparison purposes, how other users who didn't see the ads acted on their site). This data sharing, commonly known as "conversion tracking," helps us measure our advertising effectiveness and improve the quality of the advertisements you see.
- We may receive information about whether or not you've seen or interacted with certain ads on other sites in order to measure the effectiveness of those ads.

If in any of these cases we receive data that we do not already have, we will "anonymize" it within 180 days, meaning we will stop associating the information with any particular user. If we institute these programs, we will only use the information in the ways we explain in the "How We Use Your Information" section below.

Information from other users. We may collect information about you from other Facebook users, such as when a friend tags you in a photo or video, provides friend details, or indicates a relationship with you. You can limit who can see that you have been tagged in a photo or video – which we refer to as photos or videos "of me" – in your privacy settings.

3. Information You Share With Third Parties

We take steps to ensure that others use information that you share on Facebook in a manner consistent with your privacy settings, but we cannot guarantee that they will follow our rules. Read the following section to learn more about how you can protect yourself when you share information with third parties.

Sharing information on Facebook. We designed our privacy settings to enable you to control how you share your information on Facebook. You should review the default privacy settings to make sure they reflect your preferences. Here are some specific things to remember:

- You can control the visibility of most of the information you share on Facebook through the privacy settings you select.
- Certain categories of information such as your name, profile photo, list of friends and pages you are a fan of, gender, geographic region, and networks you belong to are considered publicly available, and therefore do not have privacy settings. You can limit the ability of others to find this information on third party search engines through your search privacy settings.
- Some of the content you share and the actions you take will show up on your friends' home pages and other pages they visit.
- Even after you remove information from your profile or delete your account, copies of that information may remain viewable elsewhere to the extent it has been shared with others, it was otherwise distributed pursuant to your privacy settings, or it was copied or stored by other users.
- You understand that information might be re-shared or copied by other users.
- Certain types of communications that you send to other users cannot be removed, such as messages.
- When you post information on another user's profile or comment on another user's post, that information will be subject to the other user's privacy settings.
- If you use an external source to publish information to Facebook (such as a mobile application or a Connect site), you should check the privacy setting for that post, as it is set by that external source.

"Everyone" Privacy Setting. Information set to "everyone" is publicly available information, may be accessed by everyone on the Internet (including people not logged into Facebook), is subject to indexing by third party search engines, may be associated with you outside of Facebook (such as when you visit other sites on the internet), and may be imported and exported by us and others without privacy limitations. The default privacy setting for certain types of information you post on Facebook is set to "everyone." You can review and change the default settings in your privacy settings. If you delete "everyone" content that you posted on Facebook, we will remove it from your Facebook profile, but have no control over its use outside of Facebook.

Facebook Platform. As mentioned above, we do not own or operate Facebook-enhanced applications or websites. That means that when you visit Facebook-enhanced applications and websites you are making your Facebook information available to someone other than Facebook. To help those applications and sites operate, they receive publicly available information automatically when you visit them, and additional information when you formally authorize or connect your Facebook account with them. You can learn more details about which information the operators of those applications and websites can access on our About Platform page. Prior to allowing them to access any information about you, we require them to agree to terms that limit their use of your information (which you can read about in Section 9 of our Statement of Rights and Responsibilities) and we use technical measures to ensure that they only obtain authorized information. We also give you tools to control how your information is shared with them:

[You can choose to opt-out of Facebook Platform and Facebook Connect altogether through your privacy settings] (We will remove this sentence in the next revision to our Privacy Policy as the product has changed)

- You can block specific applications from accessing your information by visiting your application settings or the application's "About" page
- You can use your privacy settings to limit which of your information is available to "everyone" (by default, every application and website, including those you have not connected with, can access "everyone" and other publicly available content)

- You can use your application settings to limit which of your information your friends can make available to applications and websites

- We may make information about the location of your computer or access device and your age available to Facebook –enhanced applications and websites in order to help them implement appropriate security measures and control the distribution of age-appropriate content.

You should always review the policies of third party applications and websites to make sure you are comfortable with the ways in which they use information you share with them. We do not guarantee that they will follow our rules. If you find an application or website that violates our rules, you should report the violation to us on this help page and we will take action as necessary.

Exporting Information. You (and those you make your information available to) may use tools like RSS feeds, mobile phone address books, or copy and paste functions, to capture and export information from Facebook, including your information and information about you.

Advertisements. Sometimes the advertisers who present ads on Facebook use technological methods to measure the effectiveness of their ads and to personalize advertising content. You may opt-out of the placement of cookies by many of these advertisers here. You may also use your browser cookie settings to limit or prevent the placement of cookies by advertising networks.

Links. When you click on links on Facebook you may leave our site. We are not responsible for the privacy practices of other sites, and we encourage you to read their privacy statements.

4. How We Use Your Information

We use the information we collect to try to provide a safe, efficient, and customized experience. Here are some of the details on how we do that:

To manage the service. We use the information we collect to provide our services and features to you, to measure and improve those services and features, and to provide you with customer support. We use the information to prevent potentially illegal activities, and to enforce our Statement of Rights and Responsibilities. For example, we ask for your date of birth to verify that you are over age 13 and so that we can better limit your access to content and advertisements that are not age appropriate. We also use a variety of technological systems to detect and address anomalous activity and screen content to prevent abuse such as spam. These efforts may on occasion result in a temporary or permanent suspension or termination of some functions for some users.

To contact you. We may contact you with service-related announcements from time to time. You may opt out of all communications except essential updates on your account notifications page. We may include content you see on Facebook in the emails we send to you.

To serve personalized advertising to you. We don't share your information with advertisers without your consent. (An example of consent would be if you asked us to provide your shipping address to an advertiser to receive a free sample.) We allow advertisers to choose the characteristics of users who will see their advertisements and we may use any of the non-personally identifiable attributes we have collected (including information you may have decided not to show to other users, such as your birth year or other sensitive personal information or preferences) to select the appropriate audience for those advertisements. For example, we might use your interest in soccer to show you ads for soccer equipment, but we do not tell the soccer equipment company who you are. You can see the criteria advertisers may select by visiting our advertising page. Even though we do not share your information with advertisers without your consent, when you click on or otherwise interact with an advertisement there is a possibility that the advertiser may place a cookie in your browser and note that it meets the criteria they selected.

To serve social ads. We occasionally pair advertisements we serve with relevant information we have about you and your friends to make advertisements more interesting and more tailored to you and your friends. For example, if you become a fan of a Page, we may display your name and profile photo next to an advertisement for that Page that is displayed to your friends. We only share the personally identifiable information visible in the social ad with the friend who can see the ad. You can opt out of having your information used in social ads on this help page.

To supplement your profile. We may use information about you that we collect from other Facebook users to supplement your profile (such as when you are tagged in a photo or mentioned in a status update). In such cases we generally allow you to direct how that information is shared in your privacy settings or give you the ability to remove the content (such as allowing you to remove a photo tag of you) or limit its visibility on Facebook.

To make Suggestions. We use your profile information, the addresses you import through our contact importers, and other relevant information, to help you connect with your friends, including making suggestions to you and other users that you connect with on Facebook. If you want to limit your visibility in suggestions we make to other people, you can adjust your search visibility privacy setting, as you will only be visible in our suggestions to the extent you choose to be visible in public search listings. You may also block specific individual users from being suggested to you and you from being suggested to them.

Downloadable Software. Certain downloadable software applications and applets that we offer, such as our browser toolbars and photo uploaders, transmit data to us. We may not make a formal disclosure if we believe our collection of and use of the information is the obvious purpose of the application, such as the fact that we receive photos when you use our photo uploader. If we believe it is not obvious that we are collecting or using such information, we will make a disclosure to you the first time you provide the information to us so that you can decide whether you want to use that feature.

Memorializing Accounts. If we are notified that a user is deceased, we may memorialize the user's account. In such cases we restrict profile access to confirmed friends, and allow friends and family to write on the user's Wall in remembrance. We may close an account if we receive a formal request from the user's next of kin or other proper legal request to do so.

5. How We Share Information

Facebook is about sharing information with others — friends and people in your networks — while providing you with privacy settings that you can use to restrict other users from accessing your information. We share your information with third parties when we believe the sharing is permitted by you, reasonably necessary to offer our services, or when legally required to do so. For example:

When you make a payment. When you enter into transactions with others or make payments on Facebook, we will only share transaction information with those third parties necessary to complete the transaction and will require those third parties to agree to respect the privacy of your information.

When you invite a friend to join. When you ask us to invite a friend to join Facebook, we will send your friend a message on your behalf using your name. We may also send up to two reminders to them in your name. If your friend does not want us to keep their information, we will remove it at their request on this help page.

When you choose to share your information with marketers. You may choose to share information with marketers or electronic commerce providers that are not associated with Facebook through on-site offers. This is entirely at your discretion and we will not provide your information to these marketers without your consent.

To help your friends find you. By default, we make certain information you have posted to your profile available in search results on Facebook to help your friends find you. However, you can control who has access to this information, as well as who can find you in searches, through your privacy settings. We also partner with email and instant messaging providers to help their users identify which of their contacts are Facebook users, so that we can promote Facebook to those users.

To give search engines access to publicly available information. We generally limit search engines' access to our site. We may allow them to access information set to the "everyone" setting and your public search listing (but you can turn off your public search listing in your privacy settings).

To help improve or promote our service. Sometimes we share aggregated information with third parties to help improve or promote our service. But we only do so in such a way that no individual user can be identified or linked to any specific action or information.

To provide you with services. We may provide information to service providers that help us bring you the services we offer. For example, we may use third parties to help host our website, send out email updates about Facebook, remove repetitive information from our user lists, process payments, or provide search results or links (including sponsored links). These service providers may have access to your personal information for use for a limited time, but when this occurs we implement reasonable contractual and technical protections to limit their use of that information to helping us provide the service.

To advertise our services. We may ask advertisers outside of Facebook to display ads promoting our services. We may ask them to deliver those ads based on the presence of a cookie, but in doing so will not share any other information with the advertiser.

To offer joint services. We may provide services jointly with other companies, such as the classifieds service in the Facebook Marketplace. If you use these services, we may share your information to facilitate that service. However, we will identify the partner and present the joint service provider's privacy policy to you before you use that service.

To respond to legal requests and prevent harm. We may disclose information pursuant to subpoenas, court orders, or other requests (including criminal and civil matters) if we have a good faith belief that the response is required by law. This may include respecting requests from jurisdictions outside of the United States where we have a good faith belief that the response is required by law under the local laws in that jurisdiction, apply to users from that jurisdiction, and are consistent with generally accepted international standards. We may also share information when we have a good faith belief it is necessary to prevent fraud or other illegal activity, to prevent imminent bodily harm, or to protect ourselves and you from people violating our Statement of Rights and Responsibilities. This may include sharing information with other companies, lawyers, courts or other government entities.

Facebook Beacon. [We have announced a settlement of a lawsuit related to the Beacon product: the Beacon product will be discontinued and this language removed from the privacy policy upon approval of a settlement by the court.] Facebook Beacon is a means of sharing actions you have taken on third party sites, such as when you make a purchase or post a review, with your friends on Facebook. In order to provide you as a Facebook user with clear disclosure of the activity information being collected on third party sites and potentially shared with your friends on Facebook, we collect certain information from that site and present it to you after you have completed an action on that site. You have the choice to have us discard that information, or to share it with your friends. To learn more about the operation of the service, we encourage you to read the tutorial [here](#). To opt out of the service altogether, click [here](#). Like many other websites that interact with third party sites, we may receive some information even if you are logged out from Facebook, or that pertains to non-Facebook users, from those sites in conjunction with the technical operation of the system. In cases where we receive information from Beacon sites on users that are not logged in, or on non-Facebook users, we do not attempt to associate it with individual Facebook accounts and will discard it.

Transfer in the Event of Sale or Change of Control. If the ownership of all or substantially all of our business changes, we may transfer your information to the new owner so that the service can continue to operate. In such a case, your information would remain subject to the promises made in any pre-existing Privacy Policy.

6. How You Can View, Change, or Remove Information

Viewing and editing your profile. You may change or delete your profile information at any time by going to your profile page and clicking "Edit My Profile." Information will be updated immediately. While you cannot delete your date of birth, you can use the setting on the info tab of your profile information page to hide all or part of it from other users.

Delete uploaded contacts. If you use our contact importer to upload addresses, you can later delete the list on this [help page](#).

Deactivating or deleting your account. If you want to stop using your account you may deactivate it or delete it. When you deactivate an account, no user will be able to see it, but it will not be deleted. We save your profile information (friends, photos, interests, etc.) in case you later decide to reactivate your account. Many users deactivate their accounts for temporary reasons and in doing so are asking us to maintain their information until they return to Facebook. You will still have the ability to reactivate your account and restore your profile in its entirety. When you delete an account, it is permanently deleted. You should only delete your account if you are certain you never want to reactivate it. You may deactivate your account on your account settings page or delete your account on this [help page](#).

Limitations on removal. Even after you remove information from your profile or delete your account, copies of that information may remain viewable elsewhere to the extent it has been shared with others, it was otherwise distributed pursuant to your privacy settings, or it was copied or stored by other users. However, your name will no longer be associated with that information on Facebook. (For example, if you post something to another user's profile, and then you delete your account, that post may remain, but be attributed to an "Anonymous Facebook User.") Additionally, we may retain certain information to prevent identity theft and other misconduct even if deletion has been requested.

Backup copies. Removed and deleted information may persist in backup copies for up to 90 days, but will not be available to others.

Non-user contact information. If a user provides your email address to us, and you are not a Facebook user but you want us to delete your address, you can do so on this [help page](#). However, that request will only apply to addresses we have at the time of the request and not to any addresses that users provide to us later.

7. How We Protect Information

We do our best to keep your information secure, but we need your help. For more detailed information about staying safe on Facebook, visit the [Facebook Security Page](#).

Steps we take to keep your information secure. We keep your account information on a secured server behind a firewall. When you enter sensitive information (such as credit card numbers and passwords), we encrypt that information using secure socket layer technology (SSL). We also use automated and social measures to enhance security, such as analyzing account behavior for fraudulent or otherwise anomalous behavior, may limit use of site features in response to possible signs of abuse, may remove inappropriate content or links to illegal content, and may suspend or disable accounts for violations of our Statement of Rights and Responsibilities.

Risks inherent in sharing information. Although we allow you to set privacy options that limit access to your information, please be aware that no security measures are perfect or impenetrable. We cannot control the actions of other users with whom you share your information. We cannot guarantee that only authorized persons will view your information. We cannot ensure that information you share on Facebook will not become publicly available. We are not responsible for third party circumvention of any privacy settings or security measures on Facebook. You can reduce these risks by using common sense security practices such as choosing a strong password, using different passwords for different services, and using up to date antivirus software.

Report Violations. You should report any security violations to us on this [help page](#).

8. Other Terms

Changes. We may change this Privacy Policy pursuant to the procedures outlined in the Facebook Statement of Rights and Responsibilities. Unless stated otherwise, our current privacy policy applies to all information that we have about you and your account. If we make changes to this Privacy Policy we will notify you by publication here and on the Facebook Site Governance Page. You can make sure that you receive notice directly by becoming a fan of the Facebook Site Governance Page.

Consent to Collection and Processing in the United States. By using Facebook, you consent to having your personal data transferred to and processed in the United States.

Defined Terms. "Us," "we," "our," "Platform" and "Facebook" mean the same as they do in the Statement of Rights and Responsibilities. "Information" and "content" are used more generally and interchangeably here than in the Statement of Rights and Responsibilities unless otherwise limited by the context.

Helpful links

- [Statement of Rights and Responsibilities](#)
- [Facebook Site Governance Page](#)
- [application settings](#)
- [privacy settings](#)
- [account notifications page](#)
- [help page for complaints about our privacy policies or practices](#)
- [help page to report use by a child under age 13](#)
- [help page with info to help parents talk to children about safe internet use](#)
- [deleting an account](#)
- [reporting a deceased user](#)
- [reporting an Impostor](#)
- [reporting abusive content](#)
- [reporting a compromised account](#)
- [requesting deletion of data for non-user](#)
- [removing Friend Finder contacts](#)
- [reporting and blocking third-party applications](#)
- [general explanation of third-party applications and how they access data](#)

EXHIBIT 23


 Keep me logged in

[Forgot your password?](#)

This agreement was written in English (US). Please note that Section 16 contains certain changes to the general terms for users outside the United States.

Date of Last Revision: December 21, 2009

Statement of Rights and Responsibilities

This Statement of Rights and Responsibilities ("Statement") derives from the Facebook Principles, and governs our relationship with users and others who interact with Facebook. By using or accessing Facebook, you agree to this Statement.

1. Privacy

Your privacy is very important to us. We designed our Privacy Policy to make important disclosures about how you can use Facebook to share with others and how we collect and can use your content and information. We encourage you to read the Privacy Policy, and to use it to help make informed decisions.

2. Sharing Your Content and Information

You own all of the content and information you post on Facebook, and you can control how it is shared through your privacy and application settings. In addition:

1. For content that is covered by intellectual property rights, like photos and videos ("IP content"), you specifically give us the following permission, subject to your privacy and application settings: you grant us a non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any IP content that you post on or in connection with Facebook ("IP License"). This IP License ends when you delete your IP content or your account unless your content has been shared with others, and they have not deleted it.
2. When you delete IP content, it is deleted in a manner similar to emptying the recycle bin on a computer. However, you understand that removed content may persist in backup copies for a reasonable period of time (but will not be available to others).
3. When you add an application and use Platform, your content and information is shared with the application. We require applications to respect your privacy settings, but your agreement with that application will control how the application can use the content and information you share. (To learn more about Platform, read our About Platform page.)
4. When you publish content or information using the "everyone" setting, it means that everyone, including people off of Facebook, will have access to that information and we may not have control over what they do with it.
5. We always appreciate your feedback or other suggestions about Facebook, but you understand that we may use them without any obligation to compensate you for them (just as you have no obligation to offer them).

3. Safety

We do our best to keep Facebook safe, but we cannot guarantee it. We need your help to do that, which includes the following commitments:

1. You will not send or otherwise post unauthorized commercial communications (such as spam) on Facebook.
2. You will not collect users' content or information, or otherwise access Facebook, using automated means (such as harvesting bots, robots, spiders, or scrapers) without our permission.
3. You will not engage in unlawful multi-level marketing, such as a pyramid scheme, on Facebook.
4. You will not upload viruses or other malicious code.
5. You will not solicit login information or access an account belonging to someone else.
6. You will not bully, intimidate, or harass any user.
7. You will not post content that is hateful, threatening, pornographic, or that contains nudity or graphic or gratuitous violence.
8. You will not develop or operate a third party application containing, or advertise or otherwise market alcohol-related or other mature content without appropriate age-based restrictions.
9. You will not offer any contest, giveaway, or sweepstakes ("promotion") on Facebook without our prior written consent. If we consent, you take full responsibility for the promotion, and will follow our Promotions Guidelines and all applicable laws.
10. You will not use Facebook to do anything unlawful, misleading, malicious, or discriminatory.
11. You will not do anything that could disable, overburden, or impair the proper working of Facebook, such as a denial of service attack.
12. You will not facilitate or encourage any violations of this Statement.

4. Registration and Account Security

Facebook users provide their real names and information, and we need your help to keep it that way. Here are some commitments you make to us relating to registering and maintaining the security of your account:

1. You will not provide any false personal information on Facebook, or create an account for anyone other than yourself without permission.
2. You will not use your personal profile for your own commercial gain (such as selling your status update to an advertiser).
3. You will not use Facebook if you are under 13.
4. You will not use Facebook if you are a convicted sex offender.
5. You will keep your contact information accurate and up-to-date.
6. You will not share your password, let anyone else access your account, or do anything else that might jeopardize the security of your account.
7. You will not transfer your account to anyone without first getting our written permission.
8. If you select a username for your account we reserve the right to remove or reclaim it if we believe appropriate (such as when a trademark owner complains about a username that does not closely relate to a user's actual name).

5. Protecting Other People's Rights

We respect other people's rights, and expect you to do the same.

1. You will not post content or take any action on Facebook that infringes or violates someone else's rights or otherwise violates the law.
2. We can remove any content or information you post on Facebook if we believe that it violates this Statement.
3. We will provide you with tools to help you protect your intellectual property rights. To learn more, visit our How to Report Claims of Intellectual Property Infringement page.
4. If we remove your content for infringing someone else's copyright, and you believe we removed it by mistake, we will provide you with an opportunity to appeal.
5. If you repeatedly infringe other people's intellectual property rights, we will disable your account when appropriate.
6. You will not use our copyrights or trademarks (including Facebook, the Facebook and F Logos, FB, Face, Poke, Wall and 32665), or any confusingly similar marks, without our written permission.
7. If you collect information from users, you will: obtain their consent, make it clear you (and not Facebook) are the one collecting their information, and post a privacy policy explaining what information you collect and how you will use it.
8. You will not post anyone's identification documents or sensitive financial information on Facebook.
9. You will not send email invitations to non-users without their consent.

6. Mobile

1. We currently provide our mobile services for free, but please be aware that your carrier's normal rates and fees, such as text messaging fees, will still apply.
2. In the event you change or deactivate your mobile telephone number, you will update your account information on Facebook within 48 hours to ensure that your messages are not sent to the person who acquires your old number.

7. Payments

Plaintiff's Trial Exhibit

PTX-1000

Case No. 08-CV-00862

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If you make a payment on Facebook or use Facebook Credits, you agree to our Payments Terms.

8. Special Provisions Applicable to Share Links

If you include our Share Link button on your website, the following additional terms apply to you:

1. We give you permission to use Facebook's Share Link button so that users can post links or content from your website on Facebook.
2. You give us permission to use such links and content on Facebook.
3. You will not place a Share Link button on any page containing content that would violate this Statement if posted on Facebook.

9. Special Provisions Applicable to Developers/Operators of Applications and Websites

If you are a developer or operator of a Platform application or website, the following additional terms apply to you:

1. You are responsible for your application and its content and all uses you make of Platform. This includes ensuring your application or use of Platform meets our Developer Principles and Policies and our Advertising Guidelines.
2. Your access to and use of data you receive from Facebook, will be limited as follows:
 1. You will only request data you need to operate your application.
 2. You will only use the data you receive for your application, and will only use it in connection with Facebook.
 3. You will have a privacy policy or otherwise make it clear to users what user data you are going to use and how you will use, display, or share that data.
 4. You will not use, display, or share a user's data in a manner inconsistent with the user's privacy settings.
 5. You will delete all data you received from us relating to any user who deauthorizes, disconnects, or otherwise disassociates from your application unless otherwise permitted in our Developer Principles and Policies.
 6. You will delete all data you received from Facebook if we disable your application or ask you to do so.
 7. We can require you to update any data you have received from us.
 8. We can limit your access to data.
 9. You will not transfer the data you receive from us (or enable that data to be transferred) without our prior consent.
3. You will not give us information that you independently collect from a user or a user's content without that user's consent.
4. You will make it easy for users to remove or disconnect from your application.
5. You will make it easy for users to contact you. We can also share your email address with users.
6. You will provide customer support for your application.
7. You will not show third party ads or web search boxes on Facebook user profiles or Pages.
8. We give you all rights necessary to use the code, APIs (along with all data received), or tools we provide to you, but only in connection with your application.
9. You will not sell, transfer, or sublicense our code, APIs, or tools to anyone.
10. You will not misrepresent your relationship with Facebook to others.
11. You may use the logos we make available to developers or issue a press release or other public statement so long as you follow our Developer Principles and Policies.
12. We can issue a press release describing our relationship with you.
13. You will comply with all applicable laws. In particular you will (if applicable):
 1. have a policy for removing infringing content and terminating repeat infringers that complies with the Digital Millennium Copyright Act.
 2. comply with the Video Privacy Protection Act ("VPPA"), and will obtain any opt-in consent necessary from users so that user data subject to the VPPA may be shared on Facebook. You represent that any disclosure to us will not be incidental to the ordinary course of your business.
14. We do not guarantee that Platform will always be free.
15. You give us all rights necessary to enable your application to work with Facebook, including the right to incorporate content you provide to us into streams, profiles, and user action stories.
16. You give us the right to link to or frame your application and place content, including ads, around your application.
17. We can analyze your application, content, and data for any purpose, including commercial (such as for targeting the delivery of advertisements and indexing content for search).
18. To ensure your application is safe for users, we can audit it.
19. We can create applications that offer similar features and services to, or otherwise compete with, your application.

10. About Advertisements on Facebook

Our goal is to deliver ads that are not only valuable to advertisers, but also valuable to you. In order to do that, you agree to the following:

1. You can use your privacy settings to limit how your name and profile picture may be associated with commercial or sponsored content served by us. You give us permission to use your name and profile picture in connection with that content, subject to the limits you place.
2. We do not give your content or information to advertisers without your consent.
3. You understand that we may not always identify paid services and communications as such.

11. Special Provisions Applicable to Advertisers

You can target your specific audience by buying ads on Facebook or our publisher network. The following additional terms apply to you if you place an order through our online advertising portal ("Order"):

1. When you place an Order, you will tell us the type of advertising you want to buy, the amount you want to spend, and your bid. If we accept your Order, we will deliver your ads as inventory becomes available.
2. You will pay for your Orders in accordance with our Payments Terms. The amount you owe will be calculated based on our tracking mechanisms.
3. Your ads will comply with our Advertising Guidelines.
4. We will determine the size, placement, and positioning of your ads.
5. We do not guarantee the activity that your ads will receive, such as the number of clicks you will get.
6. We cannot control how people interact with your ads, and are not responsible for click fraud or other improper actions that affect the cost of running ads. We do, however, have systems to detect and filter certain suspicious activity, learn more here.
7. You can cancel your Order at any time through our online portal, but it may take up to 24 hours before the ad stops running.
8. Our license to run your ad will end when we have completed your Order. You understand, however, that if users have interacted with your ads, your ads may remain until the users delete it.
9. We can use your ads and related content and information for marketing or promotional purposes.
10. You will not issue any press release or make public statements about your relationship with Facebook without written permission.
11. We may reject or remove any ad for any reason.

If you are placing ads on someone else's behalf, we need to make sure you have permission to place those ads, including the following:

12. You warrant that you have the legal authority to bind the advertiser to this Statement.
13. You agree that if the advertiser you represent violates this Statement, we may hold you responsible for that violation.

12. Special Provisions Applicable to Pages

1. Pages are special profiles that may only be used to promote a business or other commercial, political, or charitable organization or endeavor (including non-profit organizations, political campaigns, bands, and celebrities).
2. You may only administer a Facebook Page if you are an authorized representative of the subject of the Page.
3. Pages can only post content and information under the "everyone" setting.
4. When you publish content or information to your Page we have no obligation to distribute your content or information to users.
5. If you use a Fan Box widget off of our site to promote your Page, others will be able to copy and place the widget elsewhere.
6. You may not place a Fan Box widget in an advertisement.
7. If you collect user information on your Page, Section 9 of this Statement also applies to you.
8. If you display advertising on your Page, Section 11 of this Statement also applies to you.
9. You may not establish terms beyond those set forth in this Statement to govern the posting of content by users on a Page you administer, except you may disclose they types of content you will remove from your Page and grounds for which you may ban a user from accessing the Page.
10. You will restrict access to your Page in order to comply with all applicable laws. For example, if your Page includes content not suitable for minors, you will use your Page to block minors from accessing your Page.

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13. Amendments

1. We can change this Statement if we provide you notice (by posting the change on the Facebook Site Governance Page) and an opportunity to comment to get notice of any future changes to this Statement, visit our Facebook Site Governance Page and become a fan.
2. For changes to sections 7, 8, 9, and 11 (sections relating to payments, application developers, website operators, and advertisers), we will give you a minimum of three days notice. For all other changes we will give you a minimum of seven days notice. All such comments must be made on the Facebook Site Governance Page.
3. If more than 7,000 users comment on the proposed change, we will also give you the opportunity to participate in a vote in which you will be provided alternatives. The vote shall be binding on us if more than 30% of all active registered users as of the date of the notice vote.
4. We can make changes for legal or administrative reasons upon notice without opportunity to comment.

14. Termination

If you violate the letter or spirit of this Statement, or otherwise create possible legal exposure for us, we can stop providing all or part of Facebook to you. We will notify you by email or at the next time you attempt to access your account. You may also delete your account or disable your application at any time. In all such cases, this Statement shall terminate, but the following provisions will still apply: 2.2, 2.4, 3-5, 8.2, 9.1-9.3, 9.9, 9.10, 9.13, 9.15.1, 9.18, 10.3, 11.2, 11.5, 11.6, 11.9, 11.9, 11.12, 11.13, and 14-18.

15. Disputes

1. You will resolve any claim, cause of action or dispute ("claim") you have with us arising out of or relating to this Statement or Facebook exclusively in a state or federal court located in Santa Clara County. The laws of the State of California will govern this Statement, as well as any claim that might arise between you and us, without regard to conflict of law provisions. You agree to submit to the personal jurisdiction of the courts located in Santa Clara County, California for the purpose of litigating all such claims.
2. If anyone brings a claim against us related to your actions, content or information on Facebook, you will indemnify and hold us harmless from and against all damages, losses, and expenses of any kind (including reasonable legal fees and costs) related to such claim.
3. WE TRY TO KEEP FACEBOOK UP, BUG-FREE, AND SAFE, BUT YOU USE IT AT YOUR OWN RISK. WE ARE PROVIDING FACEBOOK "AS IS" WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT. WE DO NOT GUARANTEE THAT FACEBOOK WILL BE SAFE OR SECURE. FACEBOOK IS NOT RESPONSIBLE FOR THE ACTIONS, CONTENT, INFORMATION, OR DATA OF THIRD PARTIES, AND YOU RELEASE US, OUR DIRECTORS, OFFICERS, EMPLOYEES, AND AGENTS FROM ANY CLAIMS AND DAMAGES, KNOWN AND UNKNOWN, ARISING OUT OF OR IN ANY WAY CONNECTED WITH ANY CLAIM YOU HAVE AGAINST ANY SUCH THIRD PARTIES. IF YOU ARE A CALIFORNIA RESIDENT, YOU WAIVE CALIFORNIA CIVIL CODE §1542, WHICH SAYS: "A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR." WE WILL NOT BE LIABLE TO YOU FOR ANY LOST PROFITS OR OTHER CONSEQUENTIAL, SPECIAL, INDIRECT, OR INCIDENTAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THIS STATEMENT OR FACEBOOK, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. OUR AGGREGATE LIABILITY ARISING OUT OF THIS STATEMENT OR FACEBOOK WILL NOT EXCEED THE GREATER OF ONE HUNDRED DOLLARS (\$100) OR THE AMOUNT YOU HAVE PAID US IN THE PAST TWELVE MONTHS. APPLICABLE LAW MAY NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY OR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. IN SUCH CASES, FACEBOOK'S LIABILITY WILL BE LIMITED TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW.

16. Special Provisions Applicable to Users Outside the United States

We strive to create a global community with consistent standards for everyone, but we also strive to respect local laws. The following provisions apply to users outside the United States:

1. You consent to having your personal data transferred to and processed in the United States.
2. If you are located in a country embargoed by the United States, or are on the U.S. Treasury Department's list of Specially Designated Nationals you will not engage in commercial activities on Facebook (such as advertising or payments) or operate a Platform application or website.
3. Certain specific terms that apply only for German users are available here.

17. Definitions

1. By "Facebook" we mean the features and services we make available, including through (a) our website at www.facebook.com and any other Facebook branded or co-branded websites (including sub-domains, international versions, widgets, and mobile versions); (b) our Platform; and (c) other media, software (such as a toolbar), devices, or networks now existing or later developed.
2. By "us," "we" and "our" we mean Facebook, Inc., or if you are outside of the United States, Facebook Ireland Limited.
3. By "Platform" we mean a set of APIs and services that enable applications, developers, operators or services, including Connect and RSS feeds, to retrieve data from Facebook or provide data to us.
4. By "information" we mean facts and other information about you, including actions you take.
5. By "content" we mean anything you post on Facebook that would not be included in the definition of "information."
6. By "data" we mean content and information that third parties can retrieve from Facebook or provide to Facebook through Platform.
7. By "post" we mean post on Facebook or otherwise make available to us (such as by using an application).
8. By "use" we mean use, copy, publicly perform or display, distribute, modify, translate, and create derivative works of.
9. By "active registered user" we mean a user who has logged into Facebook at least once in the previous 30 days.
10. By "application" we mean any application or website (including Connect sites) that uses or accesses Platform, as well as anything else that receives data.

18. Other

1. This Statement makes up the entire agreement between the parties regarding Facebook, and supersedes any prior agreements.
2. If any portion of this Statement is found to be unenforceable, the remaining portion will remain in full force and effect.
3. If we fail to enforce any of this Statement, it will not be considered a waiver.
4. Any amendment to or waiver of this Statement must be made in writing and signed by us.
5. You will not transfer any of your rights or obligations under this Statement to anyone else without our consent.
6. All of our rights and obligations under this Statement are freely assignable by us in connection with a merger, acquisition, or sale of assets, or by operation of law or otherwise.
7. Nothing in this Statement shall prevent us from complying with the law.
8. This Statement does not confer any third party beneficiary rights.

You may also want to review the following documents:

Privacy Policy: The Privacy Policy is designed to help you understand how we collect and use information.

Payment Terms: These additional terms apply to all payments made on or through Facebook.

About Platform: This page helps you better understand what happens when you add a third-party application or use Facebook Connect, including how they may access and use your data.

Developer Principles and Policies: These guidelines outline the policies that apply to applications, including Connect sites.

Advertising Guidelines: These guidelines outline the policies that apply to advertisements placed on Facebook.

Promotions Guidelines: These guidelines outline the policies that apply if you have obtained written pre-approval from us to offer contests, sweepstakes, and other types of promotions on Facebook.

How to Report Claims of Intellectual Property Infringement

How to Appeal Claims of Copyright Infringement

To access the Statement of Rights and Responsibilities in several different languages, please use the following links:

French translation (Français)
 Italian translation (Italiano)
 German translation (Deutsch)
 Spanish translation (Español)

facebook

Search

Home Profile Find Friends Account



Italian food lovers

Wall Info Discussions Photos Video Events

Basic Info

Name: Italian food lovers
 Category: Common Interest - Food & Drink
 Description: This is a group for those who like Italian food
 Privacy Type: Open: All content is public.

Information

Category: Common Interest - Food & Drink
 Description: This is a group for those who like Italian food
 Privacy Type: Open: All content is public.

Admins

- Mary Smith (creator)

Members

1 member See All



Mary Smith

Report Group

Create an Ad

Memory difficulties x



Templeton Institute for Neurology. Serving San Luis Obispo County, and California Central Coast.

Engage Your World x



The Economist special online offer. Get 12 issues for \$12.

Who Searched You x



Enter your name to find out who's searching for

Chat (1)

facebook

Search

Home Profile Find Friends Account

Italian food lovers

Wall Info Discussions Photos Video Events

Basic Info

Name: Italian food lovers
 Category: Common Interest - Food & Drink
 Description: This is a group for those who like Italian food
 Privacy Type: Open: All content is public



Invite People to Join

Leave Group

Information

Category: Common Interest - Food & Drink
 Description: This is a group for those who like Italian food
 Privacy Type: Open: All content is public

Admins

Mary Smith (creator)

Members

2 members See All



John Vinyard Mary Smith

Report Group

Share +

Create an Ad

Engage Your World x



The Economist special online offer. Get 12 Issues for \$12.

Like

Want A Killer Good Time? x



Play Mafia Wars today and find out just how much fun you can have robbing, stealing and putting out contracts on your friends!

Like

EOS Lounge x



EOS Lounge is Santa Barbara's premiere

Chat (1)

facebook

Search

Home Profile Find Friends Account

Italian food lovers

Wall info Discussions Photos Video Events

I love Italian food! This is the group for me!

Attach:

Share



Invite People to Join
Leave Group

Information

Category:
Common Interest - Food & Drink

Description:
This is a group for those who like Italian food

Privacy Type:
Open: All content is public.

Admins

- Mary Smith (creator)

Members

2 members [See All](#)



Mary Smith



John Vineyard

Report Group

Share +

Italian food lovers has no recent posts.

Create an Ad

Memory difficulties



Templeton Institute for Neurology, Serving San Luis Obispo County, and California Central Coast.

Like

Taste the Rainbow



Take a walk in Zoo World this Easter! Play Rocky's Zoo World today!

Like

Nursing Careers at Gentiv



Clinical expertise meets advanced technology

Chat (1)

facebook

Search

Home Profile Find Friends Account

Italian food lovers

Wall Info Discussions Photos Video Events

Write something...

Attach: [Icons]

Share



John Vineyard I love Italian food! This is the group for me!
2 seconds ago · Comment · Like · Report



Invite People to join
Leave Group

Information

Category:
Common Interest - Food & Drink
Description:
This is a group for those who like Italian food.
Privacy Type:
Open: All content is public.

Admins

- Mary Smith (creator)

Members

2 members See All



Mary Smith



John Vineyard

Report Group

Share +

Create an Ad

Memory difficulties x



Templeton Institute for Neurology, Serving San Luis Obispo County, and California Central Coast.

Like

Taste the Rainbow. x



Take a walk in Zoo World this Easter! Play Rocky's Zoo World today!

Like

Nursing Careers at Gentiv x



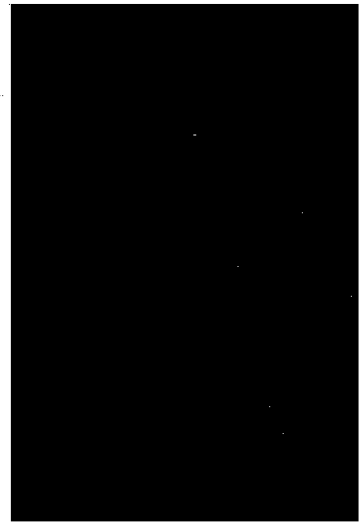
Clinical expertise meets advanced home

Chat (1)

facebook

Search

Home Profile Find Friends Account



John Vineyard

Wall Info Photos +

What's on your mind?

Attach:

Share

Options

RECENT ACTIVITY

- John wrote on Italian food lovers's Wall.
- John joined the group Italian food lovers. Comment Like
- John wrote on Mary Smith's Wall.
- John and Mary Smith are now friends. Comment Like

Edit My Profile

Write something about yourself.

Information

Birthday:
February 12, 1969

Friends

1 friend See All

Find people you know



Mary Smith

Create an Ad

Taste the Rainbow. x



Take a walk in Zoo World this Easter! Play Rockyou's Zoo World today!

Like

SLO Food Critics x



Wanna be a Food Critic? Join our Forum and write about Food in SLO County!

Become a Fan

Become a teacher x



Get a Master's and teaching credential from

Chat (1)

facebook

Search

Home Profile Find Friends Account

 **John Vineyard**
View My Profile


-  Welcome
-  News Feed
-  Messages
-  Events
-  Photos
- Video
- Recent Albums
- Mobile Uploads
- My Uploads
-  Friends
-  Applications
-  Games
-  Groups
- More
- Chat with Friends
- Go Online


 Photos

[+ Upload Photos](#) [+ Upload Video](#)

 No one has uploaded any photos. Add Photos

Suggestions


 **Chris Spohrer** x
[Add as friend](#)


 **Andrew Pynes** x
[Add as friend](#)

Sponsored [Create an Ad](#)

SHAKERS Vodka x
 Happy Easter! Join US.
[Become a Fan](#)

3 Veggies for Flat Belly: x
 Unusual article shows 3 unique veggies that help to burn abdominal fat.
TruthAboutAbs.com
[Like](#)

Chris Kelly x
 Don't sue President Obama! Sign my petition urging 13 AGs to drop their healthcare lawsuit. Join my campaign for CA Attorney General.
[Become a Fan](#)

 Chat (1)

facebook

Search

Home Profile Find Friends Account

Add New Photos

Create Album Mobile Photos

Album Name:

Location:

Description:

Privacy:

Create Album Cancel

Create an Ad

I need a home. x



Put me in your Zoo! Play Rocky's Zoo World!

Like

Modern Furniture x



Modern and contemporary furniture online store

Like

Bored? Kill Some Time x



Join millions of others. Your friends have. Show them who is boss. Click here to play Mafia Wars.

Like

Chat (1)

Upload Photos - My recipes

Add Photos Organize Edit Info Delete

Back to Album

Photos:
You can upload
JPG, GIF or PNG
files.

/homedir/john/lasagna.jpg

I certify that I have the right to distribute these photos and that they do not violate the Terms of Use.

or

The file size limit is 5 MB. If your upload does not work, try uploading a smaller picture.

Use iPhoto on your Mac? Check out the Facebook Exporter for iPhoto.
Got a camera phone? Upload photos straight from your phone.

Create an Ad

Bunnies Soft and Cuddly. x



Baby Chickens too. Easter eggs for baskets. White and pink and blue. Play Rocky's Zoo World!

Tired of the Farm? x



Social City is one of the fastest growing games on Facebook. Play now!

Want A Killer Good Time? x



Play Mafia Wars today and find out just how much.

Chat (1)

Edit Album - My recipes

Upload Complete

You have successfully uploaded one photo. You can either let your friends know now, or wait until later when you've finished editing your album, adding comments, and tagging your friends.

Don't ask again for these photos

Publish Now

Skip

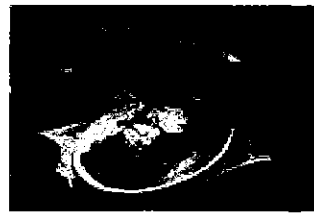
- Edit Photos**
- Add More
- Organize
- Edit Info
- Delete

[Back to Album](#)

Caption:

Empty text box for caption.

In this photo: No one.
Click on people in the photo to add them.



This is the album cover.
 Delete this photo.

Save Changes

Cancel

Share this album with anyone by sending them this public link:
http://www.facebook.com/album.php?aid=764&id=100000961393586&_z=269961f7f5

Create an Ad

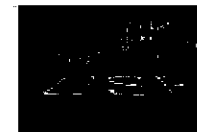
Bunnies Soft and Cuddly x



Baby Chickens too. Easter eggs for baskets. White and pink and blue. Play Rocky's Zoo World!

Like

Join the USF Saturday MBA x



Complete your MBA on Saturdays. Class forming for Spring 2011. Learn more now!

Like

Engage Your World x



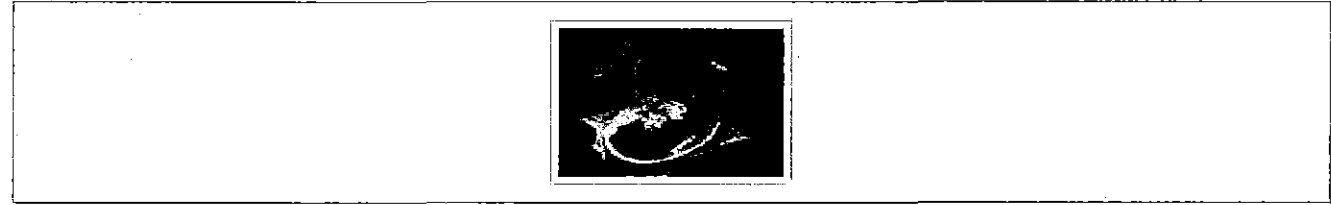
The Economist special online offer. Get 12 issues for \$77.

Chat (1)

Your Photos - My recipes

[Back to My Photos](#)

1 photo | [Edit Photos](#) | [Organize Photos](#) | [Add More Photos](#)



Pictures of the Italian food that I cooked
Added 8 minutes ago - [Comment](#) - [Like](#)

[Share This Album](#)
[Post Album to Profile](#)

Write a comment...

Share this album with anyone by sending them this public link:
<http://www.facebook.com/album.php?aid=764&id=100000961393586&l=269961f7f5>

Create an Ad

I need a home. x

Put me in your Zool! Play Rocky's Zoo World!

[Like](#)

Feed the whole family x

Long John Silver's Family Meal Deal feeds a family of 4 for just \$4 per person. Now that's a family feast you can afford!

[Like](#)

Cartoon Your Profile x

Chat (1)

facebook

Search

Home Profile Find Friends Account

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends

- Applications
- Games
- Groups
- More

Chat with Friends
Go Online

News Feed

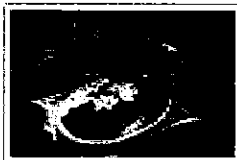
Top News • Most Recent

Suggestions

See All

What's on your mind?

John Vineyard
My recipes



2 minutes ago · Comment · Like · Share

Mary Smith
Italian food lovers
 Common Interest – Food & Drink
 This is a group for those who like Italian food
 35 minutes ago · Comment · Like · Share

Edit Options

Mary Smith
 She's new to Facebook.
 Suggest friends for her

Sponsored Create an Ad

Try Facebook Mobile



Take your friends on the go. Enter your number below to receive a link to install a Facebook Mobile application.

+1-xxx-xxx-xxxx

Get Connected

- Who's on Facebook? Find your friends
- Who's not on Facebook? Invite them now
- Connect on the go Try Facebook Mobile

Chat (1)

facebook

Search

Home Profile Find Friends Account

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends

- Applications
- Games
- Groups

Friends' Groups

More

Chat with Friends
Go Online

Groups

+ Create a Group

? Italian food lovers
2 members
1 Wall Post

Groups Help

Suggestions



Chris Spohrer
Add as friend

x



David Guillen
Add as friend

x

Sponsored

Create an Ad

\$30 Dream House Raffle!

x



Win a \$3 Million
Furnished Estate.
Amazing odds to win
cash prize of \$1.5
Million. Tickets Only
\$30. Early bird draw
Florida-Raffle.com
Like

Have a small money issue?

x



When you need cash, we are
here to help. Nothing fancy
just 3 simple steps and you
can have the cash you need
the next business day.
Like

Want A Killer Good Time?

x



Play Mafia Wars today
and find out just how
much fun you can have
robbing, stealing and
putting out contracts
on your friends!
Like



Invite People to Join
Leave Group

Information

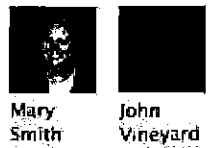
Category:
Common Interest - Food & Drink
Description:
This is a group for those who like Italian Food.
Privacy Type:
Open: All content is public.

Admins

Mary Smith (creator)

Members

2 members See All



Report Group

Share +

Italian food lovers

Wall Info Discussions Photos Video Events

Write something...
Attach: [Icons] Share

John Vineyard I love Italian food! This is the group for me!
25 minutes ago · Comment · Like · Report

Create an Ad

Taste the Rainbow. x



Take a walk in Zoo World this Easter! Play Rocky's Zoo World today!

Like

Who Searched You x



Enter your name to find out who's searching for you with mylife

Like

Feed the whole family x



Long John Silver's Family Meal Deal feeds a family

1 Chat (1)

Italian food lovers

- Wall Info Discussions Photos Video Events

+ Add Group Photos

Create an Ad

Taste the Rainbow. x



Take a walk in Zoo World this Easter! Play Rocky's Zoo World today!

Like

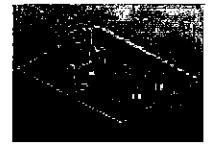
Cartoon Your Profile x



It's free, fun, and easy. Download your cartoon face now!

Like

Raise an Army x



Build your city, train your army, and conquer your

Chat (1)

facebook

Search

Home Profile Find Friends Account

Select Photos

Edit Photos Add from My Photos Upload Photos

Back to Photos | Italian food lovers

All photos that you add or upload to a group will be visible by everyone in the group.



My recipes
Created 12 minutes ago

Create an Ad

I Want a Banana! x



Feed me a treat in Zoo World to brighten my day! Click here to play!

Like

Chronoswiss x



For men who brave the elements from the back country to the boardroom. The Chronoswiss Timemaster Nighthawk. Daring sportsmen wanted.

Become a Fan

Engage Your World x



The Economist special online offer: Get 12 issues for \$12.

Chat (1)

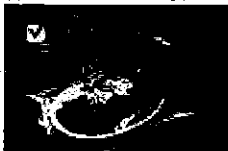
Select Photos

Edit Photos Add from My Photos Upload Photos

Back to Photos | Italian food lovers

All photos that you add or upload to a group will be visible by everyone in the group.

Select All | Select None



Add Selected Photos

Cancel

Create an Ad

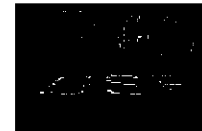
I Want a Banana! x



Feed me a treat in Zoo World to brighten my day! Click here to play!

Like

Join the USF Saturday MBA x



Complete your MBA on Saturdays. Class forming for Spring 2011. Learn more now!

Like

Are You The Best? x



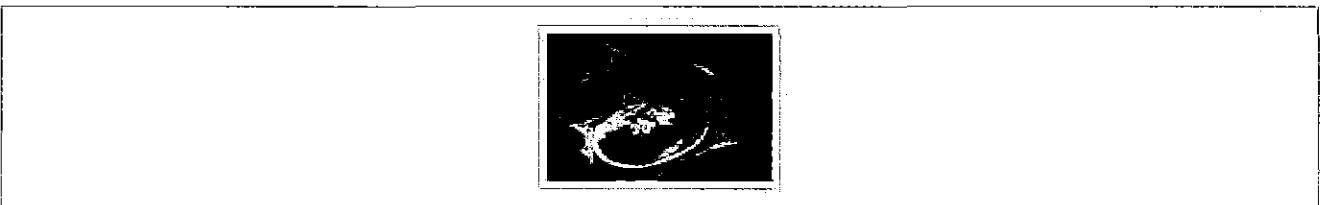
Test your skills in this addictive shooter game. Free download. Play for a

Chat (1)



Photos from Italian food lovers

[Back to Italian food lovers](#) | [View My Photos](#) | [Edit My Photos](#) | [Add Photos](#)



Create an Ad

Today's mortgage rates. x

California mortgage rates.

Like

Tire Rack Free TomTom GPS x



Buy a set of 4 Continental tires for a total value of \$440 or more and receive a free TomTom™ EASE GPS System. Now through 4/10/10.

Like

Sweet Spots Sweepstakes x



Watch our videos. Win a 3-night stay in Oregon's Mt. Hood Territory.

Chat (1)

Photos from Italian food lovers

Photo 1 of 1 | [Back to Group](#) | [See All Photos](#)



Added by you to the group "Italian food lovers" from the album "My recipes"

Added 7 minutes ago · [Comment](#) · [Like](#)

This is the lasagna that I cooked last night

Comment

[Share](#) +



[Tag This Photo](#)

[Edit This Photo](#)

[Remove This Photo](#)

Share this photo with anyone by sending them this public link:
<http://www.facebook.com/photo.php?pid=12079&l=871125040&id=100000961393586>

Create an Ad

Cell Phone For Seniors x



The easiest to use cell phone with large buttons, simple menu, and emergency SOS button. The best gift for your parents or kids.

[Like](#)

Pacific Coast Garden & Landscape.. x



Thank you for supporting us for our first year of business! 10% off your order April 1 - April 4, when you mention this ad.

[Become a Fan](#)

Guys: A Cure For Boredom? x



[Chat \(1\)](#)

Photos from Italian food lovers

Photo 1 of 1 | [Back to Group](#) | [See All Photos](#)



Added by you to the group "Italian food lovers" from the album "My recipes"

Added 7 minutes ago · [Comment](#) · [Like](#)

John Vineyard This is the lasagna that I cooked last night
2 seconds ago · [Delete](#)

Write a comment...

[Share](#) +



[Tag This Photo](#)

[Edit This Photo](#)

[Remove This Photo](#)

Share this photo with anyone by sending them this public link:
<http://www.facebook.com/photo.php?pid=12079&f=871125040&id=10000961393586>

Create an Ad

Cell Phone For Seniors x



The easiest to use cell phone with large buttons, simple menu, and emergency SOS button. The best gift for your parents or kids.

[Like](#)

Pacific Coast Garden & Landscape... x



Thank you for supporting us for our first year of business! 10% off your order April 1 - April 4, when you mention this ad.

[Become a Fan](#)

Guys: A Cure For Boredom? x



Chat (1)

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends
- Applications
- Games
- Groups

More

Chat with Friends
Go Online

News Feed

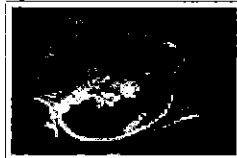
Top News - Most Recent 2

Suggestions

See All

What's on your mind?

John Vineyard ▸ Italian food lovers:
Italian food lovers Photos



2 minutes ago · Comment · Like · Share

John Vineyard This is the lasagna that I cooked last night.
about a minute ago · Delete

Write a comment...

Mary Smith
Italian food lovers
Common Interest - Food & Drink
This is a group for those who like Italian food
42 minutes ago · Comment · Like · Share

Mary Smith
She has 1 Facebook friend.
Suggest friends for her

Sponsored Create an Ad

Give us feedback
We'd like to hear from you. Please take a few minutes to tell us what you think.

Like

Get Connected

Who's on Facebook?
Find your friends

Who's not on Facebook?
Invite them now

Connect on the go
Try Facebook Mobile

Edit Options



facebook

Search

Home Profile Find Friends Account



- Message All Members
- Promote Group with an Ad
- Edit Group Settings
- Edit Members
- Invite People to Join
- Create Group Event
- Leave Group

Write something about Italian food lovers.

Information

Category:
Common Interest - Food & Drink

Description:
This is a group for those who like Italian food

Privacy Type:
Open: All content is public.

Admins

- Mary Smith (creator)

Members

2 members See All



Mary Smith



John Vineyard

Italian food lovers

Wall Info Discussions Photos Video Events

Write something...

Attach:

Share

Options Remove



John Vineyard



Italian food lovers Photos

3 minutes ago - Comment - Like - Share



John Vineyard This is the lasagna that I cooked last night
2 minutes ago

Write a comment...



John Vineyard I love Italian food! This is the group for me!
31 minutes ago - Comment - Like - Report

Create an Ad

Bunnies Soft and Cuddly x



Baby Chickens too. Easter eggs for baskets. White and pink and blue. Play Rockyou's Zoo World!

Like

Neurology Second Opinion x



Second Opinion matters in Neurology. Templeton Institute for Neurology offers Second Opinion in Neurology on California Central Coast.

Like

Tired of the Farm? x



Social City is one of the fastest growing games on

Chat (1)



facebook

Search

Home Profile Find Friends Account

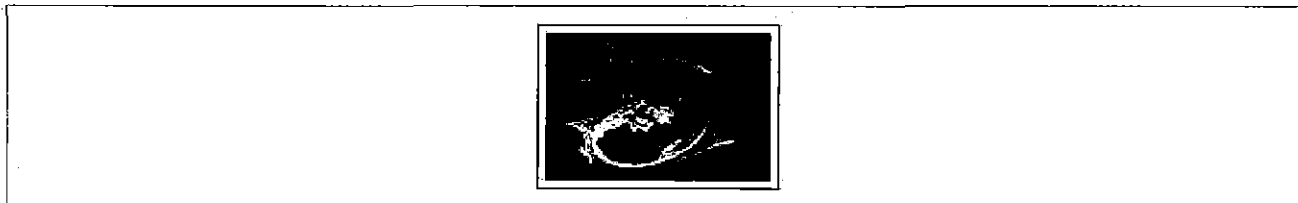


Italian food lovers

Wall Info Discussions Photos Video Events

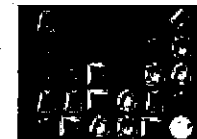
+ Add Group Photos

Italian food lovers Photos 1 photo



Create an Ad

Play Gem Drop x



Match the Gems and win cash prizes! Click to download the best Jewel Game on the Web Now!

Like

Columbia College x



With Columbia College, you can take classes in the evening and ONLINE... or both. Offering associate, bachelor's and master's degrees.

Like

A New Career Awaits You x



Hospitals and medical offices are in need of Medical Billers. Get matched with the right p Chat (1)

facebook

Search

Home Profile Find Friends Account

Photos from Italian food lovers

Photo 1 of 1 | Back to Group | See All Photos



Added by John Vineyard to the group "Italian food lovers" from the album "My recipes"

Added 12 minutes ago · Comment · Like

John Vineyard This is the lasagna that I cooked last night 3 minutes ago · Report

It looks yummy! What are the dishes in the background? Comment

Share +

Tag This Photo Report This Photo Remove This Photo

Create an Ad

Neurology Second Opinion



Second Opinion matters In Neurology, Templeton Institute for Neurology offers Second Opinion. In Neurology on California Central Coast.

Like

Bunnies Soft and Cuddly.



Baby Chickens too. Easter eggs for baskets. White and pink and blue. Play Rockyou's Zoo World!

Like

Be An Ultrasound Tech



Ultrasound Techs are in demand for their specialized skillst Get

star Chat (1)



facebook

Search

Home Profile Find Friends Account

Photos from Italian food lovers

Photo 1 of 1 | Back to Group | See All Photos



Added by John Vineyard to the group "Italian food lovers" from the album "My recipes"

Added 12 minutes ago · Comment · Like



John Vineyard This is the lasagna that I cooked last night

4 minutes ago · Report



Mary Smith It looks yummy! What are the dishes in the background?

2 seconds ago · Delete



Write a comment

Share +

Tag This Photo

Report This Photo

Remove This Photo

Create an Ad

Neurology Second Opinion



Second Opinion matters in Neurology. Templeton Institute for Neurology offers Second Opinion in Neurology on California Central Coast.

Like

Bunnies Soft and Cuddly.



Baby Chickens too. Easter eggs for baskets. White and pink and blue. Play Rockyou's Zoo World!

Like

Be An Ultrasound Tech



Ultrasound Techs are in demand for their specialized skills! Get

star ded 1 Chat (1)

facebook

Search

Home Profile Find Friends Account



Mary Smith
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends
- Applications
- Games
- Groups

More

Chat with Friends
Go Online

News Feed

Top News • Most Recent

Suggestions See All

What's on your mind?

John Vineyard ▸ Italian food lovers: Hide



Italian food lovers Photos

7 minutes ago • Comment • Like • Share

John Vineyard This is the lasagna that I cooked last night
5 minutes ago

Mary Smith It looks yummy! What are the dishes in the background?
about a minute ago • Delete

Write a comment...

Mary Smith



Italian food lovers
Common Interest - Food & Drink
This is a group for those who like Italian food

46 minutes ago • Comment • Like • Share

Edit Options

Sponsored Create an Ad

Try Facebook Ads



Reach the exact audience you want with Facebook's customizable targeting. Click here to learn more about advertising on Facebook.

Like

Get Connected

Who's on Facebook?
Find your friends

Who's not on Facebook?
Invite them now

Connect on the go
Try Facebook Mobile

facebook

Search

Home Profile Find Friends Account



Edit My Profile

Write something about yourself.

Information

Birthday: August 20, 1975

Friends

1 friend

See All

Find people you know



John Vineyard

Create a Profile Badge

Mary Smith

Wall Info Photos

What's on your mind?

Attach: [Icons]

Share

Options



Mary Smith

Italian food lovers

Common Interest - Food & Drink

This is a group for those who like Italian food

47 minutes ago - Comment - Like - Share



John Vineyard How are you?

55 minutes ago - Comment - Like - See Wall-to-Wall

RECENT ACTIVITY

Mary commented on John Vineyard's photo.

Mary and John Vineyard are now friends. - Comment - Like

Create an Ad

Cross a Bunny and a Rat



...to get a Brat! Play Zoo and adopt your fun loving animal today. Click now to play Rockyou's Zoo World!

Like

Play Family Feud



Click here to for a Free download of the cult classic Family Feud game. Play Now.

Like

Freedom From Waxing



American Laser Centers is giving away \$3,000 in permanent, painless Laser Hair Removal. Click now to enter. Time is limited.

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends
- Applications
- Games
- Groups
- More

Chat with Friends
Go Online

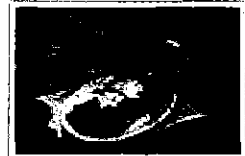
News Feed

Top News · Most Recent

Suggestions [See All](#)

What's on your mind?

John Vineyard ▸ Italian food lovers:
Italian food lovers Photos



8 minutes ago · Comment · Like · Share

John Vineyard This is the lasagna that I cooked last night.
7 minutes ago · Delete

Mary Smith It looks yummy! What are the dishes in the background?
2 minutes ago · Delete

Write a comment...

Mary Smith
Italian food lovers
Common Interest - Food & Drink
This is a group for those who like Italian food
48 minutes ago · Comment · Like · Share

Edit Options

Mary Smith x
Help her find her friends.
Suggest friends for her

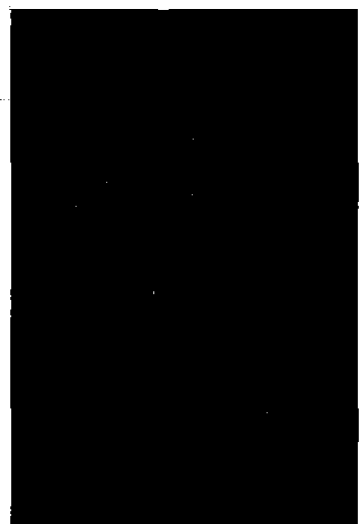
Sponsored [Create an Ad](#)

2010 Credit score? x
Did you know checking your own credit won't affect your score? Click here to see yours in two easy steps from Experian.

Like

Get Connected

- Who's on Facebook? Find your friends
- Who's not on Facebook? Invite them now
- Connect on the go Try Facebook Mobile



Edit My Profile

Write something about yourself.

Information

Birthday: February 12, 1969

Friends

1 friend See All

Find people you know



Mary Smith

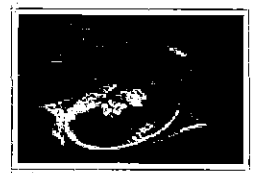
John Vineyard

Wall Info Photos +

What's on your mind? Attach: Share



John Vineyard



My recipes

16 minutes ago - Comment - Like - Share

John Vineyard This is the lasagna that I cooked last night 8 minutes ago - Delete

Mary Smith It looks yummy! What are the dishes in the background? 3 minutes ago - Delete

Write a comment...

RECENT ACTIVITY

- John wrote on Italian food lovers's Wall. John joined the group Italian food lovers. John wrote on Mary Smith's Wall. John and Mary Smith are now friends.

Create an Ad

Careful he's shy!



Collect an island of unicorns in your zoo!

Like

April 2010



Direct From Paris - Clearance Prices on Pulforcat, Odio, Christofle, Sterling Silver Flatware & Tableware - 24 hr Delivery via Fedex

Like

Engage Your World



The Economist special online offer. Get 12 issues for \$12.

Chat (1)

facebook

Search

Home Profile Find Friends Account

Italian food lovers

Wall Info Discussions Photos Video Events

Write something...

Attach: [Icons]

Share



Invite People to Join

Leave Group

Information

Category: Common Interest - Food & Drink
Description: This is a group for those who like Italian food
Privacy Type: Open: All content is public.

Admins

- Mary Smith (creator)

Members

2 members See All



Mary Smith John Vineyard

Photos

1 photo See All

John Vineyard



Italian food lovers Photos

10 minutes ago Comment Like Share

John Vineyard This is the lasagna that I cooked last night
8 minutes ago Delete

Mary Smith It looks yummy! What are the dishes in the background?
4 minutes ago Delete

Write a comment...

John Vineyard I love Italian food! This is the group for me!
38 minutes ago Comment Like Report

Create an Ad

Who Searched You



Enter your name to find out who's searching for you with mylife

Like

Careful he's shy!



Collect an island of unicorns in your zool

Like

Cartoon Your Profile



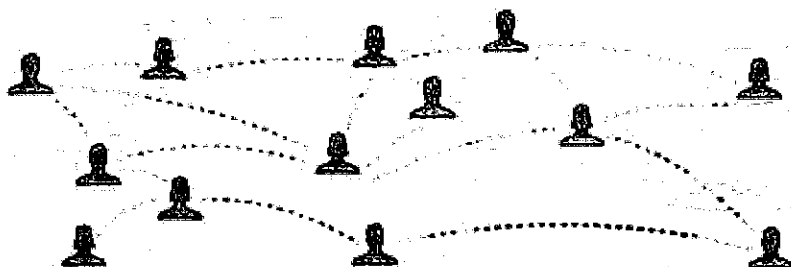
It's free, fun, and easy. Download your cartoon face now!

Chat (1)

EXHIBIT 22

facebook

Facebook helps you connect and share with the people in your life.



Sign Up

It's free and anyone can join

First Name:

Last Name:

Your Email:

New Password:

I am:

Birthday:

Why do I need to provide this?

Create a Page for a celebrity, band or business.

English (US) | Español | Português (Brasil) | Français (France) | Deutsch | Italiano | العربية | हिन्दी | 中文(简体) | 日本語 »

Facebook © 2010 English (US)

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Plaintiff's Trial Exhibit
PTX-942
Case No. 08-CV-00862

facebook

Search

Account

Step 1 Find Friends

Step 2 Profile Information

Step 3 Profile Picture

Are your friends already on Facebook?

Many of your friends may already be here. Searching your email account is the fastest way to find your friends on Facebook.

Your Email: john.vineyard@yahoo.com

Find Friends Yahoo! Mail

Facebook will not store your password. Learn More.

Skip this step

facebook

Search

Account ▾

Step 1
Find Friends

Step 2
Profile Information

Step 3
Profile Picture

Fill out your Profile Info

This information will help you find your friends on Facebook.

High School:	Santa Barbara High School	1989 ▾
College/University:	UCSB	1994 ▾
Company:	<input type="text"/>	

← Back

Skip · Save & Continue

facebook

Search

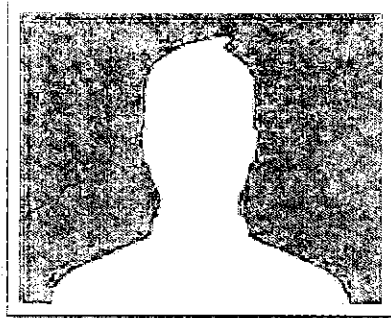
Account ▾

Step 1
Find Friends

Step 2
Profile Information

Step 3
Profile Picture

Set your profile picture



Upload a Photo
From your computer

OR

Take a Photo
With your webcam

◀ Back

Skip • **Save & Continue**

facebook

Sign Up

Facebook helps you connect and share with the people in your life.

Facebook Login

You must log in to see this page.

Email: john.vineyard@yahoo.com

Password:

Keep me logged in

Login or Sign up for Facebook

[Forgot your password?](#)

English (US) Español Português (Brasil) Français (France) Deutsch Italiano العربية हिन्दी 中文(简体) 日本語

facebook

Search

Home Profile Find Friends Account

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends

- Applications
- Games
- Groups

More

Chat with Friends
Go Online

Welcome to Facebook, John.

Search your email for friends already on Facebook

Your Email:

John.vineyard@yahoo.com

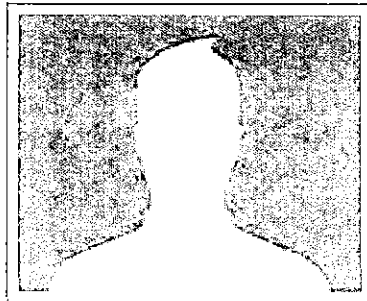
Find Friends **YAHOO! Mail**

Facebook will not store your password. Learn More.

Suggestions

- David Bowersox x
Add as friend
- Carrissa Bowman x
Add as friend

2 Upload a profile picture



Upload a Photo
From your computer

OR

Take a Photo
With your webcam

3 Fill out your profile information

Help your friends find you by filling out some basic profile information.

Edit Profile

4 Activate your mobile phone

Receive texts with your friends' Status



Your Home Page
Help

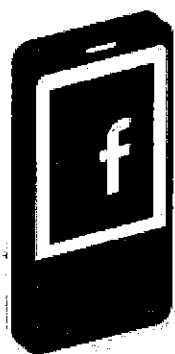
Your Home Page displays interesting content from your friends. Share messages and photos with your friends using the Publisher.

You control your experience. Learn more about how privacy works on Facebook.

close

facebook

Email: Password: Log In



Heading out? Stay connected
Visit facebook.com on your mobile phone.

Get Facebook Mobile

Sign Up It's free and anyone can join

First Name:

Last Name:

Your Email:

New Password:

I am: Select Sex:

Birthday: Month: Day: Year:

Why do I need to provide this?

Sign Up

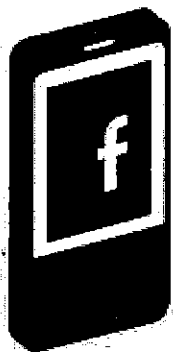
Create a Page for a celebrity, band, or business.

English (US) Español Português (Brasil) Français (France) Deutsch Italiano العربية हिन्दी 中文(简体) 日本語 »

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facebook

Email Log In



Heading out? Stay connected
 Visit facebook.com on your mobile phone.

[Get Facebook Mobile](#)

Sign Up

It's free and anyone can join

First Name:

Last Name:

Your Email:

New Password:

I am:

Birthday:

Why do I need to provide this?

[Create a Page for a celebrity, band, or business.](#)

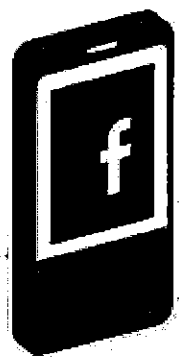
[English \(US\)](#) [Español](#) [Português \(Brasil\)](#) [Français \(France\)](#) [Deutsch](#) [Italiano](#) [العربية](#) [हिन्दी](#) [中文\(简体\)](#) [日本語](#) »

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facebook

john.vineyard@yahoo.com Login



Heading out? Stay connected
 Visit facebook.com on your mobile phone.

[Get Facebook Mobile](#)

Sign Up
 It's free and anyone can join

First Name:

Last Name:

Your Email:

New Password:

I am: Select Sex:

Birthday: Month: Day: Year:

Why do I need to provide this?

[Create a Page for a celebrity, band or business.](#)

English (US) Español Português (Brasil) Français (France) Deutsch Italiano العربية हिन्दी 中文(简体) 日本語 »

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facebook

Search

Home Profile Find Friends Account

John Vineyard

Wall Info +

This is your Publisher. Use it to post content, like photos or links to your wall.

What's on your mind?

Attach: [Image] [Video] [Link] [App]

Share

Options

John has no recent posts.

Upload a Photo
Take a Photo

Edit My Profile

Write something about yourself.

Information

Birthday:
February 12, 1969

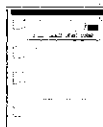
Friends

0 friends

Find people you know

Create a Profile Badge

Your Profile > Wall
Help



Your Wall is a place where you and your friends can post content, such as photos and messages.

Your Wall is visible to anyone who visits your profile. Learn more

Use the Publisher to post for others to see.

close

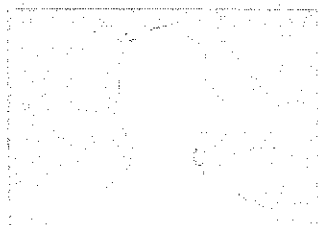
facebook

Search

Home Profile Find Friends Account

John Vineyard

Wall Info +



- Upload a Photo
- Take a Photo

Edit My Profile

Write something about yourself.

Information

Birthday: February 12, 1969

Friends

0 friends

Find people you know

Create a Profile Badge

Upload Your Profile Picture

Select an image file on your computer (4MB max):

By uploading a file you certify that you have the right to distribute this picture and that it does not violate the Terms of Service.

John has no recent posts.

Your Profile > Wall Help



Your Wall is a place where you and your friends can post content, such as photos and messages.

Your Wall is visible to anyone who visits your profile. Learn more

Use the Publisher to post for others to see.

close

facebook

Search

Home Profile Find Friends Account

John Vineyard

Wall Info Photos +

This is your Publisher. Use it to post content, like photos or links to your wall.

What's on your mind?

Attach: [Image] [Video] [Link] [File]

Share

Options

John has no recent posts.

Edit My Profile

Write something about yourself.

Information

Birthday:
February 12, 1969

Friends

0 friends

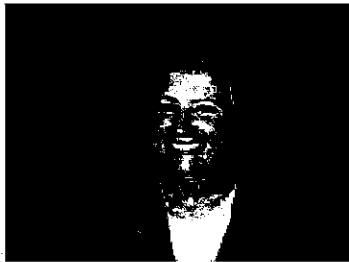
Find people you know

Create a Profile Badge

facebook

Search

Home Profile Find Friends Account



Edit My Profile

Write something about yourself.

Information

Birthday: August 20, 1975

Friends

0 friends

Find people you know

Create a Profile Badge

Mary Smith

Wall Info Photos +

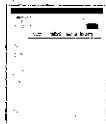
This is your Publisher. Use it to post content, like photos or links to your wall.

What's on your mind? Attach: Share

Options

Mary has no recent posts.

Your Profile > Wall Help



Your Wall is a place where you and your friends can post content, such as photos and messages. Your Wall is visible to anyone who visits your profile. Learn more

Use the Publisher to post for others to see.

close



Mary Smith
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends

Recently Updated
Status Updates

- Applications
- Games
- Groups

More

Chat with Friends
Go-Online

Friends

Create a List

We'd like to help you find your friends

Your friends on Facebook are the same friends, acquaintances and family members that you communicate with in the real world. You can use any of the tools on this page to find more friends.

Find People You Email

Upload Contact File

Searching your email account is the fastest way to find your friends on Facebook.

Your Email:

Find Friends

Facebook will not store your password. [Learn More.](#)

Search for People

Find People You IM

Turn your instant messenger buddies into Facebook friends.

- Find former high school classmates »
- Find current or past college classmates »
- Find current or past coworkers »

Import contacts from:

- AOL Instant Messenger »
- ICQ Chat »
- Windows Live Messenger »

Your Home Page
Help



Your Home Page displays interesting content from your friends. Share messages and photos with your friends using the Publisher.

You control your experience. [Learn more about how privacy works on Facebook.](#)

close



http://www.facebook.com/search/?ref=ffs&q=john.vineyard%40yahoo.com&o=2048&init=ffs

Google

Daily Security Banking Movies Sites Surf Misc TLLQD WebWise

facebook

Search

Home Profile Find Friends Account

john.vineyard@yahoo.com

Search

All Results

Filter By:

Location

School

Workplace

Refine Search

People

Pages

Groups

Applications

Events

Web Results

Posts by Friends

Posts by Everyone



Name:

John Vineyard

Add as Friend

Send a Message

Sponsored Results

Windfall Insurance Serv
One Agent for all your
insurance needs
<http://windfallinsurance.com>

vineyard.com
Find & buy top-rated wines
online. Great selection, prices,
& reviews.
WineAccess.com

Chat (0)

LTI 157095


john.vineyard@yahoo.com Search

- All Results
- People**
- Pages
- Groups
- Applications
- Events
- Web Results
- Posts by Friends
- Posts by Everyone

Filter By: Location School Workplace Refine Search

Add John Vineyard as a friend?

John will have to confirm that you are friends.



[Add a personal message...](#) **Send Request** **Cancel**

Sponsored Results.

Windfall Insurance Serv.
One Agent for all your insurance needs
<http://windfallinsurance.com>

vineyard.com
Find & buy top-rated wines online. Great selection, prices, & reviews.
WineAccess.com

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends (1)
- Applications
- Games
- Groups
- More

Chat with Friends
Go Online

Welcome to Facebook, John.

Accept your friend requests

Mary Smith wants to be your friend.

Confirm Friend Ignore

2 Search your email for friends already on Facebook

Your Email:

Find Friends Yahoo! Mail

Facebook will not store your password. [Learn More.](#)

3 Fill out your profile information

Help your friends find you by filling out some basic profile information.

Edit Profile

4 Activate your mobile phone

- Receive texts with your friends' Status Updates and Messages instantly.
- Update your Status and Message friends using SMS.



Register for Facebook Text Messages

Already received a confirmation code?

5 Find people you know

Search by name or look for classmates and coworkers.

Suggestions

- Brian John Snyder** x
Add as friend
- Charles William Smith III** x
Add as friend

Chat (0)



John Vineyard

Wall Info Photos +

This is your Publisher. Use it to post content, like photos or links to your wall.

What's on your mind? Attach: [Image] [Video] [Link] [File] [Share]

Options

RECENT ACTIVITY

John and Mary Smith are now friends. Comment Like

Edit My Profile

Write something about yourself.

Information

Birthday: February 12, 1969

Friends

1 friend See All

Find people you know



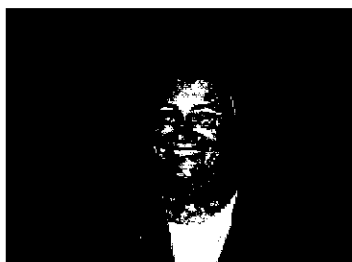
Mary Smith

Chat (1)

facebook

Search

Home Profile Find Friends Account



Mary Smith

Wall Info Photos

Write something...

Attach: [Icons for photo, video, link, application]

Share

Filters

Send Mary a Message

Chat with Mary

Poke Mary

RECENT ACTIVITY

Mary and John Vineyard are now friends. Comment Like

Mary is new to Facebook:

Suggest Friends for Mary

Mary's progress:

Information

Birthday:
August 20, 1975

Friends

1 friend See All



John Vineyard

Report/Block this Person

Remove from Friends

Chat (1)

facebook

Search

Home Profile Find Friends Account



Mary Smith

Wall Info Photos

How are you?

Attach:

Share

Filters

Send Mary a Message

Chat with Mary

Poke Mary

Mary is new to Facebook:

Suggest Friends for Mary

Mary's progress:

Information

Birthday:

August 20, 1975

Friends

1 friend

See All



John Vineyard

RECENT ACTIVITY

Mary and John Vineyard are now friends. Comment Like

Report/Block this Person

Remove from Friends

1 Chat (1)

facebook

Search

Home Profile Find Friends Account



Mary Smith

Wall Info Photos

Write something...

Attach: [Icons]

Share

Filters

Send Mary a Message

Chat with Mary

Poke Mary

Mary is new to Facebook:

Suggest Friends for Mary

Mary's progress:

Information

Birthday: August 20, 1975

Friends

1 friend See All



John Vineyard

John Vineyard How are you?

2 seconds ago · Comment · Like · See Wall-to-Wall

RECENT ACTIVITY

Mary and John Vineyard are now friends. · Comment · Like

Report/Block this Person

Remove from Friends

Chat (1)

facebook

Search

Home Profile Find Friends Account

John Vineyard

Wall Info Photos +

What's on your mind?

Attach:



Share

Options

RECENT ACTIVITY

John wrote on Mary Smith's Wall.

John and Mary Smith are now friends. [Comment](#) [Like](#)

Edit My Profile

Write something about yourself.

Information

Birthday:
February 12, 1969

Friends

1 friend [See All](#)

Find people you know



Mary Smith

Chat (1)

facebook

Search

Home Profile Find Friends Account

 **Mary Smith**
View My Profile

-  Welcome
-  News Feed
-  Messages
-  Events
-  Photos
-  Friends


-  Applications
-  Games
-  **Groups**
- Friends' Groups

- More

- Chat with Friends
- Go Online

 **Groups**

[+ Create a Group](#)

 You don't belong to any groups. [Create a Group](#)

Sponsored

[Create an Ad](#)

William McKee Photography x




Looking for a Mother's Day gift? Mini portrait sessions are \$125 for the month of April. Call today to book a session.

 Like

SLO Food Critics x



Wanna be a Food Critic? Join our Forum and write about Food in SLO County!  Become a Fan

Begin your New Career x



Learn about creative career programs at The Art Institute of Pittsburgh - online division. The journey begins now.

 Like

Create a Group

Step 1: Group Info

Group Name: (required)

Description: (required)

Group Type: (required)

Recent News:

Office:

Email:

Website:

Street:

City/Town:

Create Group Cancel

Note: groups that attack a specific person or group of people (e.g. racist, sexist, or other hate groups) will not be tolerated. Creating such a group will result in the immediate termination of your Facebook account.

Your group has been created.

Non-admins can write on the wall

Show group events.

Show profile box

Show profile tab

Enable discussion board.

Enable photos.

Allow all members to upload photos.

Only allow admins to upload photos.

Show profile box

Show profile tab

Enable videos.

Allow all members to upload videos.

Only allow admins to upload videos.

Show profile box

Show profile tab

Enable links.

Allow all members to post links.

Only allow admins to post links.

Access: This group is open.
Anyone can join and invite others to join. Group info and content can be viewed by anyone and may be indexed by search engines.

This group is closed.
Admins must approve requests for new members to join. Anyone can see the group description, but only members can see the Wall, discussion board, and photos.

This group is secret.
The group will not appear in search results or in the profiles of its members. Membership is by invitation only, and only members can see the group information and content.

Save Skip

Chat (1)

Invite People to Italian food lovers

Your group options have been saved.

Customize Officers Members **Invite**

[Back to Italian food lovers](#)


Invite Friends

[Promote Group with an Ad](#)

Select friends to invite by clicking on their picture below

Find Friends:

Filter Friends ▼ All Selected (0)

	John Vineyard
---	---------------

Invite People via Email [Import Email Addresses](#)

Enter emails separated by commas

Add a Personal Message

Send Invitations

facebook

Search

Home Profile Find Friends Account



Italian food lovers

Wall Info Discussions Photos Video Events

Write something...

Attach: [Icons]

Share

Options

Italian food lovers has no recent posts.

Message All Members

Promote Group with an Ad

Edit Group Settings

Edit Members

Invite People to Join

Create Group Event

Leave Group

Write something about Italian food lovers.

Information

Category: Common Interest - Food & Drink

Description: This is a group for those who like Italian food

Privacy Type: Open: All content is public.

Admins

- Mary Smith (creator)

Members

1 member See All



Mary Smith

Chat (1)

LTI 157107

facebook

Search

Home Profile Find Friends Account

John Vineyard
View My Profile

- Welcome
- News Feed
- Messages
- Events
- Photos
- Friends
- Applications
- Games
- Groups
- Friends' Groups**
- More
- Chat with Friends
- Go Online

Friends' Groups

+ Create a Group



Italian food lovers
Mary Smith and 0 other members

Join

Groups Help

Suggestions

Brett Norris x
Add as friend

Cheryll Putt x
Add as friend

Sponsored Create an Ad

Time For Home Solar x



There's never been a better time get home solar. Get started with SunRun for as low as \$0 Down. Find out how.
Like

Careful he's shy! x



Collect an Island of unicorns in your zoo!
Like

SLO Food Critics x



Wanna be a Food Critic? Join our Forum and write about Food in SLO County!
Become a Fan

EXHIBIT 21

Search

Home Chat (0) Profile Find Friends Account

Help Center

Search

- Using Facebook
- Added Applications
- Help Discussions
- Getting Started
- Safety

Home page: Publisher Hide All

Using the Publisher

How does the Publisher work?

The Publisher lets you share content on Facebook. It is located at the top of both your home page and on your profile. Both locations offer the same functionalities.

Typing in the Publisher text box and clicking "Share" updates your status. Clicking inside the text box displays additional types of content that you can share:

- Link (add a web address to external content)
- Photos (upload a photo, create an album, or take a webcam photo)
- Video (upload a video or record a webcam video)
- Note (add from Facebook's Notes application)
- Import (add external blogs or RSS feeds)
- Gifts (add from Facebook's Gift Shop)

Once you have added content, you will still need to click "Share" in order to publish a story. To exit the submenu for a specific type of content, simply click the "X" in the upper-right corner of the Publisher box.

The Publisher also allows you to select a privacy setting for every post you make. After clicking inside the text box, or attaching your content, look for the lock icon next to the "Share" button. Clicking on it will bring up a menu that lets you choose who will be able to see your post, from Everyone, to Friends, to Friends of Friends.

If you type in the Publisher box and then add content (e.g., a link or a video), the text will appear as a comment above the content you have shared. It will not appear as a new status update or replace your current status.

<http://www.facebook.com/help/?faq=14876>

How is the Publisher different when viewing it on a friend's profile?

While viewing another person's profile, you can use the Publisher to add content directly to their profile. Typing text alone in the Publisher box will create a Wall post.

When you share any content (e.g., a Wall post, video, or photo), a story will appear on your friend's profile with a headline indicating that you have shared the information with them. The same story can also appear in the streams of other people who can view your friend's profile.

If a person's privacy settings prevent you from sharing a certain type of content on their profile, an error message will appear.

To share information privately with one person, click "Send a Message" below the person's name on their profile.

<http://www.facebook.com/help/?faq=14877>

How does this affect my privacy?

This doesn't affect your privacy. The stream is designed to show people all the posts their friends want to share in real-time, but it is subject to the privacy restrictions you set at the time of creation. For example, if you create a photo album and restrict it from certain friends, those friends will never see that photo album in their stream.

<http://www.facebook.com/help/?faq=14878>

Can I control the content that appears on my friends' home pages?

The stories that appear on your friends' home pages are based on the content you publish, the settings of your Publisher Control, and your friends' filter preferences. While your friends can always choose to hide content that you publish, you can ensure that they have to option to view your stories by changing the settings on your Publisher Control.

<http://www.facebook.com/help/?faq=15361>

Tagging Your Status and Posts

What is tagging in a post? How do I use this feature?

Now you can tag your friends and other things you're connected to in your Facebook status and other posts. This feature works with the Publisher box that appears on your home page and profile page.

1. Type the "@" symbol in the Publisher text field, either to start the post or as a

Community Help

To get more information about Home page: Publisher, visit the Community Help Center.

Available Languages

This page is available in the following languages:

- العربية
- Čeština
- Dansk
- English (US)
- Suomi
- עברית
- Italiano
- 한국어
- Norsk (bokmål)
- Nederlands
- Polski
- Português (Brasil)
- Português (Portugal)
- Русский
- Türkçe

Plaintiff's Trial Exhibit
PTX-920
 Case No. 08-CV-00862

Chat (0)

- new word with a space before it.
- 2. Directly after the "@" symbol, type any part of the name you would like to tag. A new drop-down menu will appear with all matching entries. You can tag friends, Pages, groups, events and applications.
- 3. Click the name you would like to tag. It will appear as a blue link in your post. You can tag multiple different names in the same post.

People who can see your post will be able to click through to view the profile, Page, group or event you tag, but only if the existing privacy settings permit this.

Tagging allows you to more actively mention your friends and other things you are connected to on Facebook. It also lets you direct a post at specific people while still keeping the conversation open. Friends you tag will receive a notification and Wall story that you have tagged them, and also when someone else comments on a post they are tagged in.

<http://www.facebook.com/help/?faq=15925>

What can I tag in a post?

You can tag the following things in a post:

- Your confirmed friends
 - Pages you are a fan of
 - Events you are attending
 - Your groups
 - Applications you've used
- To tag any of these things, enter the "@" symbol followed by the name.

Groups will show a group icon next to their name in the drop-down menu, and events will show a calendar icon. Pages will show the Page photo, and profiles will show the profile photo.

When you tag an application, the link in your post will lead to the application's Page. You can only tag applications that you have used.

<http://www.facebook.com/help/?faq=15927>

Who can tag me? Can I exclude someone from tagging me?

Only your confirmed friends can tag you in their posts. If you have blocked someone or removed them as a friend, they will not be able to tag you. If you have blocked someone, and then a mutual friend tags you in their post, the person you blocked will not be able to view your profile by clicking on your name.

<http://www.facebook.com/help/?faq=15928>

My question is not listed above.

Find questions and answers from users in the "Questions and Answers from Users" section [here](#).

<http://www.facebook.com/help/?faq=14879>

- [New privacy controls for the Publisher](#)
- [Have a suggestion about tagging in posts? Tell us about it.](#)
- [How do I update my status?](#)
- [How to use the Wall feature](#)

EXHIBIT 20



Stream.publish

topics

- › Main Page
- › Core Components
- › Platform Policies
- › Facebook Connect
- › Internationalization
- › Mobile
- › Client Libraries
- › Support Resources
- › Developer Roadmap

get involved

- › Contribute
- › Developer site
- › Platform FAQ

reference

- › RESTful API
- › JavaScript API
- › FQL
- › XFBML
- › FBML
- › FBJS

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- › Random page
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- › What links here
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- › Upload file
- › Special pages
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- › Permanent link

Contents [hide]

- 1 Description
- 2 Parameters
- 3 Example Requests
- 4 Response
- 5 Error Codes
- 6 Notes
- 7 See Also

Description

This method publishes a post into the stream on the Wall of a friend or a Facebook Page, group, or event connected to the current session or specified user (but not to an application profile page). By default, this call publishes to the current session user's Wall, but if you specify a user ID, Facebook Page ID, group ID, or event ID as the `target_id`, then the post appears on the Wall of the target, and not the user posting the item.

The post also appears in the streams (News Feeds) of any user connected to both the actor and the target of the post.

Before your application can publish to the stream using this method, the user or Page must grant your application the `publish_stream` [extended permission](#). If the user previously granted your application the permission to publish short stories into the News Feed automatically, then you don't need to prompt for this permission in order to call this method.

Note: To give users control over what gets published to their streams, you should use [Feed forms](#) (rendered with `Facebook.streamPublish` or `FB.Connect.streamPublish`) instead of `stream.publish`. This method is intended to be used in cases where [Feed forms](#) are not available or do not make sense in the natural workflow. For more information, read about the [publish_stream permission](#).

You can give your users the opportunity to add their own message to the post.

To provide rich content like MP3 audio, Flash, or an image, you can supply a predefined JSON-encoded object called `attachment`. Facebook formats the attachment into the post. The attachment is described in [Attachment \(Streams\)](#).

Note: The examples below are all server-side versions of the call in PHP. To see the JavaScript equivalents, check out [FB.Connect.streamPublish](#).

Parameters

Required	Name	Type	Description
optional	<code>session_key</code>	<code>string</code>	The session key of the logged in user, or the session key provided when the user granted your application the <code>offline_access</code> extended permission . The session key is automatically included by our PHP

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		client. This is only required if you don't specify a <code>uid</code> , or if a desktop application calls <code>stream.publish</code> .
<code>format</code>	<code>string</code>	The desired response format, which can be either <code>XML</code> or <code>JSON</code> . (Default value is <code>XML</code> .)
<code>callback</code>	<code>string</code>	Name of a function to call. This is primarily to enable cross-domain JavaScript requests using the <code><script></code> tag, also known as JSONP, and works with both the <code>XML</code> and <code>JSON</code> formats. The function will be called with the response passed as the parameter.
<code>message</code>	<code>string</code>	The message the user enters for the post at the time of publication. If the message is a status update (that is, you're not including an attachment), it can contain up to 420 characters. Otherwise, if the post contains an attachment, the message can contain up to 10,000 characters.
<code>attachment</code>	<code>object</code>	A JSON-encoded object containing the text of the post, relevant links, a media type (image, mp3, flash), as well as any other key/value pairs you may want to add. See Attachment (Streams) for more details. Note: If you want to use this call to update a user's status, don't pass an <code>attachment</code> ; the content of the <code>message</code> parameter will become the user's new status and will appear at the top of the user's profile.
<code>action_links</code>	<code>array</code>	A JSON-encoded array of action link objects, containing the link text and a hyperlink.
<code>target_id</code>	<code>string</code>	The ID of the user, Page, group, or event where you are publishing the content. If you specify a <code>target_id</code> , the post appears on the Wall of the target profile, Page, group, or event, not on the Wall of the user who published the post. This mimics the action of posting on a friend's Wall on Facebook itself. Note: If you specify a Page ID as the <code>uid</code> , you cannot specify a <code>target_id</code> . Pages cannot write on other users' Walls. Note: You cannot publish to an application profile page's Wall.
<code>uid</code>	<code>string</code>	The user ID or Page ID of the user or Page publishing the post. If this parameter is not specified, then it defaults to the session user. If you specified a <code>session_key</code> , and that session user is a Page admin, then you can specify a Page ID here to publish to one Page for which the session user is an admin. Note: If you specify a Page ID as the <code>uid</code> , you cannot specify a <code>target_id</code> . Pages cannot write on other users' Walls.
<code>privacy</code>	<code>object</code>	A JSON-encoded object that defines the privacy setting for a post, video, or album. It contains the following fields. <ul style="list-style-type: none"> ▸ <code>value</code> (string): The privacy value for the object, specify one of <code>EVERYONE</code>, <code>CUSTOM</code>, <code>ALL_FRIENDS</code>, <code>NETWORKS_FRIENDS</code>, <code>FRIENDS_OF_FRIENDS</code>. ▸ <code>friends</code> (string): For <code>CUSTOM</code> settings, this indicates which users can see the object. Can be one of <code>EVERYONE</code>, <code>NETWORKS_FRIENDS</code> (when the object can be seen by networks and friends), <code>FRIENDS_OF_FRIENDS</code>, <code>ALL_FRIENDS</code>,

SOME_FRIENDS, SELF, or NO_FRIENDS (when the object can be seen by a network only).

- networks (string): For CUSTOM settings, specify a comma-separated list of network IDs that can see the object, or 1 for all of a user's networks.
- allow (string): When friends is set to SOME_FRIENDS, specify a comma-separated list of user IDs and friend list IDs that *can* see the post.
- deny (string): When friends is set to SOME_FRIENDS, specify a comma-separated list of user IDs and friend list IDs that *cannot* see the post.

Only the user can specify the privacy settings for the post. You can create an interface that lets the user specify the privacy setting. For CUSTOM settings, use [friends.get](#) and [friends.getLists](#) to get the user's friends and friend lists to populate the interface, then pass along the selections to the privacy object.

Privacy Policy: Any non-default privacy setting must be intentionally chosen by the user. You may not set a custom privacy setting unless the user has proactively specified that they want this non-default setting.

Example Requests

Setting a User's Status

```
$message = 'in ur tubez';  
$facebook->api_client->stream_publish($message);
```

Publishing a Post Containing an Image, Action Link, and Custom Metadata

```
$message = 'Check out this cute pic.';  
$attachment = array(  
    'name' => 'i\'m bursting with joy',  
    'href' => 'http://icanhascheezburger.com/2009/04/22/funny-pictures-bursting-with-joy/',  
    'caption' => '{*actor*} rated the lolcat 5 stars',  
    'description' => 'a funny looking cat',  
    'properties' => array('category' => array(  
        'text' => 'humor',  
        'href' => 'http://www.icanhascheezburger.com/category/humor',  
        'ratings' => '5 stars'),  
    'media' => array(array('type' => 'image',  
        'src' => 'http://icanhascheezburger.files.wordpress.com/2009/03/funny-pictures-your-cat-is-bursting-with-joy1.jpg',  
        'href' => 'http://icanhascheezburger.com/2009/04/22/funny-pictures-bursting-with-joy/')),  
    'latitude' => '41.4', //Let's add some custom metadata in the form of key/value pairs  
    'longitude' => '2.19');  
$action_links = array(  
    array('text' => 'Recaption this',  
        'href' => 'http://mine.icanhascheezburger.com/default.aspx?tiid=1192742&recap=1#step2'));  
$attachment = json_encode($attachment);  
$action_links = json_encode($action_links);  
$facebook->api_client->stream_publish($message, $attachment, $action_links);
```


Publishing a Post Containing Flash, Action Link, and a Target

```

$message = 'Watch this video!';
$attachment = array(
    'name' => 'ninja cat',
    'href' => 'http://www.youtube.com/watch?v=muLIPWjks_M',
    'caption' => '{>actor*} uploaded a video to www.youtube.com',
    'description' => 'a sneaky cat',
    'properties' => array('category' => array(
        'text' => 'pets',
        'href' => 'http://www.youtube.com/browse?s=mp&t=t&c=15',
        'ratings' => '5 stars'),
    'media' => array(array('type' => 'flash',
        'swfsrc' => 'http://www.youtube.com/v/fzzjgBAaWZw&hl=en&fs=1',
        'imgsrc' => 'http://img.youtube.com/vi/muLIPWjks_M/default.jpg?
h=100&w=200&sig=__wsYqEz4uZUOvBIb8g-wljxpf3Q=',
        'width' => '100',
        'height' => '80',
        'expanded_width' => '160',
        'expanded_height' => '120')));
$action_links = array(
    array('text' => 'Upload a video',
        'href' => 'http://www.youtube.com/my_videos_upload'));
$target_id = 2342314;
$facebook->api_client->stream_publish($message, $attachment, $action_links, $target_id);

```

Publishing a Post With Image and Action Link in C#

```

attachment attach = new attachment();

attach.caption = "Caption for attachment";
attach.description = "Description for attachment";
attach.href = "http://www.joemagner.com";
attach.name = "Hopefully this works";

attachment_media attach_media = new attachment_media();
attach_media.type = attachment_media_type.image;

attachment_media_image image = new attachment_media_image();
image.type = attachment_media_type.image;
image.href = "http://icanhascheezburger.com/2009/03/30/funny-pictures-awlll-gone-cookie-now/";
image.src = "http://icanhascheezburger.files.wordpress.com/2009/03/funny-pictures-kitten-
finished-his-milk-and-wants-a-cookie.jpg";

List<attachment_media> attach_media_list = new List<attachment_media>();
attach_media_list.Add(image);

attach.media = attach_media_list;

attachment_property attach_prop = new attachment_property();
attachment_category attach_cat = new attachment_category();
attach_cat.text = "Sample";
attach_cat.href = "#";

attach_prop.category = attach_cat;
//attach_prop.ratings = "5 stars";

attach.properties = attach_prop;

/* action links */
List<action_link> actionlink = new List<action_link>();

action_link all = new action_link();
all.href = "http://www.genuineinteractive.com/";
all.text = "Genuine Interactive";

actionlink.Add(all);

// Create the service
FacebookService fbService = new FacebookService();
fbService.ApplicationKey = AppSettings.GetKeyAsString("APIKey");
fbService.Secret = AppSettings.GetKeyAsString("Secret");
fbService.IsDesktopApplication = false;

```

```

fbService.SessionKey = sessionKey;
fbService.uid = uid;

return fbService.API.stream.publish("Message goes here", attach, actionlink,
fbService.uid.ToString(), 0);

```

Publishing a Post With Image and Action Link in C# using facebook developer toolkit v2

```

public void Post(facebook.API fbAPI, string appLink)
{
string response = fbAPI.stream.publish(
    "is a good guy.",
    new attachment() {
        name = "I am a good guy !",
        href = appLink,
        caption = "{*actor*} is now a good guy",
        description = "Helping other people, I became a new good guy.",
        properties = null,
        media = new List<attachment_media>() {
            new attachment_media_image() { src =
"http://www.goodguy.com/goodGuy.png", href = appLink }
        }
    },
    new List<action_link>() {
        new action_link() { text = "Become a good guy", href = appLink }
    },
    null,
    0);
}

```

Response

This call returns a `post_id` string containing the ID of the stream item upon success. If the call fails, it returns an error code instead.

Error Codes

For a complete list of error codes, see [Error codes](#).

Code	Description
1	An unknown error occurred.
100	Invalid parameter.
102	Session key invalid or no longer valid (if it's a desktop application and the session is missing).
200	Permissions error. The application does not have permission to perform this action.
210	User not visible. The user doesn't have permission to act on that object.
340	Feed action request limit reached.

Notes

You can call this method using a [session secret](#), and not the application secret (for example, for a [Facebook Connect site](#) or [desktop application](#)).

See Also

[Using the Open Stream API](#)

Categories: [API functions](#) | [Session Secret API](#) | [Open Stream API](#) | [Session Optional API](#)

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EXHIBIT 19

Documentation Community Resources Tools News

Photo (FQL)

From Facebook Developer Wiki

Description

The FQL photo table. Query this table to return information about a photo.

To structure your query, use the table name (**photo** in this case) in the FROM clause. The items in the Name column correspond to columns in the table that can be referenced in the SELECT and WHERE clauses.

In order to make your query indexable, the WHERE in your query should contain an = or IN clause for one of the columns marked with a * in the **Indexable** column of the table.

The See Also section lists API functions that work on similar data; their documentation pages contain additional information about the contents of the column and example FQL queries.

Need to get photos associated with a group or event? Use the Photo_tag (FQL) table.

Columns

Indexable	Name	Type	Description
*	pid	string	The ID of the photo being queried. The pid cannot be longer than 50 characters. Note: Because the pid is a string, you should always wrap the pid in quotes when referenced in a query. The pid is unique only for a given user.
*	aid	string	The ID of the album containing the photo being queried. The aid cannot be longer than 50 characters. Note: Because the aid is a string, you should always wrap the aid in quotes when referenced in a query. The aid is unique only for a given user.
	owner	int	The user ID of the owner of the photo being queried.
	src_small	string	The URL to the thumbnail version of the photo being queried. The image can have a maximum width of 75px and a maximum height of 225px. This URL may be blank.
	src_small_height	string	Height of the thumbnail version, in px. This field may be blank.
	src_small_width	string	Width of the thumbnail version, in px. This field may be blank.
	src_big	string	The URL to the full-sized version of the photo being queried. The image can have a maximum width or height of 604px. This URL may be blank.
	src_big_height	string	Height of the full-sized version, in px. This field may be blank.
	src_big_width	string	Width of the full-sized version, in px. This field may be blank.
	src	string	The URL to the album view version of the photo being queried. The image can have a maximum width or height of 130px. This URL may be blank.
	src_height	string	Height of the album view version, in px. This field may be blank.
	src_width	string	Width of the album view version, in px. This field may be blank.
	link	string	The URL to the page containing the photo being queried.
	caption	string	The caption for the photo being queried.
	created	time	The date when the photo being queried was added.
	modified	time	The date when the photo being queried was last modified.
	object_id	int	The object_id of a photo on Facebook. Use the object_id to let users comment on a photo with the Comments API.

Contents

- 1 Description
- 2 Columns
- 3 Examples
- 4 Notes
- 5 See Also

Examples

```
SELECT pid FROM photo WHERE aid IN ( SELECT aid FROM album WHERE owner = '$user_id' ) ORDER BY created DESC LIMIT 1,42
```

Fetch the src_big field for a user's profile picture. As this particular URL does not exist in the user table, we first obtain the profile picture's pid from the album table (the profile picture is the same as the cover_pid for the album named "Profile Pictures").

```
SELECT src_big FROM photo WHERE pid IN (SELECT cover_pid FROM album WHERE owner = $user_id AND name = 'Profile Pictures')
```

Notes

If the user can change the album name of the Profile Picture then the above will not work.

See Also

- Photos.get
- Sample FQL Queries
- Photo_tag (FQL)

Retrieved from "http://wiki.developers.facebook.com/index.php/Photo_%28FQL%29"

Category: FQL Tables

- This page was last modified 01:10, 22 December 2009.

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EXHIBIT 18

Documentation Community Resources Tools News

Photos.get

From Facebook Developer Wiki

Description

Returns all visible photos according to the filters specified. You can use this method to find all photos that are:

- Tagged with the specified subject (passing the user's `uid` as the `subj_id`)
- Contained within the album specified by `aid`
- Included in the list of photos specified by `pids`
- Any combination of these three criteria

Contents
▪ 1 Description
▪ 2 Parameters
▪ 3 Example Requests
▪ 4 Response
▪ 5 FQL Equivalent
▪ 6 Error Codes
▪ 7 Notes
▪ 8 See Also

Parameters

Required	Name	Type	Description
required	<code>api_key</code>	string	The application key associated with the calling application. If you specify the API key in your client, you don't need to pass it with every call.
	<code>session_key</code>	string	The session key of the logged in user, or the session key provided when the user granted your application the <code>offline_access</code> extended permission. The session key is automatically included by our PHP client.
	<code>call_id</code>	float	The request's sequence number. Each successive call for any session must use a sequence number greater than the last. We suggest using the current time in milliseconds, such as PHP's <code>microtime(true)</code> function. If you specify the call ID in your client, you don't need to pass it with every call.
	<code>sig</code>	string	An MD5 hash of the current request and your secret key, as described in the How Facebook Authenticates Your Application. Facebook computes the signature for you automatically.
	<code>v</code>	string	This must be set to <code>1.0</code> to use this version of the API. If you specify the version in your client, you don't need to pass it with every call.
	<code>subj_id</code>	int	Filter by photos tagged with this user. You must specify at least one of <code>subj_id</code> , <code>aid</code> or <code>pids</code> . The <code>subj_id</code> parameter has no default value, but if you pass one, it must be the user's user ID.
	<code>aid</code>	string	Filter by photos in this album. You must specify at least one of <code>subj_id</code> , <code>aid</code> or <code>pids</code> . The <code>aid</code> parameter has no default value. The <code>aid</code> cannot be longer than 50 characters.
	<code>pids</code>	array	Filter by photos in this list. This is a comma-separated list of <code>pids</code> . You must specify at least one of <code>subj_id</code> , <code>aid</code> or <code>pids</code> . The <code>pids</code> parameter has no default value.
optional	<code>format</code>	string	The desired response format, which can be either <code>XML</code> or <code>JSON</code> . (Default value is <code>XML</code> .)
	<code>callback</code>	string	Name of a function to call. This is primarily to enable cross-domain javascript requests using the <code><script></code> tag, sometimes known as "JSONP". This works with both <code>XML</code> and <code>JSON</code> .

Example Requests

<http://wiki.developers.facebook.com/index.php/Photos.get>

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get all photos of a user, given its uid

```
$facebook->api_client->call_method('Photos.get', array('subj_id' => $uid));
```

get all photos from an event, given its eid

```
$facebook->api_client->call_method('Photos.get', array('subj_id' => $eid));
```

get all photos of a group, given its gid

```
$facebook->api_client->call_method('Photos.get', array('subj_id' => $gid));
```

```
$facebook->api_client->photos_get(1240077, '', '');
```

```
$facebook->api_client->photos_get('', 34585963571485, '');
```

```
$facebook->api_client->photos_get('', '', '34585991612804,34585991612805');
```

Response

If no such photos are found, the method returns an empty `photos_get_response` element.

Note: The following size constraints on photos returned:

- `src` - URL of photo, with max width 130px and max height 130px. May be blank.
- `src_big` - URL of photo, with max width 604px and max height 604px. May be blank.
- `src_small` - URL of photo, with with max width 75px and max height 225px. May be blank.

Privacy Note: Photos are visible on the Facebook Platform only if the photo owner has authorized the calling application, or the photo owner has not turned off access to the Platform.

FQL Equivalent

FQL queries take the form: `SELECT <fields> FROM <table> WHERE <conditions>`

This function is similar to doing the following FQL query, with the appropriate parameters filled in:

```
SELECT pid, aid, owner, src, src_big, src_small, link, caption, created
FROM photo
WHERE pid IN (SELECT pid FROM photo_tag WHERE subject=<uid>) AND
aid=<aid> AND pid IN (pid)
```

Error Codes

For a complete list of error codes, see Error codes.

- 1 An unknown error occurred. Please resubmit the request.
- 2 The service is not available at this time.
- 4 The application has reached the maximum number of requests allowed. More requests are allowed once the time window has completed.
- 5 The request came from a remote address not allowed by this application.
- 100 One of the parameters specified was missing or invalid.
- 101 The API key submitted is not associated with any known application.
- 102 The session key was improperly submitted or has reached its timeout. Direct the user to log in again to obtain another key.
- 103 The submitted `call_id` was not greater than the previous `call_id` for this session.
- 104 Incorrect signature.

Notes

You can call this method using a session secret, and not the application secret (for example, for a Facebook Connect site or desktop application).

See Also

- photo FQL table

Retrieved from "<http://wiki.developers.facebook.com/index.php/Photos.get>"

Categories: [API functions](#) | [Session Required API](#) | [Session Secret API](#)

- This page was last modified 17:27, 4 November 2009.

EXHIBIT 17



Photos.getAlbums

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Description

Returns metadata about all of the photo albums uploaded by the specified user.

This method returns information from all visible albums satisfying the filters specified. The method can be used to return all photo albums created by a user, query a specific set of albums by a list of `aids`, or filter on any combination of these two.

This call does return a user's profile picture album. However, you cannot upload photos to this album using `photos.upload`. You can determine whether an album is the profile album by comparing the album cover `pid` with the user's profile picture `pid`. If they are the same `pid`, then that's the profile picture album. Also, see the **Notes** below for another way of returning the profile picture album.

You **cannot** store the values returned from this call.

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Parameters

Required	Name	Type	Description
required	<code>api_key</code>	<code>string</code>	The application key associated with the calling application. If you specify the API key in your client, you don't need to pass it with every call.
	<code>session_key</code>	<code>string</code>	The session key of the logged in user, or the session key provided when the user granted your application the <code>offline_access</code> extended permission . The session key is automatically included by our PHP client.
	<code>call_id</code>	<code>float</code>	The request's sequence number. Each successive call for any session must use a sequence number greater than the last. We suggest using the current time in milliseconds, such as PHP's <code>microtime(true)</code> function. If you specify the call ID in your client, you don't need to pass it with every call.

topics

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- ▶ Permanent link

<code>sig</code>	<code>string</code>	An MD5 hash of the current request and your secret key, as described in the How Facebook Authenticates Your Application . Facebook computes the signature for you automatically.
<code>v</code>	<code>string</code>	This must be set to <code>1.0</code> to use this version of the API. If you specify the version in your client, you don't need to pass it with every call.
<code>uid</code>	<code>int</code>	Return albums created by this user. You must specify either <code>uid</code> or <code>aids</code> . The <code>uid</code> parameter has no default value.
<code>aids</code>	<code>array</code>	Return albums with aids in this list. This is a comma-separated list of aids. You must specify either <code>uid</code> or <code>aids</code> . The <code>aids</code> parameter has no default value.
optional <code>format</code>	<code>string</code>	The desired response format, which can be either <code>XML</code> or <code>JSON</code> . (Default value is <code>XML</code> .)
<code>callback</code>	<code>string</code>	Name of a function to call. This is primarily to enable cross-domain JavaScript requests using the <code><script></code> tag, also known as JSONP, and works with both the XML and JSON formats. The function will be called with the response passed as the parameter.

Example Requests

This is using the PHP library

```
$albums = $facebook->api_client->photos_getAlbums($uid, NULL);  
print_r($albums);
```

Response

The album IDs (`aids`) returned by this function can be passed in to `photos.get`.

Privacy note: In this call, an album owned by a user gets returned to an application if that user has not turned off access to the Facebook Platform.

Example Return XML

```
<?xml version="1.0" encoding="UTF-8"?>  
<photos_getAlbums_response xmlns="http://api.facebook.com/1.0/"  
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xsi:schemaLocation="http://api.facebook.com/1.0/ http://api.facebook.com/1.0/facebook.xsd"  
  list="true">  
  <album>  
    <aid>34595963571485</aid>  
    <cover_pid>34595991612812</cover_pid>  
    <owner>8055</owner>  
    <name>Films you will never see</name>  
    <created>1132553109</created>  
    <modified>1132553363</modified>  
    <description>No I will not make out with you</description>  
    <location>York, PA</location>
```

```
<link>http://www.facebook.com/album.php?aid=2002205&id=8055</link>
<size>30</size>
<visible>friends</visible>
<modified_major>1241834423</modified_major>
</album>
</photos_getAlbums_response>
```

FQL Equivalent

FQL queries take the form: `SELECT <fields> FROM <table> WHERE <conditions>`

This function is similar to doing the following FQL query, with the appropriate parameters filled in (for example, using an actual user ID in place of `<uid>`):

```
SELECT aid, cover_pid, owner, name, created, modified, description, location, link, size, visible
FROM album
WHERE owner=<uid> AND aid IN (aid)
```

Error Codes

For a complete list of error codes, see [Error codes](#).

Code	Description
1	An unknown error occurred. Please resubmit the request.
2	The service is not available at this time.
4	The application has reached the maximum number of requests allowed. More requests are allowed once the time window has completed.
5	The request came from a remote address not allowed by this application.
100	One of the parameters specified was missing or invalid.
101	The API key submitted is not associated with any known application.
102	The session key was improperly submitted or has reached its timeout. Direct the user to log in again to obtain another key.
103	The submitted <code>call_id</code> was not greater than the previous <code>call_id</code> for this session.
104	Incorrect signature.

Notes

- ▶ You can return a user's [Profile archive album](#) -- the place where the user's profile pictures are stored -- by specifying `-3` for the `aid` parameter.
- ▶ The `visible` field indicates who can see the album. The values can be `friends`, `friends-of-friends`, `networks`, `everyone`, or `custom` (if the visibility doesn't match any of these values). This information is available only to the album owner.
- ▶ You can call this method using a [session secret](#), and not the application secret (for example, for a

See Also

- [Album \(FQL\)](#)

Categories: [API functions](#) | [Session Required API](#) | [Session Secret API](#)

EXHIBIT 16

Keep me logged in [Forgot your password?](#)

Email Password

Help Center

Search

- Using Facebook
- Help Discussions
- Getting Started
- Safety

Photos > Photos: Creating and uploading [Hide All](#)

How do I add photos and create an album?

To create an album and upload photos, take the following steps:

1. Go to your profile.
2. Click the Photos tab.
3. Click the "Create a Photo Album" button.
4. Follow the on-screen directions. If you have not yet done so, you may be prompted to first install the Facebook Plug In, which allows easy uploading of your photos. Please click "Install" and "Allow" to any prompts that appear while the application is uploading. If you are having any trouble installing or using the photo upload application, try the simple version located at the bottom of the "Add More Photos" tab.

For photos to appear under the "View Photos of" profile link, you will need to be tagged in the photos. To tag yourself in a photo that you have uploaded, just go to the photo and click the "Tag This Photo" link beneath it, then select "me."

<http://www.facebook.com/help/?faq=12548>

How do I add or change a profile picture?

You can add or change a profile picture in any of the following ways:

- To set a photo that you or a friend has already uploaded to Facebook as your profile picture, select "Make Profile Picture" at the bottom right when you are viewing the photo.
- To upload a picture that you have saved on your computer, move your mouse over your profile picture and click the pencil icon. Select "Upload a picture" from the drop-down menu and follow the on-screen directions.
- To take a new profile picture using your webcam, move your mouse over your profile picture and click the pencil icon. Select "Take a picture" from the drop-down menu and follow the on-screen directions. If you choose to take a picture using your webcam, you may first have to allow your Flash player to access your webcam.

You can edit the thumbnail version of your profile picture at any time by moving your mouse over your profile picture, clicking the pencil icon, and selecting "Edit Thumbnail." If you wish, you can also remove your profile picture by moving your mouse over your profile picture, clicking the pencil icon, and selecting "Remove your picture."

If you are having trouble adding or changing your profile picture, please note that you cannot upload a photo if it is more than three times as tall as it is wide. If you are still experiencing this problem, please report the issue [here](#).

<http://www.facebook.com/help/?faq=13568>

I'm being prompted to install the Facebook Plug-In when I upload photos. What is this?

The Facebook Plug-in is a free browser extension that was built by Facebook and designed to improve your experience on the site. For example, you can use the Facebook Plug-In to speed up and simplify the photo upload process.

To install the Facebook Plug-In on your computer, simply click "Install" when you see the dialogue box prompt. Installation should not take longer than two minutes.

When the installation is complete, you'll be able to use the Facebook Plug-In to upload your photos. The top half of the box allows you to select folders where you upload photos from; the bottom half of the box is where you can choose which photos you'd like to upload. Click the "Use Selected Photos" button when you're ready to upload.

<http://www.facebook.com/help/?faq=16480>

How do I install the Facebook Plug-In?

To install the Facebook Plug-In on your computer, simply click "Install" when you see the dialogue box prompt. The box will appear anytime you do something on the site that requires the plug-in: for example, when you are adding photos to the site. Installation should not take longer than two minutes.

<http://www.facebook.com/help/?faq=16481>

Community Help

To get more information about **Photos: Creating and uploading**, visit the [Community Help Center](#).

Available Languages

This page is available in the following languages:

- العربية
- Čeština
- Dansk
- Deutsch
- English (US)
- Español (España)
- Español
- Suomi
- Français (France)
- עברית
- Italiano
- 日本語
- 한국어
- Norsk (bokmål)
- Nederlands
- Polski
- Português (Brasil)
- Português (Portugal)
- Русский
- Türkçe

Plaintiff's Trial Exhibit
PTX-886
 Case No. 08-CV-00862

How do I uninstall the Facebook Plug-In?

To uninstall the Facebook Plug-in, take the following steps:

Windows

1. Select "Control Panel" from the Start menu.
2. Click "Add or Remove Programs."
3. Find "Facebook Plug-In" in the list and follow the on-screen instructions to remove the program.

Mac

1. Go into your Home directory.
2. Select "Library."
3. Select "Internet Plug-Ins."
4. Delete all files that begin with "fbplugin".

Linux

1. Go to the following path: ~/.mozilla/plugins/
2. Delete all files beginning with "npfbbook".

<http://www.facebook.com/help/?tag=16482>

How do I share photos or share an album with someone?

You can share a Facebook photo with any of your friends on Facebook by clicking on the "Share" link located under a photo or photo album. Please note that in order to send a photo to a friend in a Facebook message, the photo needs to exist either in a Facebook album or elsewhere on the internet. If it exists elsewhere on the internet, copy the URL (web address) of the photo and paste it into your message to that person, and a preview of the photo will appear. If the photo does not exist on the internet, upload the photo to one of your Facebook albums. Then, click the "Share" link below the photo to send a link and preview of the photo to your friend. For instructions on how to upload, please see the answer above.

Identify the people in your photos by tagging the images. To do this, follow the steps below:

1. Go to the Photos page and select "My Photos."
2. Click on the "Edit Album" link of the album that you want to tag.
3. Click on a person's face in the photo and then select their name in the box that pops up. If their name is not in the box, you can type it in the text field.
4. Repeat this process for everyone in the photo that you would like to tag. If you need to tag yourself, select "me."
5. After you have finished tagging your photos, click "Save Changes" at the bottom of the page.

Please note that when you tag a friend in a photo, it will be accessible from the "View Photos of" link beneath their profile picture.

You can also tag someone else's photos while browsing them. To do this, click on "Tag This Photo" from the actions listed under the photo.

<http://www.facebook.com/help/?tag=13406>

How does tagging work? How do I remove a tag?

You can identify people in your photos by tagging the images.

To tag your photos, please follow the steps below:

1. Go to the Photos page and select "My Photos."
2. Click the "Edit Album" link of the album that you want to tag.
3. Click on a person's face in the photo and then select their name in the box that pops up. If their name is not in the box, you can type it in the text field. If you need to tag yourself, select "me."
4. Repeat this process for everyone in the photo that you would like to tag.
5. Click "Save Changes" when you are done.

Please note that when you tag a friend in a photo, it will be accessible from the "View Photos of" link beneath their profile picture. You can also tag someone else's photos while browsing them. To do this, click on "Tag This Photo" from the actions listed under the photo.

To remove the tag from a photo that someone else has uploaded and tagged you in, simply view the photo, and then choose "remove tag" at the bottom next to your name. The photo will no longer be linked to your profile. Please note that if you tag a user in a photo that you did not upload, you cannot remove or edit the tag. Only the owner of the photo and the tagged user will be able to do so.

Please note that you can set your notifications so that you always know when someone tags you or one of your photos. If you wish to remove a tag made on a photo that you uploaded, please select the "remove tag" link when viewing the photo.
<http://www.facebook.com/help/?faq=13407>

What does "Post a Photo" on the Wall mean?

If you'd like to add single images with comments to your own Wall or a friend's Wall, you can select the "Post a Photo" option in the Publisher box. Photos you upload to your own Wall with this method will appear in the "Wall Photos" album in your My Photos section and in your Photos tab. Photos you upload on your friends' Walls with this method will not be placed in an album.
<http://www.facebook.com/help/?faq=13170>

How can I post a photo to my Wall?

To post a photo on your own Wall, follow the steps below:

1. Click "Write something..." and select the "Photo" link when it appears.
2. Select "Upload a Photo."
3. Click the "Browse" button and select an image to upload.
4. Add an optional comment.
5. Click the "Share" button.

<http://www.facebook.com/help/?faq=14359>

How can I post a photo to my friend's Wall?

To post a photo on a friend's Wall, follow the steps below:

1. Click "Write something..." and select the "Photo" link when it appears.
2. Select "Upload a Photo."
3. Click the "Browse" button and select an image to upload.
4. Add an optional comment.
5. Click the "Share" button.

<http://www.facebook.com/help/?faq=14361>

How many photos can I upload?

You can upload 200 photos per album and create as many albums as you want.

You can upload 100 photos into the Mobile Uploads album. If you add more than 100, a second album is automatically created.

<http://www.facebook.com/help/?faq=13064>

How do I add an application box, and what's the Boxes tab?

The Boxes tab serves as a home for your applications.

If an application supports profile boxes, you can choose to add it to your profile by editing the application's settings. To add a box, follow the steps below:

1. Click the "Applications" in the bottom left corner of any page.
2. Select the "Edit" link.
3. Click the "Edit" link to the right of any application.
4. Select the "Profile" tab of the window that appears.
5. Click the "add" link next to "Box."

<http://www.facebook.com/help/?faq=13168>

I'm having trouble uploading photos. I can't upload any photos using the Advanced Uploader.

Please make sure you are using an unedited version of the image. Editing the photo using third party software may cause it to upload incorrectly or fail to upload entirely.

Please also make sure that the length or width of the photo you are uploading is not over three times longer than the other dimension.

Please note that we only support the uploading of .jpg, .gif, .bmp, and .png files.

The maximum file size is 15 MB.

Please make sure that you have the latest version of your browser installed and have also updated to the latest version of Java. If you continue to experience problems, please report this issue [here](#).

<http://www.facebook.com/help/?faq=13265>

How do I edit the privacy settings for my photo albums?

To edit your album privacy, follow the steps below:

1. Go to the photo album.
2. Click the "Edit Photos" link at the top of the screen.
3. Select the Edit Info tab.
4. Update your album privacy.

Please also take note that if the photo resides in an album you do not own, then the owner of the album will need to adjust the album privacy. This may affect the visibility of photos in "View More Photos of Me" under your profile picture.

Note that you can also access the photo album privacy settings by going to your Privacy Settings page, clicking "Profile", and then clicking "Edit Photo Albums Privacy Settings" in the section titled "Photos tagged of you."

<http://www.facebook.com/help/?faq=13268>

My photo albums don't appear on my Wall after being uploaded.

To adjust the Wall permissions for the Photos application and allow or prevent it from publishing stories on your Wall, please follow these steps:

1. Select "Application Settings" from the Settings drop-down menu at the top right of any page.
2. Click "Edit Settings" to the right of the Photos application.
3. In the Edit Photo Settings box, select the Wall tab.
4. Change the setting to allow or restrict the application from publishing stories.

<http://www.facebook.com/help/?faq=14492>

I cannot add any more photos to an album.

The "Add More Photos" link will disappear from an album when you have added 200 photos to it. Please create a new album for more photos, or move photos in the current album to another to allow photos to be added to the existing album.

<http://www.facebook.com/help/?faq=13961>

I can't find my Photos application.

To access the Photos application if you do not see it in the Applications menu, type "Photos" into the search box at the top of the page and follow the link that appears. While using the application, you will see the option to bookmark it in the bar at the bottom of the page. You may adjust the order of your bookmarks at any time by dragging them within the Applications menu.

You can also edit the settings for an application at any time by selecting "Application Settings" from the Settings drop-down menu at the top of the page.

<http://www.facebook.com/help/?faq=13266>

My question is not listed above.

Find questions and answers from other users [here](#).

<http://www.facebook.com/help/?faq=12572>

EXHIBIT 15

Keep me logged in [Forgot your password?](#)

Email

Password

Login

Sign Up

Facebook helps you connect and share with the people in your life.

Plaintiff's Trial Exhibit

PTX-882

Case No. 08-CV-00862



Needle in a haystack: efficient storage of billions of photos

Facebook Engineering & Notes



Needle in a haystack: efficient storage of billions of photos

by Peter Vajdal (notes) Thursday, April 30, 2009 at 2:27pm

In this note
No one.

The Photos application is one of Facebook's most popular features. Up to date, users have uploaded over 15 billion photos which makes Facebook the biggest photo sharing website. For each uploaded photo, Facebook generates and stores four images of different sizes, which translates to a total of 60 billion images and 1.5PB of storage. The current growth rate is 220 million new photos per week, which translates to 25TB of additional storage consumed weekly. At the peak there are 550,000 images served per second. These numbers pose a significant challenge for the Facebook photo storage infrastructure.

NFS photo infrastructure

The old photo infrastructure consisted of several tiers:

- Upload tier receives users' photo uploads, scales the original images and saves them on the NFS storage tier.
- Photo serving tier receives HTTP requests for photo images and serves them from the NFS storage tier.
- NFS storage tier built on top of commercial storage appliances.

Since each image is stored in its own file, there is an enormous amount of metadata generated on the storage tier due to the namespace directories and file inodes. The amount of metadata far exceeds the caching abilities of the NFS storage tier, resulting in multiple I/O operations per photo upload or read request. The whole photo serving infrastructure is bottlenecked on the high metadata overhead of the NFS storage tier, which is one of the reasons why Facebook relies heavily on CDNs to serve photos. Two additional optimizations were deployed in order to mitigate this problem to some degree:

- Cachr: a caching server tier caching smaller Facebook "profile" images.
- NFS file handle cache - deployed on the photo serving tier eliminates some of the NFS storage tier metadata overhead

Haystack Photo Infrastructure

The new photo infrastructure merges the photo serving tier and storage tier into one physical tier. It implements a HTTP based photo server which stores photos in a generic object store called Haystack. The main requirement for the new tier was to eliminate any unnecessary metadata overhead for photo read operations, so that each read I/O operation was only reading actual photo data (instead of filesystem metadata). Haystack can be broken down into these functional layers -

- HTTP server
- Photo Store
- Haystack Object Store
- Filesystem
- Storage

In the following sections we look closely at each of the functional layers from the bottom up,

Storage

Haystack is deployed on top of commodity storage blades. The typical hardware configuration of a 2U storage blade is -

- 2 x quad-core CPUs
- 16GB - 32GB memory
- hardware raid controller with 256MB - 512MB of NVRAM cache
- 12+ 1TB SATA drives

Each storage blade provides around 10TB of usable space, configured as a RAID-6 partition managed by the hardware RAID controller. RAID-6 provides adequate redundancy and excellent read performance while keeping the storage cost down. The poor write performance is partially mitigated by the RAID controller NVRAM write-back cache. Since the reads are mostly random, the NVRAM cache is fully reserved for writes. The disk caches are disabled in order to guarantee data consistency in the event of a crash or a power loss.

Filesystem

Haystack object stores are implemented on top of files stored in a single filesystem created on top of the 10TB volume.

Photo read requests result in read() system calls at known offsets in these files, but in order to execute the reads, the filesystem must first locate the data on the actual physical volume. Each file in the filesystem is represented by a structure called an inode which contains a block map that maps the logical file offset to the physical block offset on the physical volume. For large files, the block map can be quite large depending on the type of the filesystem in use.

Block based filesystems maintain mappings for each logical block, and for large files, this information will not typically fit into the cached inode and is stored in indirect address blocks instead, which must be traversed in order to read the data for a file. There can be several layers of indirection, so a single read could result in several I/Os depending on whether or not the indirect address blocks are cached.

Extent based filesystems maintain mappings only for contiguous ranges of blocks (extents). A block map for a contiguous large file could consist of only one extent which would fit in the inode itself. However, if the file is severely fragmented and its blocks are not contiguous on

the underlying volume, its block map can grow large as well. With extent based filesystems, fragmentation can be mitigated by aggressively allocating a large chunk of space whenever growing the physical file.

Currently, the filesystem of choice is XFS, an extent based filesystem providing efficient file preallocation.

Haystack Object Store

Haystack is a simple log structured (append-only) object store containing needles representing the stored objects. A Haystack consists of two files – the actual haystack store file containing the needles, plus an index file. The following figure shows the layout of the haystack store file:



The first 8KB of the haystack store is occupied by the superblock. Immediately following the superblock are needles, with each needle consisting of a header, the data, and a footer:

Header Magic Number	Magic number used to find the right device and/or partition to verify.
Cookie	Security cookie appended to the work key to allow the user to verify the haystack.
Key	64-bit object key.
Alternate Key	32-bit object alternate key.
Flags	Currently a single flag indicating that the object has been indexed.
Size	Byte size.
Footer Magic Number	Magic number used to find the possible needle footer location.
Data Checksum	Checksum for the data portion of the needle.
Padding	Total needle size is aligned to 4 bytes.

A needle is uniquely identified by its <Offset, Key, Alternate Key, Cookie> tuple, where the offset is the needle offset in the haystack store. Haystack doesn't put any restriction on the values of the keys, and there can be needles with duplicate keys. Following figure shows the layout of the index file -



There is a corresponding index record for each needle in the haystack store file, and the order of the needle index records must match the order of the associated needles in the haystack store file. The index file provides the minimal metadata required to locate a particular needle in the haystack store file. Loading and organizing index records into a data structure for efficient lookup is the responsibility of the Haystack application (Photo Store in our case). The index file is not critical, as it can be rebuilt from the haystack store file if required. The main purpose of the index is to allow quick loading of the needle metadata into memory without traversing the larger Haystack store file, since the index is usually less than 1% the size of the store file.

Haystack Write Operation

A Haystack write operation synchronously appends new needles to the haystack store file. After the needles are committed to the larger Haystack store file, the corresponding index

records are then written to the index file. Since the index file is not critical, the index records are written asynchronously for faster performance.

The index file is also periodically flushed to the underlying storage to limit the extent of the recovery operations caused by hardware failures. In the case of a crash or a sudden power loss, the haystack recovery process discards any partial needles in the store and truncates the haystack store file to the last valid needle. Next, it writes missing index records for any trailing orphan needles at the end of the haystack store file.

Haystack doesn't allow overwrite of an existing needle offset, so if a needle's data needs to be modified, a new version of it must be written using the same <Key, Alternate Key, Cookie> tuple. Applications can then assume that among the needles with duplicate keys, the one with the largest offset is the most recent one.

Haystack Read Operation

The parameters passed to the haystack read operation include the needle offset, key, alternate key, cookie and the data size. Haystack then adds the header and footer lengths to the data size and reads the whole needle from the file. The read operation succeeds only if the key, alternate key and cookie match the ones passed as arguments, if the data passes checksum validation, and if the needle has not been previously deleted (see below).

Haystack Delete Operation

The delete operation is simple – it marks the needle in the haystack store as deleted by setting a "deleted" bit in the flags field of the needle. However, the associated index record is not modified in any way so an application could end up referencing a deleted needle. A read operation for such a needle will see the "deleted" flag and fail the operation with an appropriate error. The space of a deleted needle is not reclaimed in any way. The only way to reclaim space from deleted needles is to compact the haystack (see below).

Photo Store Server.

Photo Store Server is responsible for accepting HTTP requests and translating them to the corresponding Haystack store operations. In order to minimize the number of I/Os required to retrieve photos, the server keeps an in-memory index of all photo offsets in the haystack store file. At startup, the server reads the haystack index file and populates the in-memory index. With hundreds of millions of photos per node (and the number will only grow with larger capacity drives), we need to make sure that the index will fit into the available memory. This is achieved by keeping a minimal amount of metadata in memory, just the information required to locate the images.

When a user uploads a photo, it is assigned a unique 64-bit id. The photo is then scaled down to 4 different sizes. Each scaled image has the same random cookie and 64-bit key, and the logical image size (large, medium, small, thumbnail) is stored in the alternate key. The upload server then calls the photo store server to store all four images in the Haystack.

The in-memory index keeps the following information for each photo:

64-bit photo key		
00000000000000000000000000000000	00000000000000000000000000000000	00000000000000000000000000000000
00000000000000000000000000000000	00000000000000000000000000000000	00000000000000000000000000000000
00000000000000000000000000000000	00000000000000000000000000000000	00000000000000000000000000000000
00000000000000000000000000000000	00000000000000000000000000000000	00000000000000000000000000000000

Haystack uses the open source Google sparse hash data structure to keep the in-memory index small, since it only has 2 bits of overhead per entry.

Photo Store Write/Modify Operation

A write operation writes photos to the haystack and updates the in-memory index with the new entries. If the index already contains records with the same keys then this is a modification of existing photos and only the index records offsets are modified to reflect the location of the new images in the haystack store file. Photo store always assumes that if there are duplicate images (images with the same key) it is the one stored at a larger offset which is valid.

Photo Store Read Operation

The parameters passed to a read operation include haystack id and a photo key, size and cookie. The server performs a lookup in the in-memory index based on the photo key and retrieves the offset of the needle containing the requested image. If found it calls the haystack read operation to get the image. As noted above haystack delete operation doesn't update the haystack index file record. Therefore a freshly populated in-memory index can contain stale entries for the previously deleted photos. Read of a previously deleted photo will fail and the in-memory index is updated to reflect that by setting the offset of the particular image to zero.

Photo Store Delete Operation

After calling the haystack delete operation the in-memory index is updated by setting the image offset to zero signifying that the particular image has been deleted.

Compaction

Compaction is an online operation which reclaims the space used by the deleted and duplicate needles (needles with the same key). It creates a new haystack by copying needles

while skipping any duplicate or deleted entries. Once done it swaps the files and in-memory structures.

HTTP Server

The HTTP framework we use is the simple evhttp server provided with the open source libevent library. We use multiple threads, with each thread being able to serve a single HTTP request at a time. Because our workload is mostly I/O bound, the performance of the HTTP server is not critical.

Summary

Haystack presents a generic HTTP-based object store containing needles that map to stored opaque objects. Storing photos as needles in the haystack eliminates the metadata overhead by aggregating hundreds of thousands of images in a single haystack store file. This keeps the metadata overhead very small and allows us to store each needle's location in the store file in an in-memory index. This allows retrieval of an image's data in a minimal number of I/O operations, eliminating all unnecessary metadata overhead.

Peter Vajgel, Doug Beaver and Jason Sobel are infrastructure engineers at Facebook.

Updated about 8 months ago

[Serdar](#), [José María](#), [Tsu](#) and [218 others](#) like this.

[View all 29 comments.](#)



Weerapon Oh... Amazing complex...
January 2 at 10:00pm



Ryan Stenson Is there any plan for Facebook to accept, store, and display larger image sizes? I.e. 1600x1200 or bigger? This is the only thing holding me back from moving to Facebook to store all my photos online. You could swallow up Flickr, Picasa, and Smugmug in one shot!
January 5 at 8:51am



Martin Millnert Facebook Engineering: Have you at Facebook looked into Ceph? It would handle the storage and filesystem layers in your above layer representation. It is all open source and has an open API.

I am certain it could improve upon this and many other of your systems.

[... See More](#)

Fri at 3:10pm

EXHIBIT 14

facebook



Facebook helps you connect and share with the people in your life.

Terms of Use

Date of Last Revision: September 23, 2008

Welcome to Facebook, a social utility that connects you with the people around you. The Facebook service and network (collectively, "Facebook" or "the Service") are operated by Facebook, Inc. and its corporate affiliates (collectively, "us", "we" or "the Company"). By accessing or using our web site at www.facebook.com or the mobile version thereof (together the "Site") or by posting a Share Button on your site, you (the "User") signify that you have read, understand and agree to be bound by these Terms of Use ("Terms of Use" or "Agreement"), whether or not you are a registered member of Facebook. We reserve the right, at our sole discretion, to change, modify, add, or delete portions of these Terms of Use at any time without further notice. If we do this, we will post the changes to these Terms of Use on this page and will indicate at the top of this page the date these terms were last revised. Your continued use of the Service or the Site after any such changes constitutes your acceptance of the new Terms of Use. If you do not agree to abide by these or any future Terms of Use, do not use or access (or continue to use or access) the Service or the Site. It is your responsibility to regularly check the Site to determine if there have been changes to these Terms of Use and to review such changes.

PLEASE READ THESE TERMS OF USE CAREFULLY AS THEY CONTAIN IMPORTANT INFORMATION REGARDING YOUR LEGAL RIGHTS, REMEDIES AND OBLIGATIONS. THESE INCLUDE VARIOUS LIMITATIONS AND EXCLUSIONS, AND A DISPUTE RESOLUTION CLAUSE THAT GOVERNS HOW DISPUTES WILL BE RESOLVED.

Eligibility

Membership in the Service is void where prohibited. This Site is intended solely for users who are thirteen (13) years of age or older, and users of the Site under 18 who are currently in high school or college. Any registration by, use of or access to the Site by anyone under 13, or by anyone who is under 18 and not in high school or college, is unauthorized, unlicensed and in violation of these Terms of Use. By using the Service or the Site, you represent and warrant that you are 13 or older and in high school or college, or else that you are 18 or older, and that you agree to and to abide by all of the terms and conditions of this Agreement.

Registration Data; Account Security

In consideration of your use of the Site, you agree to (a) provide accurate, current and complete information about you as may be prompted by any registration forms on the Site ("Registration Data"); (b) maintain the security of your password and identification; (c) maintain and promptly update the Registration Data, and any other information you provide to Company, to keep it accurate, current and complete; and (d) be fully responsible for all use of your account and for any actions that take place using your account.

Plaintiff's Trial Exhibit

PTX-629

Case No. 08-CV-00862

All content on the Site and available through the Service, including designs, text, graphics, pictures, video, information, applications, software, music, sound and other files, and their selection and arrangement (the "Site Content"), are the proprietary property of the Company, its users or its licensors with all rights reserved. No Site Content may be modified, copied, distributed, framed, reproduced, republished, downloaded, scraped, displayed, posted, transmitted, or sold in any form or by any means, in whole or in part, without the Company's prior written permission, except that the foregoing does not apply to your own User Content (as defined below) that you legally post on the Site. Provided that you are eligible for use of the Site, you are granted a limited license to access and use the Site and the Site Content and to download or print a copy of any portion of the Site Content to which you have properly gained access solely for your personal, non-commercial use, provided that you keep all copyright or other proprietary notices intact. Except for your own User Content, you may not upload or republish Site Content on any Internet, Intranet or Extranet site or incorporate the information in any other database or compilation, and any other use of the Site Content is strictly prohibited. Such license is subject to these Terms of Use and does not permit use of any data mining, robots, scraping or similar data gathering or extraction methods. Any use of the Site or the Site Content other than as specifically authorized herein, without the prior written permission of Company, is strictly prohibited and will terminate the license granted herein. Such unauthorized use may also violate applicable laws including copyright and trademark laws and applicable communications regulations and statutes. Unless explicitly stated herein, nothing in these Terms of Use shall be construed as conferring any license to intellectual property rights, whether by estoppel, implication or otherwise. This license is revocable at any time without notice and with or without cause.

Trademarks

32665, FACEBOOK, THE FACEBOOK, FACEBOOKHIGH, FBOOK, POKE, THE WALL and other Company graphics, logos, designs, page headers, button icons, scripts and service names are registered trademarks, trademarks or trade dress of Company in the U.S. and/or other countries. Company's trademarks and trade dress may not be used, including as part of trademarks and/or as part of domain names, in connection with any product or service in any manner that is likely to cause confusion and may not be copied, imitated, or used, in whole or in part, without the prior written permission of the Company.

User Conduct

You understand that except for advertising programs offered by us on the Site (e.g., Facebook Flyers, Facebook Marketplace), the Service and the Site are available for your personal, non-commercial use only. You represent, warrant and agree that no materials of any kind submitted through your account or otherwise posted, transmitted, or shared by you on or through the Service will violate or infringe upon the rights of any third party, including copyright, trademark, privacy, publicity or other personal or proprietary rights; or contain libelous, defamatory or otherwise unlawful material.

In addition, you agree not to use the Service or the Site to:

- harvest or collect email addresses or other contact information of other users from the Service or the Site by electronic or other means for the purposes of sending unsolicited emails or other unsolicited communications;
- use the Service or the Site in any unlawful manner or in any other manner that could damage, disable, overburden or impair the Site;
- use automated scripts to collect information from or otherwise interact with the Service or the Site;
- upload, post, transmit, share, store or otherwise make available any content that we deem to be harmful, threatening, unlawful, defamatory, infringing, abusive, inflammatory, harassing, vulgar, obscene, fraudulent, invasive of privacy or publicity rights, hateful, or racially, ethnically or otherwise objectionable;
- upload, post, transmit, share, store or otherwise make available any videos other than those of a personal

- nature that: (i) are of you or your friends, (ii) are false or not by you or your friends, or (iii) are original and animation created by you or your friends;
- . register for more than one User account, register for a User account on behalf of an individual other than yourself, or register for a User account on behalf of any group or entity;
 - . impersonate any person or entity, or falsely state or otherwise misrepresent yourself, your age or your affiliation with any person or entity;
 - . upload, post, transmit, share or otherwise make available any unsolicited or unauthorized advertising, solicitations, promotional materials, "junk mail," "spam," "chain letters," "pyramid schemes," or any other form of solicitation;
 - . upload, post, transmit, share, store or otherwise make publicly available on the Site any private information of any third party, including, addresses, phone numbers, email addresses, Social Security numbers and credit card numbers;
 - . solicit personal information from anyone under 18 or solicit passwords or personally identifying information for commercial or unlawful purposes;
 - . upload, post, transmit, share or otherwise make available any material that contains software viruses or any other computer code, files or programs designed to interrupt, destroy or limit the functionality of any computer software or hardware or telecommunications equipment;
 - . intimidate or harass another;
 - . upload, post, transmit, share, store or otherwise make available content that would constitute, encourage or provide instructions for a criminal offense, violate the rights of any party, or that would otherwise create liability or violate any local, state, national or international law;
 - . use or attempt to use another's account, service or system without authorization from the Company, or create a false identity on the Service or the Site.
 - . upload, post, transmit, share, store or otherwise make available content that, in the sole judgment of Company, is objectionable or which restricts or inhibits any other person from using or enjoying the Site, or which may expose Company or its users to any harm or liability of any type.

Without limiting any of the foregoing, you also agree to abide by our Facebook Code of Conduct that provides further information regarding the authorized conduct of users on Facebook.

User Content Posted on the Site

You are solely responsible for the photos, profiles (including your name, image, and likeness), messages, notes, text, information, music, video, advertisements, listings, and other content that you upload, publish or display (hereinafter, "post") on or through the Service or the Site, or transmit to or share with other users (collectively the "User Content"). You may not post, transmit, or share User Content on the Site or Service that you did not create or that you do not have permission to post. You understand and agree that the Company may, but is not obligated to, review the Site and may delete or remove (without notice) any Site Content or User Content in its sole discretion, for any reason or no reason, including User Content that in the sole judgment of the Company violates this Agreement or the Facebook Code of Conduct, or which might be offensive, illegal, or that might violate the rights, harm, or threaten the safety of users or others. You are solely responsible at your sole cost and expense for creating backup copies and replacing any User Content you post or store on the Site or provide to the Company.

When you post User Content to the Site, you authorize and direct us to make such copies thereof as we deem necessary in order to facilitate the posting and storage of the User Content on the Site. By posting User Content to any part of the Site, you automatically grant, and you represent and warrant that you have the right to grant, to the Company an irrevocable, perpetual, non-exclusive, transferable, fully paid, worldwide license (with the right to sublicense) to use, copy, publicly perform, publicly display, reformat, translate, excerpt (in whole or in part) and distribute such User Content for any purpose, commercial, advertising, or otherwise, on or in connection with the Site or the promotion thereof, to prepare derivative works of, or incorporate into other works, such User Content, and to grant and authorize sublicenses of the foregoing. You may remove your User Content from the Site at any time. If you choose to remove your User Content, the license granted above will automatically expire, however you acknowledge that the Company may retain archived copies of your User Content. Facebook does not assert any ownership over your User Content; rather, as between us and you, subject to the rights granted to us

in these Terms, you retain full ownership of all of your content and any intellectual property rights or other proprietary rights associated with your User Content.

Facebook Mobile Services

The Service includes certain services that are available via your mobile phone, including (i) the ability to upload content to Facebook via your mobile phone (Mobile Uploads), (ii) the ability to receive and reply to Facebook messages, to poke and receive pokes and to write wall posts using text messaging (Mobile Texts), (iii) the ability to browse Facebook from your mobile phone (Mobile Web), and (iv) the ability to access certain Facebook features through a mobile application you have downloaded and installed on your mobile phone (Mobile Client) (collectively the "Mobile Services"). We do not charge for these Mobile Services. However, your carrier's normal messaging, data and other rates and fees will still apply. You should check with your carrier to find out what plans are available and how much they cost. In addition, downloading, installing, or using certain Mobile Services may be prohibited or restricted by your carrier, and not all Mobile Services may work with all carriers or devices. Therefore, you should check with your carrier to find out if the Mobile Services are available for your mobile devices, and what restrictions, if any, may be applicable to your use of such Mobile Services. By using the Mobile Services, you agree that we may communicate with you regarding Facebook and other entities by SMS, MMS, text message or other electronic means to your mobile device and that certain information about your usage of the Mobile Services may be communicated to us. In the event you change or deactivate your mobile telephone number, you agree to promptly update your Facebook account information to ensure that your messages are not sent to the person that acquires your old number.

Copyright Complaints

We respect the intellectual property rights of others and we prohibit users from uploading, posting or otherwise transmitting on the Facebook website or service any materials that violate another party's intellectual property rights. When we receive proper Notification of Alleged Copyright Infringement as described in our Facebook Copyright Policy, we promptly remove or disable access to the allegedly infringing material and terminate the accounts of repeat infringers as described herein in accordance with the Digital Millennium Copyright Act. If you believe that any material on the Site infringes upon any copyright which you own or control, you may send a written notification of such infringement to our Designated Agent. Please see our Facebook Copyright Policy for more information on how to report infringement of your copyright.

Repeat Infringer Policy

In accordance with the Digital Millennium Copyright Act (DMCA) and other applicable law, Company has adopted a policy of terminating, in appropriate circumstances and at Company's sole discretion, members who are deemed to be repeat infringers. Company may also at its sole discretion limit access to the Site and/or terminate the memberships of any users who infringe any intellectual property rights of others, whether or not there is any repeat infringement.

Third Party Websites and Content

The Site contains (or you may be sent through the Site or the Service) links to other web sites ("Third Party Sites") as well as articles, photographs, text, graphics, pictures, designs, music, sound, video, information, applications, software and other content or items belonging to or originating from third parties (the "Third Party Applications, Software or Content"). Such Third Party Sites and Third Party Applications, Software or Content are not investigated, monitored or checked for accuracy, appropriateness, or completeness by us, and we are not responsible for any Third Party Sites accessed through the Site or any Third Party Applications, Software or Content posted on, available through or installed from the Site, including the content, accuracy, offensiveness,

opinions, reliability, privacy practices or policies of the Third Party Applications, Software or Content. Inclusion of, linking to or permitting the use or installation of any Third Party Site or any Third Party Applications, Software or Content does not imply approval or endorsement thereof by us. If you decide to leave the Site and access the Third Party Sites or to use or install any Third Party Applications, Software or Content, you do so at your own risk and you should be aware that our terms and policies no longer govern. You should review the applicable terms and policies, including privacy and data gathering practices, of any site to which you navigate from the Site or relating to any applications you use or install from the site.

Share Service

Company offers a feature whereby users of the Site can share with others or post to their own member profile, videos, articles and other Third Party Applications, Software or Content from, and/or links to, Third Party Sites through the Service (the "Share Service"). You acknowledge and agree that your use of the Share Services and all links, User Content or Third Party Applications, Software or Content shared through the Share Service is subject to, and will fully comply with the user conduct rules set forth above and the other terms and conditions set forth in these Terms of Use.

Use of Share Links by Online Content Providers

Subject to the terms and conditions of these Terms of Use, Third Party Sites that meet the requirements set forth below may place a Share Link (as described below), in the form approved by Company, on pages of their web sites to facilitate use of the Share Service. A Third Party Site that posts a Share Link on its web site is referred to herein as an "Online Content Provider" and shall abide and be subject to the applicable sections of these Terms of Use. A "Share Link" is a button and/or a text link appearing on an Online Content Provider's web page that, upon being clicked by a user, enables us to launch a sharing mechanism through which users can share with others or post to their own member profile, links and content from that page.

In the event that the Share Link is a button that contains any icons or other graphic images, trademarks or other proprietary materials of the Company, Online Content Provider is granted permission to use such images, trademarks or other materials solely for the purpose of placing the Share Link on Online Content Provider's site and solely in the current form provided by the Company. In the event that the Share Link is a text link, it must include the word "Facebook" as part of the link. The rights granted in this paragraph may be revoked by Company at any time with or without cause in its sole discretion, and upon such termination, Online Content Provider agrees to immediately remove all Share Links from its site.

In order for an Online Content Provider to include a Share Link on its pages, the Third Party Site must not contain any web content that if shared or posted by a user would be a violation of the user conduct rules set forth above. Without limiting the forgoing, Online Content Provider agrees not to post a Share Link on any web site that contains, and represents and warrants that such web site does not and will not contain, any content that is infringing, harmful, threatening, unlawful, defamatory, abusive, inflammatory, harassing, vulgar, obscene, lewd, fraudulent, or invasive of privacy or publicity rights or that may expose Company or its users to any harm or liability of any type. Upon including of a Share Link, Online Content Provider agrees to defend, indemnify and hold the Company, its subsidiaries and affiliates, and each of their directors, officers, agents, contractors, partners and employees, harmless from and against any loss, liability, claim, demand, damages, costs and expenses, including reasonable attorney's fees, arising out of or in connection with such Share Link, any links, content or other items or materials which may be shared or posted through such Share Link, or any breach or alleged breach of the foregoing representations and warranties.

By including a Share Link, Online Content Provider automatically grants, and represents and warrants that it has the right to grant, to the Company an irrevocable, perpetual, non-exclusive, transferable, fully paid, worldwide license (with the right to sublicense) to use the Share Service in order to link to, use, copy, publish, stream, publicly perform, publicly display, reformat, translate, excerpt (in whole or in part), summarize, and distribute the content, links and other materials of any kind residing on any web pages on which Online Content Provider places the Share Link.

Facebook Marketplace

All listings posted on or through the Facebook Marketplace service and all transactions conducted in connection therewith are subject to and governed by the Facebook Marketplace Guidelines (the "Guidelines") as well as these Terms of Use. When you use Facebook Marketplace in any manner you are agreeing to abide by and be subject to the Guidelines and the other applicable rules set forth in these Terms of Use. The Guidelines are subject to change without prior notice at any time, in the Company's sole discretion, so you should review the Guidelines each time you use Facebook Marketplace. Parties to a transaction are solely responsible for all interactions with each other, for arranging for payment and the exchange of the goods or services purchased if applicable, and for the results and performance of any transaction or relationship entered into through Facebook Marketplace. You acknowledge that Facebook is not responsible or liable for any action or inaction of any party to a transaction, for any failure to perform, to pay any amounts due, or to deliver any merchandise or services as promised, or for any other aspect of the transaction. Any fees or payments collected by Facebook applicable to Facebook Marketplace are set forth on the Site, and all terms and conditions applicable to such fees are set forth in the Facebook Terms of Sale. However, please note that the Terms of Sale do not apply to your purchases of products or services from third parties through Facebook Marketplace, as those transactions are strictly between you and the other party to the transaction. ALL USE OF FACEBOOK MARKETPLACE IS PROVIDED "AS IS" AND AT YOUR OWN RISK.

Facebook Platform Applications

The Facebook Platform is a set of APIs and services provided by Facebook that enable third-party developers ("Platform Developers") to create websites and applications that retrieve data made available by Facebook and its users and/or that retrieve authorized data from third-party sites for use on the Facebook Site ("Platform Applications")

Platform Developers may use the Facebook Platform and create Platform Applications only in accordance with the terms and conditions set forth in an agreement entered into between Facebook and the Platform Developer ("Developer Terms"). Our standard Developer Terms consist of the Facebook Developer Terms of Service and the related Facebook Platform Application Guidelines. We may from time to time enter into separate agreements with certain third party Platform Developers that contain different or additional terms, provided however, that each such separate agreement will require the third party Platform Developer to only display your information in accordance with your Facebook privacy settings. The standard Developer Terms are subject to change without prior notice at any time, in the Company's sole discretion, so you should review these documents from time to time. ALL USE OF THE FACEBOOK PLATFORM IS PROVIDED "AS IS" AND AT YOUR OWN RISK.

Users who install Platform Applications must agree to the terms and conditions set forth in the Platform Application Terms of Use ("Application User Terms") and in these Terms of Use. The Application User Terms are subject to change without prior notice at any time, in the Company's sole discretion, so you should review these terms each time you install an application and from time to time. Platform Developers may require you to agree to their own terms of service, privacy policies and/or other policies as a condition of using Platform Applications. Platform Applications have not been approved, endorsed, or reviewed in any manner by Facebook, and we are not responsible for your use of or inability to use any Platform Applications, including the content, accuracy, or reliability of such Application and the privacy practices or other policies of Developers. YOU USE SUCH PLATFORM APPLICATIONS AT YOUR OWN RISK.

If you, your friends or members of your network use any Platform Applications, such Platform Applications may access and share certain information about you with others in accordance with your privacy settings as further described in our Privacy Policy. Platform Developers are required to agree to restrictions on access, storage and use of such information. However, while we have undertaken contractual and technical steps to restrict possible misuse of such information by such Platform Developers, we do not screen or approve Developers, and we cannot and do not guarantee that all Platform Developers will abide by such restrictions and agreements. Certain actions you take through the Platform Applications may be displayed to your friends in your profile, mini-feed and news

feed, and you may opt-out of displaying ads on the Facebook Platform on the [application settings page](#). Please report any suspected misuse of information through the Facebook Platform as described in our [Privacy Policy](#).

You may set your preferences for your news feed and mini-feed [here](#).

Facebook Connect

Facebook Connect ("Connect") enables participating third party websites to work just like Facebook Platform applications. Once you allow a third party website to connect with Facebook, you will be able to use your Facebook login information to log into that website. The third party website will be able to: generate and publish news feed and other stories about actions you take on their website; access Facebook information related to you (including your profile information, friends, and privacy settings) so you can use your Facebook information on the third party site; and allow you to interact with your friends on the website. In order to make Connect possible, you agree to allow Facebook to check your Facebook cookies when you are visiting participating third party websites, and allow Facebook to receive information concerning the actions you take on those third party websites. In addition, once you allow a participating third party website to connect with Facebook, you agree to allow Facebook and such third party website to generate and publish news feed and other stories about actions you take on the website without any additional permission. In the event you no longer want the third party website to publish stories about you, you can always disable this feature by changing your application settings.

When your friends connect their Facebook account with a participating third party website, Facebook Connect will enable them to find Facebook friends that may also be users of that third party website, and invite them to use Connect as well. If you do not want your friends to be able to invite you, you may change your privacy settings to disable this feature.

Connect also gives you the ability to permit Facebook and participating third party websites to generate and publish news feed and other stories about actions you have taken on such websites, even if you have not gone through the Connect process. In such cases, you will be asked whether you want to publish the story on Facebook, and will be given the opportunity to save your answer for future stories. In the event you want to change your settings for that website, visit your application settings.

Like Platform Applications, third party websites that participate in Connect are required, among other things, to protect your privacy consistent with your Facebook privacy settings and Facebook's privacy policy.

Facebook Pages

Facebook Pages are special profiles used solely for commercial, political, or charitable purposes. You may not set up a Facebook Page on behalf of another individual or entity unless you are authorized to do so. This includes fan Facebook Pages, as well as Facebook Pages to support or criticize another individual or entity.

FACEBOOK DOES NOT PRE-SCREEN OR APPROVE FACEBOOK PAGES, AND CANNOT GUARANTEE THAT A FACEBOOK PAGE WAS ACTUALLY CREATED AND IS BEING OPERATED BY THE INDIVIDUAL OR ENTITY THAT IS THE SUBJECT OF A FACEBOOK PAGE. NOR IS FACEBOOK RESPONSIBLE FOR THE CONTENT OF ANY FACEBOOK PAGE, OR ANY TRANSACTIONS ENTERED INTO OR OTHER ACTIONS TAKEN ON OR IN CONNECTION WITH ANY FACEBOOK PAGE, INCLUDING HOW THE OWNER OF THE FACEBOOK PAGE COLLECTS, HANDLES, USES AND / OR SHARES ANY PERSONAL INFORMATION IT MAY COLLECT FROM USERS (PLEASE REVIEW THE FACEBOOK PRIVACY POLICY IF YOU HAVE ANY QUESTIONS OR CONCERNS REGARDING THE USE OR SHARING OF YOUR PERSONAL INFORMATION). YOU SHOULD BE CAREFUL BEFORE PROVIDING ANY PERSONAL INFORMATION TO OR ENTERING INTO ANY TRANSACTION IN CONNECTION WITH A FACEBOOK PAGE.

In addition to these Terms of Use, Facebook Pages are subject to and governed by certain [Additional Terms Applicable to Facebook Pages](#). The [Additional Terms Applicable to Facebook Pages](#) control in the event of any conflict between them and the Terms of Use.

Terms of Sale

Please refer to our Terms of Sale for the terms, conditions and policies applicable to your purchase of products or services from Company. By ordering products or services from Company through the Site, you agree to be bound by and accept the Terms of Sale. The Terms of Sale are subject to change without prior notice at any time, in Company's sole discretion so you should review the Terms of Sale each time you make a purchase.

User Disputes

You are solely responsible for your interactions with other Facebook users. We reserve the right, but have no obligation, to monitor disputes between you and other users.

Privacy

We care about the privacy of our users. Click [here](#) to view the Facebook's Privacy Policy. By using the Site or the Service, you are consenting to have your personal data transferred to and processed in the United States.

Disclaimers

The Company is not responsible or liable in any manner for any User Content or Third Party Applications, Software or Content posted on the Site or in connection with the Service, whether posted or caused by users of the Site, by Facebook, by third parties or by any of the equipment or programming associated with or utilized in the Site or the Service. Although we provide rules for user conduct and postings, we do not control and are not responsible for what users post, transmit or share on the Site and are not responsible for any offensive, inappropriate, obscene, unlawful or otherwise objectionable content you may encounter on the Site or in connection with any User Content or Third Party Applications, Software or Content. The Company is not responsible for the conduct, whether online or offline, of any user of the Site or Service.

The Site and the Service may be temporarily unavailable from time to time for maintenance or other reasons. Company assumes no responsibility for any error, omission, interruption, deletion, defect, delay in operation or transmission, communications line failure, theft or destruction or unauthorized access to, or alteration of, User communications. The Company is not responsible for any technical malfunction or other problems of any telephone network or service, computer systems, servers or providers, computer or mobile phone equipment, software, failure of email or players on account of technical problems or traffic congestion on the Internet or at any Site or combination thereof, including injury or damage to User's or to any other person's computer, mobile phone, or other hardware or software, related to or resulting from using or downloading materials in connection with the Web and/or in connection with the Service, including any Mobile Client software. Under no circumstances will the Company be responsible for any loss or damage, including any loss or damage to any User Content or personal injury or death, resulting from anyone's use of the Site or the Service, any User Content or Third Party Applications, Software or Content posted on or through the Site or the Service or transmitted to Users, or any interactions between users of the Site, whether online or offline.

THE SITE, THE SERVICE (INCLUDING THE MOBILE SERVICES, THE SHARE SERVICE AND THE MARKETPLACE SERVICE), ANY PLATFORM APPLICATIONS AND THE SITE CONTENT ARE PROVIDED "AS-IS" AND THE COMPANY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES, WHETHER EXPRESS OR IMPLIED, INCLUDING IMPLIED WARRANTIES OF TITLE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE COMPANY CANNOT GUARANTEE AND DOES NOT PROMISE ANY SPECIFIC RESULTS FROM USE OF THE SITE AND/OR THE SERVICE AND/OR ANY PLATFORM APPLICATIONS. COMPANY DOES NOT REPRESENT OR WARRANT THAT SOFTWARE, CONTENT OR MATERIALS ON THE SITE, THE SERVICE OR ANY PLATFORM APPLICATIONS ARE ACCURATE, COMPLETE, RELIABLE, CURRENT OR ERROR-FREE OR THAT THE

SITE OR SERVICE ITS SERVERS, OR THROUGH ANY PLATFORM APPLICATIONS OR OTHER MATERIALS OR OTHER HARMFUL COMPONENTS. THEREFORE, YOU SHOULD EXERCISE CAUTION IN THE USE AND DOWNLOADING OF ANY SUCH SOFTWARE, CONTENT OR MATERIALS AND USE INDUSTRY-RECOGNIZED SOFTWARE TO DETECT AND DISINFECT VIRUSES. WITHOUT LIMITING THE FOREGOING, YOU UNDERSTAND AND AGREE THAT YOU DOWNLOAD OR OTHERWISE OBTAIN CONTENT, MATERIAL, DATA OR SOFTWARE (INCLUDING ANY MOBILE CLIENT) FROM OR THROUGH THE SERVICE AND ANY PLATFORM APPLICATIONS AT YOUR OWN DISCRETION AND RISK AND THAT YOU WILL BE SOLELY RESPONSIBLE FOR YOUR USE THEREOF AND ANY DAMAGES TO YOUR MOBILE DEVICE OR COMPUTER SYSTEM, LOSS OF DATA OR OTHER HARM OF ANY KIND THAT MAY RESULT.

The Company reserves the right to change any and all content, software and other items used or contained in the Site and any Services and Platform Applications offered through the Site at any time without notice. Reference to any products, services, processes or other information, by trade name, trademark, manufacturer, supplier or otherwise does not constitute or imply endorsement, sponsorship or recommendation thereof, or any affiliation therewith, by Company.

Limitation on Liability

IN NO EVENT WILL COMPANY OR ITS DIRECTORS, EMPLOYEES OR AGENTS BE LIABLE TO YOU OR ANY THIRD PERSON FOR ANY INDIRECT, CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, SPECIAL OR PUNITIVE DAMAGES, INCLUDING FOR ANY LOST PROFITS OR LOST DATA ARISING FROM YOUR USE OF THE SITE OR THE SERVICE, ANY PLATFORM APPLICATIONS OR ANY OF THE SITE CONTENT OR OTHER MATERIALS ON, ACCESSED THROUGH OR DOWNLOADED FROM THE SITE, EVEN IF THE COMPANY IS AWARE OR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, THE COMPANY'S LIABILITY TO YOU FOR ANY CAUSE WHATSOEVER, AND REGARDLESS OF THE FORM OF THE ACTION, WILL AT ALL TIMES BE LIMITED TO THE AMOUNT PAID, IF ANY, BY YOU TO COMPANY FOR THE SERVICE DURING THE TERM OF MEMBERSHIP, BUT IN NO CASE WILL THE COMPANY'S LIABILITY TO YOU EXCEED \$1000. YOU ACKNOWLEDGE THAT IF NO FEES ARE PAID TO COMPANY FOR THE SERVICE, YOU SHALL BE LIMITED TO INJUNCTIVE RELIEF ONLY, UNLESS OTHERWISE PERMITTED BY LAW, AND SHALL NOT BE ENTITLED TO DAMAGES OF ANY KIND FROM COMPANY, REGARDLESS OF THE CAUSE OF ACTION.

CERTAIN STATE LAWS DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR THE EXCLUSION OR LIMITATION OF CERTAIN DAMAGES. IF THESE LAWS APPLY TO YOU, SOME OR ALL OF THE ABOVE DISCLAIMERS, EXCLUSIONS OR LIMITATIONS MAY NOT APPLY TO YOU, AND YOU MAY HAVE ADDITIONAL RIGHTS.

Termination

The Company may terminate your membership, delete your profile and any content or information that you have posted on the Site or through any Platform Application and/or prohibit you from using or accessing the Service or the Site or any Platform Application (or any portion, aspect or feature of the Service or the Site or any Platform Application) for any reason, or no reason, at any time in its sole discretion, with or without notice, including if it believes that you are under 13, or under 18 and not in high school or college. When we are notified that a user has died, we will generally, but are not obligated to, keep the user's account active under a special memorialized status for a period of time determined by us to allow other users to post and view comments.

Governing Law; Venue and Jurisdiction

By visiting or using the Site and/or the Service, you agree that the laws of the State of Delaware, without regard to principles of conflict of laws, will govern these Terms of Use and any dispute of any sort that might arise between you and the Company or any of our affiliates. With respect to any disputes or claims not subject to arbitration (as set forth below), you agree not to commence or prosecute any action in connection therewith other

than in the state and federal courts of California and you hereby consent to the jurisdiction and personal jurisdiction and forum non conveniens with respect to, venue and jurisdiction in the state and federal courts of California.

Arbitration

YOU AND COMPANY AGREE THAT, EXCEPT AS MAY OTHERWISE BE PROVIDED IN REGARD TO SPECIFIC SERVICES ON THE SITE IN ANY SPECIFIC TERMS APPLICABLE TO THOSE SERVICES, THE SOLE AND EXCLUSIVE FORUM AND REMEDY FOR ANY AND ALL DISPUTES AND CLAIMS RELATING IN ANY WAY TO OR ARISING OUT OF THESE TERMS OF USE, THE SITE AND/OR THE SERVICE (INCLUDING YOUR VISIT TO OR USE OF THE SITE AND/OR THE SERVICE) SHALL BE FINAL AND BINDING ARBITRATION, except that: (a) to the extent that either of us has in any manner infringed upon or violated or threatened to infringe upon or violate the other party's patent, copyright, trademark or trade secret rights, or you have otherwise violated any of the user conduct rules set forth above or in the Code of Conduct then the parties acknowledge that arbitration is not an adequate remedy at law and that injunctive or other appropriate relief may be sought; and (b) no disputes or claims relating to any transactions you enter into with a third party through the Facebook Marketplace may be arbitrated.

Arbitration under this Agreement shall be conducted by the American Arbitration Association (the "AAA") under its Commercial Arbitration Rules and, in the case of consumer disputes, the AAA's Supplementary Procedures for Consumer Related Disputes (the "AAA Consumer Rules") (collectively the "AAA Rules"). The location of the arbitration and the allocation of costs and fees for such arbitration shall be determined in accordance with such AAA Rules and shall be subject to the limitations provided for in the AAA Consumer Rules (for consumer disputes). If such costs are determined to be excessive in a consumer dispute, the Company will be responsible for paying all arbitration fees and arbitrator compensation in excess of what is deemed reasonable. The arbitrator's award shall be binding and may be entered as a judgment in any court of competent jurisdiction.

To the fullest extent permitted by applicable law, NO ARBITRATION OR CLAIM UNDER THESE TERMS OF USE SHALL BE JOINED TO ANY OTHER ARBITRATION OR CLAIM, INCLUDING ANY ARBITRATION OR CLAIM INVOLVING ANY OTHER CURRENT OR FORMER USER OF THE SERVICE, AND NO CLASS ARBITRATION PROCEEDINGS SHALL BE PERMITTED. In no event shall any claim, action or proceeding by you related in any way to the Site and/or the Service (including your visit to or use of the Site and/or the Service) be instituted more than three (3) years after the cause of action arose.

Indemnity

You agree to indemnify and hold the Company, its subsidiaries and affiliates, and each of their directors, officers, agents, contractors, partners and employees, harmless from and against any loss, liability, claim, demand, damages, costs and expenses, including reasonable attorney's fees, arising out of or in connection with any User Content, any Third Party Applications, Software or Content you post or share on or through the Site (including through the Share Service), your use of the Service or the Site, your conduct in connection with the Service or the Site or with other users of the Service or the Site, or any violation of this Agreement or of any law or the rights of any third party.

Submissions

You acknowledge and agree that any questions, comments, suggestions, ideas, feedback or other information about the Site or the Service ("Submissions"), provided by you to Company are non-confidential and shall become the sole property of Company. Company shall own exclusive rights, including all intellectual property rights, and shall be entitled to the unrestricted use and dissemination of these Submissions for any purpose, commercial or otherwise, without acknowledgment or compensation to you.

Definitions and Constructions

Unless otherwise specified, the terms "includes", "including", "e.g.", "for example", and other similar terms are deemed to include the term "without limitation" immediately thereafter. Terms used in these Terms with the initial letter(s) capitalized will have the meaning attributed to them in these Terms.

Other

These Terms of Use constitute the entire agreement between you and Company regarding the use of the Site and/or the Service, superseding any prior agreements between you and Company relating to your use of the Site or the Service. The failure of Company to exercise or enforce any right or provision of these Terms of Use shall not constitute a waiver of such right or provision in that or any other instance. If any provision of this Agreement is held invalid, the remainder of this Agreement shall continue in full force and effect. If any provision of these Terms of Use shall be deemed unlawful, void or for any reason unenforceable, then that provision shall be deemed severable from these Terms of Use and shall not affect the validity and enforceability of any remaining provisions.

Questions

Please visit our [Help page](#) or these links for more information.

- [Facebook Copyright Policy](#)
- [Facebook Terms of Sale](#)
- [Facebook Marketplace Guidelines](#)
- [Facebook Platform Application Guidelines](#)
- [Platform Application Terms of Use](#)
- [Facebook Developer Terms of Service](#)

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EXHIBIT 13

Remember Me[Forgot your password?](#)

Terms of Use

Date of Last Revision: September 23, 2008

Welcome to Facebook, a social utility that connects you with the people around you. The Facebook service and network (collectively, "Facebook" or "the Service") are operated by Facebook, Inc. and its corporate affiliates (collectively, "us", "we" or "the Company"). By accessing or using our web site at www.facebook.com or the mobile version thereof (together the "Site") or by posting a Share Button on your site, you (the "User") signify that you have read, understand and agree to be bound by these Terms of Use ("Terms of Use" or "Agreement"), whether or not you are a registered member of Facebook. We reserve the right, at our sole discretion, to change, modify, add, or delete portions of these Terms of Use at any time without further notice. If we do this, we will post the changes to these Terms of Use on this page and will indicate at the top of this page the date these terms were last revised. Your continued use of the Service or the Site after any such changes constitutes your acceptance of the new Terms of Use. If you do not agree to abide by these or any future Terms of Use, do not use or access (or continue to use or access) the Service or the Site. It is your responsibility to regularly check the Site to determine if there have been changes to these Terms of Use and to review such changes.

PLEASE READ THESE TERMS OF USE CAREFULLY AS THEY CONTAIN IMPORTANT INFORMATION REGARDING YOUR LEGAL RIGHTS, REMEDIES AND OBLIGATIONS. THESE INCLUDE VARIOUS LIMITATIONS AND EXCLUSIONS, AND A DISPUTE RESOLUTION CLAUSE THAT GOVERNS HOW DISPUTES WILL BE RESOLVED.

Eligibility

Membership in the Service is void where prohibited. This Site is intended solely for users who are thirteen (13) years of age or older, and users of the Site under 18 who are currently in high school or college. Any registration by, use of or access to the Site by anyone under 13, or by anyone who is under 18 and not in high school or college, is unauthorized, unlicensed and in violation of these Terms of Use. By using the Service or the Site, you represent and warrant that you are 13 or older and in high school or college, or else that you are 18 or older, and that you agree to and to abide by all of the terms and conditions of this Agreement.

Registration Data; Account Security

In consideration of your use of the Site, you agree to (a) provide accurate, current and complete information about you as may be prompted by any registration forms on the Site ("Registration Data"); (b) maintain the security of your password and identification; (c) maintain and promptly update the Registration Data, and any other information you provide to Company, to keep it accurate, current and complete; and (d) be fully responsible for all use of your account and for any actions that take place using your account.

Proprietary Rights in Site Content; Limited License

All content on the Site and available through the Service, including designs, text, graphics, pictures, video, information, applications, software, music, sound and other files, and their selection and arrangement (the "Site Content"), are the proprietary property of the Company, its users or its licensors with all rights reserved. No Site Content may be modified, copied, distributed, framed, reproduced, republished, downloaded, scraped, displayed, posted, transmitted, or sold in any form or by any means, in whole or in part, without the Company's prior written permission, except that the foregoing does not apply to your own User Content (as defined below) that you legally post on the Site. Provided that you are eligible for use of the Site, you are granted a limited license to access and use the Site and the Site Content and to download or print a copy of any portion of the Site Content to which you have properly gained access solely for your personal, non-commercial use, provided that you keep all copyright or other proprietary notices intact. Except for your own User Content, you may not upload or republish Site Content on any Internet, Intranet or Extranet site or incorporate the information in any other database or compilation, and any other use of the Site Content is strictly prohibited. Such license is subject to these Terms of Use and does not permit use of any data mining, robots, scraping or similar data gathering or extraction methods. Any use of the Site or the Site Content other than as specifically authorized herein, without the prior written permission of Company, is strictly prohibited and will terminate the license granted herein. Such unauthorized use may also violate applicable laws including copyright and trademark laws and applicable communications regulations and statutes. Unless explicitly stated herein, nothing in these Terms of Use shall be construed as conferring any license to intellectual property rights, whether by estoppel, implication or otherwise. This license is revocable at any time without notice and with or without cause.

Trademarks

32665, FACEBOOK, THE FACEBOOK, FACEBOOKHIGH, FBOOK, POKE, THE WALL and other Company graphics, logos, designs, page headers, button icons, scripts and service names are registered trademarks, trademarks or trade dress of Company in the U.S. and/or other countries. Company's trademarks and trade dress may not be used, including as part of trademarks and/or as part of domain names, in connection with any product or service in any manner that is likely to cause confusion and may not be copied, imitated, or used, in whole or in part, without the prior written permission of the Company.

User Conduct

You understand that except for advertising programs offered by us on the Site (e.g., Facebook Flyers, Facebook

Plaintiff's Trial Exhibit

PTX-628

Case No. 08-CV-00862

Marketplace), the Service and the Site are available for your personal, non-commercial use only. You represent, warrant and agree that no materials of any kind submitted through your account or otherwise posted, transmitted, or shared by you on or through the Service will violate or infringe upon the rights of any third party, including copyright, trademark, privacy, publicity or other personal or proprietary rights; or contain libelous, defamatory or otherwise unlawful material.

In addition, you agree not to use the Service or the Site to:

- harvest or collect email addresses or other contact information of other users from the Service or the Site by electronic or other means for the purposes of sending unsolicited emails or other unsolicited communications;
- use the Service or the Site in any unlawful manner or in any other manner that could damage, disable, overburden or impair the Site;
- use automated scripts to collect information from or otherwise interact with the Service or the Site;
- upload, post, transmit, share, store or otherwise make available any content that we deem to be harmful, threatening, unlawful, defamatory, infringing, abusive, inflammatory, harassing, vulgar, obscene, fraudulent, invasive of privacy or publicity rights, hateful, or racially, ethnically or otherwise objectionable;
- upload, post, transmit, share, store or otherwise make available any videos other than those of a personal nature that: (i) are of you or your friends, (ii) are taken by you or your friends, or (iii) are original art or animation created by you or your friends;
- register for more than one User account, register for a User account on behalf of an individual other than yourself, or register for a User account on behalf of any group or entity;
- impersonate any person or entity, or falsely state or otherwise misrepresent yourself, your age or your affiliation with any person or entity;
- upload, post, transmit, share or otherwise make available any unsolicited or unauthorized advertising, solicitations, promotional materials, "junk mail," "spam," "chain letters," "pyramid schemes," or any other form of solicitation;
- upload, post, transmit, share, store or otherwise make publicly available on the Site any private information of any third party, including, addresses, phone numbers, email addresses, Social Security numbers and credit card numbers;
- solicit personal information from anyone under 18 or solicit passwords or personally identifying information for commercial or unlawful purposes;
- upload, post, transmit, share or otherwise make available any material that contains software viruses or any other computer code, files or programs designed to interrupt, destroy or limit the functionality of any computer software or hardware or telecommunications equipment;
- intimidate or harass another;
- upload, post, transmit, share, store or otherwise make available content that would constitute, encourage or provide instructions for a criminal offense, violate the rights of any party, or that would otherwise create liability or violate any local, state, national or international law;
- use or attempt to use another's account, service or system without authorization from the Company, or create a false identity on the Service or the Site.
- upload, post, transmit, share, store or otherwise make available content that, in the sole judgment of Company, is objectionable or which restricts or inhibits any other person from using or enjoying the Site, or which may expose Company or its users to any harm or liability of any type.

Without limiting any of the foregoing, you also agree to abide by our [Facebook Code of Conduct](#) that provides further information regarding the authorized conduct of users on Facebook.

User Content Posted on the Site

You are solely responsible for the photos, profiles (including your name, image, and likeness), messages, notes, text, information, music, video, advertisements, listings, and other content that you upload, publish or display (hereinafter, "post") on or through the Service or the Site, or transmit to or share with other users (collectively the "User Content"). You may not post, transmit, or share User Content on the Site or Service that you did not create or that you do not have permission to post. You understand and agree that the Company may, but is not obligated to, review the Site and may delete or remove (without notice) any Site Content or User Content in its sole discretion, for any reason or no reason, including User Content that in the sole judgment of the Company violates this Agreement or the Facebook Code of Conduct, or which might be offensive, illegal, or that might violate the rights, harm, or threaten the safety of users or others. You are solely responsible at your sole cost and expense for creating backup copies and replacing any User Content you post or store on the Site or provide to the Company.

When you post User Content to the Site, you authorize and direct us to make such copies thereof as we deem necessary in order to facilitate the posting and storage of the User Content on the Site. By posting User Content to any part of the Site, you automatically grant, and you represent and warrant that you have the right to grant, to the Company an irrevocable, perpetual, non-exclusive, transferable, fully paid, worldwide license (with the right to sublicense) to use, copy, publicly perform, publicly display, reformat, translate, excerpt (in whole or in part) and distribute such User Content for any purpose, commercial, advertising, or otherwise, on or in connection with the Site or the promotion thereof, to prepare derivative works of, or incorporate into other works, such User Content, and to grant and authorize sublicenses of the foregoing. You may remove your User Content from the Site at any time. If you choose to remove your User Content, the license granted above will automatically expire, however you acknowledge that the Company may retain archived copies of your User Content. Facebook does not assert any ownership over your User Content; rather, as between us and you, subject to the rights granted to us in these Terms, you retain full ownership of all of your User Content and any intellectual property rights or other proprietary rights associated with your User Content.

Facebook Mobile Services

The Service includes certain services that are available via your mobile phone, including (i) the ability to upload content to Facebook via your mobile phone (Mobile Uploads), (ii) the ability to receive and reply to Facebook messages, to poke and receive pokes and to write wall posts using text messaging (Mobile Texts), (iii) the ability to browse Facebook from your mobile phone (Mobile Web), and (iv) the ability to access certain Facebook features through a mobile application you have downloaded and installed on your mobile phone (Mobile Client) (collectively the "Mobile Services"). We do not charge for these Mobile Services. However, your carrier's normal messaging, data and other rates and fees will still apply. You should check with your carrier to find out what plans are available and how much they cost. In addition, downloading, installing, or using certain Mobile Services may be prohibited or restricted by your carrier, and not all Mobile Services may work with all carriers or devices. Therefore, you should check with your carrier to find out if the Mobile Services are available for your mobile devices, and what restrictions, if any, may be applicable to your use of such Mobile Services. By using the Mobile Services, you agree that we may communicate with you regarding Facebook and other entities by SMS, MMS, text message or other electronic means to your mobile device and that certain information about your usage of the Mobile Services may be communicated to us. In the event you change or deactivate your mobile telephone number, you agree to promptly update your Facebook account information to ensure that your messages are not sent to the person that acquires your old number.

Copyright Complaints

We respect the intellectual property rights of others and we prohibit users from uploading, posting or otherwise transmitting on the Facebook website or service any materials that violate another party's intellectual property rights. When we receive proper Notification of Alleged Copyright Infringement as described in our Facebook Copyright Policy, we promptly remove or disable access to the allegedly infringing material and terminate the accounts of repeat infringers as described herein in accordance with the Digital Millennium Copyright Act. If you believe that any material on the Site infringes upon any copyright which you own or control, you may send a written notification of such infringement to our Designated Agent. Please see our Facebook Copyright Policy for more information on how to report infringement of your copyright.

Repeat Infringer Policy

In accordance with the Digital Millennium Copyright Act (DMCA) and other applicable law, Company has adopted a policy of terminating, in appropriate circumstances and at Company's sole discretion, members who are deemed to be repeat infringers. Company may also at its sole discretion limit access to the Site and/or terminate the memberships of any users who infringe any intellectual property rights of others, whether or not there is any repeat infringement.

Third Party Websites and Content

The Site contains (or you may be sent through the Site or the Service) links to other web sites ("Third Party Sites") as well as articles, photographs, text, graphics, pictures, designs, music, sound, video, information, applications, software and other content or items belonging to or originating from third parties (the "Third Party Applications, Software or Content"). Such Third Party Sites and Third Party Applications, Software or Content are not investigated, monitored or checked for accuracy, appropriateness, or completeness by us, and we are not responsible for any Third Party Sites accessed through the Site or any Third Party Applications, Software or Content posted on, available through or installed from the Site, including the content, accuracy, offensiveness, opinions, reliability, privacy practices or other policies of or contained in the Third Party Sites or the Third Party Applications, Software or Content. Inclusion of, linking to or permitting the use or installation of any Third Party Site or any Third Party Applications, Software or Content does not imply approval or endorsement thereof by us. If you decide to leave the Site and access the Third Party Sites or to use or install any Third Party Applications, Software or Content, you do so at your own risk and you should be aware that our terms and policies no longer govern. You should review the applicable terms and policies, including privacy and data gathering practices, of any site to which you navigate from the Site or relating to any applications you use or install from the site.

Share Service

Company offers a feature whereby users of the Site can share with others or post to their own member profile, videos, articles and other Third Party Applications, Software or Content from, and/or links to, Third Party Sites through the Service (the "Share Service"). You acknowledge and agree that your use of the Share Services and all links, User Content or Third Party Applications, Software or Content shared through the Share Service is subject to, and will fully comply with the user conduct rules set forth above and the other terms and conditions set forth in these Terms of Use.

Use of Share Links by Online Content Providers

Subject to the terms and conditions of these Terms of Use, Third Party Sites that meet the requirements set forth below may place a Share Link (as described below), in the form approved by Company, on pages of their web sites to facilitate use of the Share Service. A Third Party Site that posts a Share Link on its web site is referred to herein as an "Online Content Provider" and shall abide and be subject to the applicable sections of these Terms of Use. A "Share Link" is a button and/or a text link appearing on an Online Content Provider's web page that, upon being clicked by a user, enables us to launch a sharing mechanism through which users can share with others or post to their own member profile, links and content from that page.

In the event that the Share Link is a button that contains any icons or other graphic images, trademarks or other proprietary materials of the Company, Online Content Provider is granted permission to use such images, trademarks or other materials solely for the purpose of placing the Share Link on Online Content Provider's site

and solely in the current form provided by the Company. In the event that the Share Link is a text link, it must include the word "Facebook" as part of the link. The rights granted in this paragraph may be revoked by Company at any time with or without cause in its sole discretion, and upon such termination, Online Content Provider agrees to immediately remove all Share Links from its site.

In order for an Online Content Provider to include a Share Link on its pages, the Third Party Site must not contain any web content that if shared or posted by a user would be a violation of the user conduct rules set forth above. Without limiting the foregoing, Online Content Provider agrees not to post a Share Link on any web site that contains, and represents and warrants that such web site does not and will not contain, any content that is infringing, harmful, threatening, unlawful, defamatory, abusive, inflammatory, harassing, vulgar, obscene, lewd, fraudulent, or invasive of privacy or publicity rights or that may expose Company or its users to any harm or liability of any type. Upon including of a Share Link, Online Content Provider agrees to defend, indemnify and hold the Company, its subsidiaries and affiliates, and each of their directors, officers, agents, contractors, partners and employees, harmless from and against any loss, liability, claim, demand, damages, costs and expenses, including reasonable attorney's fees, arising out of or in connection with such Share Link, any links, content or other items or materials which may be shared or posted through such Share Link, or any breach or alleged breach of the foregoing representations and warranties.

By including a Share Link, Online Content Provider automatically grants, and represents and warrants that it has the right to grant, to the Company an irrevocable, perpetual, non-exclusive, transferable, fully paid, worldwide license (with the right to sublicense) to use the Share Service in order to link to, use, copy, publish, stream, publicly perform, publicly display, reformat, translate, excerpt (in whole or in part), summarize, and distribute the content, links and other materials of any kind residing on any web pages on which Online Content Provider places the Share Link.

Facebook Marketplace

All listings posted on or through the Facebook Marketplace service and all transactions conducted in connection therewith are subject to and governed by the Facebook Marketplace Guidelines (the "Guidelines") as well as these Terms of Use. When you use Facebook Marketplace in any manner you are agreeing to abide by and be subject to the Guidelines and the other applicable rules set forth in these Terms of Use. The Guidelines are subject to change without prior notice at any time, in the Company's sole discretion, so you should review the Guidelines each time you use Facebook Marketplace. Parties to a transaction are solely responsible for all interactions with each other, for arranging for payment and the exchange of the goods or services purchased if applicable, and for the results and performance of any transaction or relationship entered into through Facebook Marketplace. You acknowledge that Facebook is not responsible or liable for any action or inaction of any party to a transaction, for any failure to perform, to pay any amounts due, or to deliver any merchandise or services as promised, or for any other aspect of the transaction. Any fees or payments collected by Facebook applicable to Facebook Marketplace are set forth on the Site, and all terms and conditions applicable to such fees are set forth in the Facebook Terms of Sale. However, please note that the Terms of Sale do not apply to your purchases of products or services from third parties through Facebook Marketplace, as those transactions are strictly between you and the other party to the transaction. ALL USE OF FACEBOOK MARKETPLACE IS PROVIDED "AS IS" AND AT YOUR OWN RISK.

Facebook Platform Applications

The Facebook Platform is a set of APIs and services provided by Facebook that enable third-party developers ("Platform Developers") to create websites and applications that retrieve data made available by Facebook and its users and/or that retrieve authorized data from third-party sites for use on the Facebook Site ("Platform Applications")

Platform Developers may use the Facebook Platform and create Platform Applications only in accordance with the terms and conditions set forth in an agreement entered into between Facebook and the Platform Developer ("Developer Terms"). Our standard Developer Terms consist of the Facebook Developer Terms of Service and the related Facebook Platform Application Guidelines. We may from time to time enter into separate agreements with certain third party Platform Developers that contain different or additional terms, provided however, that each such separate agreement will require the third party Platform Developer to only display your information in accordance with your Facebook privacy settings. The standard Developer Terms are subject to change without prior notice at any time, in the Company's sole discretion, so you should review these documents from time to time. ALL USE OF THE FACEBOOK PLATFORM IS PROVIDED "AS IS" AND AT YOUR OWN RISK.

Users who install Platform Applications must agree to the terms and conditions set forth in the Platform Application Terms of Use ("Application User Terms") and in these Terms of Use. The Application User Terms are subject to change without prior notice at any time, in the Company's sole discretion, so you should review these terms each time you install an application and from time to time. Platform Developers may require you to agree to their own terms of service, privacy policies and/or other policies as a condition of using Platform Applications. Platform Applications have not been approved, endorsed, or reviewed in any manner by Facebook, and we are not responsible for your use of or inability to use any Platform Applications, including the content, accuracy, or reliability of such Application and the privacy practices or other policies of Developers. YOU USE SUCH PLATFORM APPLICATIONS AT YOUR OWN RISK.

If you, your friends or members of your network use any Platform Applications, such Platform Applications may access and share certain information about you with others in accordance with your privacy settings as further described in our Privacy Policy. Platform Developers are required to agree to restrictions on access, storage and use of such information. However, while we have undertaken contractual and technical steps to restrict possible misuse of such information by such Platform Developers, we do not screen or approve Developers, and we cannot and do not guarantee that all Platform Developers will abide by such restrictions and agreements. Certain actions you take through the Platform Applications may be displayed to your friends in your profile, mini-feed and news feed, and you may opt-out of displaying your Platform Application actions on the Privacy Settings page. Please report any suspected misuse of information through the Facebook Platform as described in our Privacy Policy.

You may set your preferences for your news feed and mini-feed [here](#).

Facebook Connect

Facebook Connect ("Connect") enables participating third party websites to work just like Facebook Platform applications. Once you allow a third party website to connect with Facebook, you will be able to use your Facebook login information to log into that website. The third party website will be able to: generate and publish news feed and other stories about actions you take on their website; access Facebook information related to you (including your profile information, friends, and privacy settings) so you can use your Facebook information on the third party site; and allow you to interact with your friends on the website. In order to make Connect possible, you agree to allow Facebook to check your Facebook cookies when you are visiting participating third party websites, and allow Facebook to receive information concerning the actions you take on those third party websites. In addition, once you allow a participating third party website to connect with Facebook, you agree to allow Facebook and such third party website to generate and publish news feed and other stories about actions you take on the website without any additional permission. In the event you no longer want the third party website to publish stories about you, you can always disable this feature by changing your [application settings](#).

When your friends connect their Facebook account with a participating third party website, Facebook Connect will enable them to find Facebook friends that may also be users of that third party website, and invite them to use Connect as well. If you do not want your friends to be able to invite you, you may change your [privacy settings](#) to disable this feature.

Connect also gives you the ability to permit Facebook and participating third party websites to generate and publish news feed and other stories about actions you have taken on such websites, even if you have not gone through the Connect process. In such cases, you will be asked whether you want to publish the story on Facebook, and will be given the opportunity to save your answer for future stories. In the event you want to change your settings for that website, visit your [application settings](#).

Like Platform Applications, third party websites that participate in Connect are required, among other things, to protect your privacy consistent with your Facebook privacy settings and Facebook's [privacy policy](#).

Facebook Pages

Facebook Pages are special profiles used solely for commercial, political, or charitable purposes. You may not set up a Facebook Page on behalf of another individual or entity unless you are authorized to do so. This includes fan Facebook Pages, as well as Facebook Pages to support or criticize another individual or entity.

FACEBOOK DOES NOT PRE-SCREEN OR APPROVE FACEBOOK PAGES, AND CANNOT GUARANTEE THAT A FACEBOOK PAGE WAS ACTUALLY CREATED AND IS BEING OPERATED BY THE INDIVIDUAL OR ENTITY THAT IS THE SUBJECT OF A FACEBOOK PAGE. NOR IS FACEBOOK RESPONSIBLE FOR THE CONTENT OF ANY FACEBOOK PAGE, OR ANY TRANSACTIONS ENTERED INTO OR OTHER ACTIONS TAKEN ON OR IN CONNECTION WITH ANY FACEBOOK PAGE, INCLUDING HOW THE OWNER OF THE FACEBOOK PAGE COLLECTS, HANDLES, USES AND / OR SHARES ANY PERSONAL INFORMATION IT MAY COLLECT FROM USERS (PLEASE REVIEW THE FACEBOOK PRIVACY POLICY IF YOU HAVE ANY QUESTIONS OR CONCERNS REGARDING THE USE OR SHARING OF YOUR PERSONAL INFORMATION). YOU SHOULD BE CAREFUL BEFORE PROVIDING ANY PERSONAL INFORMATION TO OR ENTERING INTO ANY TRANSACTION IN CONNECTION WITH A FACEBOOK PAGE.

In addition to these Terms of Use, Facebook Pages are subject to and governed by certain [Additional Terms Applicable to Facebook Pages](#). The [Additional Terms Applicable to Facebook Pages](#) control in the event of any conflict between them and the Terms of Use.

Terms of Sale

Please refer to our [Terms of Sale](#) for the terms, conditions and policies applicable to your purchase of products or services from Company. By ordering products or services from Company through the Site, you agree to be bound by and accept the Terms of Sale. The Terms of Sale are subject to change without prior notice at any time, in Company's sole discretion so you should review the Terms of Sale each time you make a purchase.

User Disputes

You are solely responsible for your interactions with other Facebook users. We reserve the right, but have no obligation, to monitor disputes between you and other users.

Privacy

We care about the privacy of our users. [Click here](#) to view the Facebook's Privacy Policy. By using the Site or the Service, you are consenting to have your personal data transferred to and processed in the United States.

Disclaimers

The Company is not responsible or liable in any manner for any User Content or Third Party Applications, Software or Content posted on the Site or in connection with the Service, whether posted or caused by users of the Site, by Facebook, by third parties or by any of the equipment or programming associated with or utilized in the Site or

the Service. Although we provide rules for user conduct and postings, we do not control and are not responsible for what users post, transmit or share on the Site and are not responsible for any offensive, inappropriate, obscene, unlawful or otherwise objectionable content you may encounter on the Site or in connection with any User Content or Third Party Applications, Software or Content. The Company is not responsible for the conduct, whether online or offline, of any user of the Site or Service.

The Site and the Service may be temporarily unavailable from time to time for maintenance or other reasons. Company assumes no responsibility for any error, omission, interruption, deletion, defect, delay in operation or transmission, communications line failure, theft or destruction or unauthorized access to, or alteration of, User communications. The Company is not responsible for any technical malfunction or other problems of any telephone network or service, computer systems, servers or providers, computer or mobile phone equipment, software, failure of email or players on account of technical problems or traffic congestion on the Internet or at any Site or combination thereof, including injury or damage to User's or to any other person's computer, mobile phone, or other hardware or software, related to or resulting from using or downloading materials in connection with the Web and/or in connection with the Service, including any Mobile Client software. Under no circumstances will the Company be responsible for any loss or damage, including any loss or damage to any User Content or personal injury or death, resulting from anyone's use of the Site or the Service, any User Content or Third Party Applications, Software or Content posted on or through the Site or the Service or transmitted to Users, or any interactions between users of the Site, whether online or offline.

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Questions

Please visit our [Help](#) page or these [links](#) for more information.

- [Facebook Copyright Policy](#)
- [Facebook Terms of Sale](#)
- [Facebook Marketplace Guidelines](#)
- [Facebook Platform Application Guidelines](#)
- [Platform Application Terms of Use](#)
- [Facebook Developer Terms of Service](#)

EXHIBIT 12

Feed tracking logging Last modified Friday, November 21, 2008 at 4:20pm by Ding Zho

How to log a new event: 1) In lib/feed/constants.php, define a new constant corresponding to your event type 2) In lib/feed/util.php

- a. Look for the feed_tracking_log_event_data function
- b. Modify the comment at the top to document your new event type
- c. In the switch statement, add a case for your event type
- d. Fill out which ever fields you need in an array. Generally the minimum is uid and evt.

The extra field is there for whatever you need. Just be sure to document the format of the field so that whatever reads the log knows how to parse it. For example:



Format for tab click logging: The evt field for tab clicks will be: **Redacted** of the user clicking the tab pos = # of the tab that was clicked

Format for flyout menu clicks: The evt field will be 'fclk' uid = uid of the user clicking the flyout menu The 'extra' field will have subfields within it. The subfields will be delimited by chr(2). The subfields will be as follows: subfield 1: 'up' to indicate the user clicked more about, 'down' to indicate the user clicked less about subfield 2: the id of the object the user tuned the weight for. For story types, it will be a string such as 'photos' or 'profiles'. For friends it will be the uid of the friend. subfield 3: the story id which is constructed as the story_key_story fbids delimited by dashes. The story id will identify unique stories but won't separate them across users. Thus, the same story appearing on two different feeds will have the same story id.

[Back to Feed Metrics.](#)

<p>Plaintiff's Trial Exhibit</p> <p>PTX-341</p> <p>Case No. 08-CV-00862</p>
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EXHIBIT 11

POLITICIAN USERS GUIDE TO FACEBOOK

December 2007

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Plaintiff's Trial Exhibit

PTX-302

Case No. 08-CV-00862

WHY FACEBOOK?

Introduction

Facebook offers you an unparalleled opportunity to connect with your constituents and voters – on their turf and in ways that they find meaningful. By maintaining a Facebook Page and using all the available features, you can interact with voters the same way they interact with their friends and colleagues. This will allow you to build deeper connections with your supporters and express your message in a way that rarely comes through in other media.

This guide will give you the basics on how to use Facebook as well as some tips on how to best engage with users.

Keys to Using Facebook

Here are some general strategies to follow to get the most out of your Facebook experience:

1. Get personal and go beyond politics

People primarily use Facebook to share personal information with friends. The more your Facebook Page is a genuine reflection of who you are as a person and not just as a politician, the stronger of an effect it will have on the people who view it.

2. Update your Facebook Page frequently

Facebook is geared to highlight new information and recent changes. The more often you add new content, the more often people will come back to your Facebook Page. You can also send Updates to your supporters on Facebook every time you add new content or have news to report.

3. Harness the power of News Feed*

The News Feed on users' home pages tells them what is happening around them on Facebook. When users add you as a politician they support, their friends on Facebook will hear about it in their News Feeds. When you update your Facebook Page, your supporters will find out about it through News Feed. News Feed is the key to spreading your message virally on Facebook.

4. Build applications on the Facebook Platform

The Facebook Platform allows anyone to develop features and tools for Facebook. So not only can you use Facebook's applications – like Photo, Groups, and Notes – to connect with users, but you can also build features specific to your office or campaign. You can build applications for your supporters to add to their profiles and also build applications for your own Facebook Page.

5. Test a variety of strategies

Facebook is still a young technology, and there is much room for exploring how best to connect with voters and constituents through the site. Don't be afraid to take chances and try new things.

* The integration of Facebook Pages with News Feed is still in progress. Currently, the only News Feed stories generated by your Facebook Page will be when someone supports your Page – that user's friends will be alerted about this in their News Feeds. Full integration with News Feed should be complete in early 2008.

OVERVIEW OF FACEBOOK PAGES

Facebook Pages, which launched in November 2007, is a system that allows public figures, celebrities, businesses, brands and other groups to have a presence on Facebook. Users can add themselves to your Facebook Page as a supporter, write on your Wall, upload photos, and join other supporters in discussion groups. You can send Updates to all your supporters regularly when you add new content or have other news to report. And you can add applications to your Page and engage Facebook users with videos, notes, links, flash content, and more.

Facebook Pages vs. Regular User Profiles

There are several important differences between regular user profiles and your Facebook Page. These differences allow you to connect with more people, make it easier to manage your presence on Facebook, and make it easier for users to find you on the site.

- **Facebook Pages are visible to everyone**
Your Facebook Page can be seen by everyone, even people who aren't logged in to Facebook. Regular user profiles can only be seen by a user's friends and the other Facebook users in their networks.
- **Facebook Pages can have an unlimited number of supporters**
Regular users can only have up to 5,000 friends.
- **Users can automatically support your Facebook Page without confirmation**
Regular users have to approve all incoming friend requests. You do not need to confirm users who want to support your Facebook Page.
- **You can send Updates to all your Supporters**
Regular users cannot message all their friends at once, but you can send an Update message to all your Supporters.

Finding Your Facebook Page

There are several ways users can find your Facebook Page and support you on Facebook:

- **Name Search**
Users can search for you by name using the Quick Search bar on any page, or by going to the main search page. Your Facebook Page should be the first result if the user enters your name exactly as it appears on your Facebook Page.
- **Politics Applications**
If you are an American or Canadian politician, users will be able to find you in Facebook's US Politics application or Canadian Politics application. These applications have options for searching for politicians from their respective country.
- **Supporters' Profiles**
A link to your Facebook Page will appear in the profile of each of your supporters in their "I am a Fan of..." box. If you are an American or Canadian politician, you will also appear in the US Politics or Canadian Politics application box in the profiles of your supporters who have added the appropriate application to their account.
- **News Feed**

Users will see stories in their News Feed when their friends support your Facebook Page.

- **Public View of Your Facebook Page**

Most of your Facebook Page is visible to people who are not logged in to Facebook, so you can add links to your Facebook Page on other websites and blogs.

Getting Help with Your Facebook Page

Many questions you may have about your Facebook Page are answered in this guide, so be sure to read it in full if you need help. You can email Facebook for help at any time at info@facebook.com, but you can probably find your answer faster by referring to this guide.

MANAGING YOUR FACEBOOK PAGE

This section provides detailed information about how to manage and maintain your Facebook Page.

Basic Administration of Your Facebook Page

- It's important to understand the difference between your Personal Account and your Facebook Page
- Use the Page Manager application to edit your Facebook Page content and settings
- You can also edit your Facebook Page by going to the Page itself

It's important that you understand the difference between your Personal Account and your Facebook Page. Your Personal Account is the regular user account that you log into when you sign in to Facebook, and this is the account you use to manage your Facebook Page.

Your Personal Account profile is separate from your Facebook Page. When you edit your Personal Account profile or add content to it, these changes will **not** be reflected on your Facebook Page. Likewise, when you edit your Facebook Page, these changes will **not** be reflected in your Personal Account or your Personal Account profile.

When you click on 'Profile' at the top of any page on the site, you will be viewing your Personal Account profile. This profile is only visible to your friends and the people on the networks you join. When you click 'edit' next to 'Profile' at the top of any page on the site, you will be editing your Personal Account profile.

You can edit your Facebook Page by going to the Page itself and clicking 'edit' on any section you would like to update, or by using the links in the upper right part of your Facebook Page.

You can also manage your Facebook Page by going to the Page Manager application, which appears in the left sidebar on every page when you're logged in to your Personal Account. Click on the 'Pages' tab inside the Page Manager application to edit your Facebook Page. You can also use the Page Manager application to review Insights into your Facebook Page and to change your Page's settings.

When adding content to Facebook, it's important to make sure you're aware of whether you're adding it to your Facebook Page or to your Personal Account profile. Always go to the Page Manager application or to your Facebook Page first if you want to add content to your Facebook Page.

Adding and Removing Administrators to Your Facebook Page

- You can let other people administrate your Facebook Page from their own Facebook accounts
- Go to your Facebook Page, and click 'Edit Admins' to add administrators to your Page
- Users cannot see who is administrating your Facebook Page

By default, your Personal Account is the only administrator of your Facebook Page. However, if you have colleagues or staff members who help maintain your Facebook Page, you may want to add them as administrators of your Page. By doing this, they will be able edit your Facebook Page from their own accounts. Users cannot see who the administrators are for your Facebook Page.

To add another administrator to your Facebook Page, go to the Page and in the upper-right part of the Page, click 'Edit Admins'. Select the names of any users you would like to be an administrator. The user(s) you add will then need to confirm that they want to administer your Facebook Page from their own accounts.

Note that you must be friends with someone on Facebook in order to add them as an administrator to your Facebook Page. If the person you want to add doesn't show up in the list of names on the Edit Admins page, then you need to become friends with them on Facebook first before you can add them as an administrator. Search for the person you want to add, and click 'Add to Friends' in their search listing. That person will need to confirm your friend request before you can add them as an administrator to your Facebook Page.

If the person you want to add as an administrator does not have a Facebook account, you can enter their email address in the lower right box on the Edit Admins page. We will send them a confirmation email that will give them administrative access to your Facebook Page.

To remove someone from being an administrator of your Facebook Page, just click 'Remove Admin' next to the name of the person you want to remove on the Edit Admins page.

If you accidentally remove yourself as an administrator of your Facebook Page, you will need to ask one of the remaining admins to add you as an administrator of the Page. Never remove yourself as an administrator of your Facebook Page unless there is at least one other user set to be an administrator; otherwise, your Facebook Page will be taken down from the site.

Editing Your Facebook Page

- You can edit your Facebook Page by going to the Page and clicking 'Edit Page' in the upper right
- You can also edit your Page from the Page Manager application
- It is important to keep your information up to date

To add information to your Facebook Page, go to the Page and click 'Edit Page' in the upper-right part of the Page. This will take you to the Edit Page view for your Facebook Page. From this Page, you can edit each section of your Facebook Page.

Be sure to fill in the Basic Info section, which has information about your current office and/or which office you are running for. If you are an American or Canadian politician, you must indicate the appropriate country in the Basic Info section in order to show up in the US Politics application or the Canadian Politics application.

From the Edit Page, you can also add and edit content to any applications you have on your Facebook Page. You can also add and remove applications from your Facebook Page. See **Using Applications on Your Facebook Page** for more information.

From the Edit Page, you can also change the Published status for your Facebook Page, which controls whether your Facebook Page is visible to users or not. See **Publishing Your Facebook Page** for more information.

Publishing Your Facebook Page

- You must set your Facebook Page to ‘Published’ for users to see it on the site
- You can set your Facebook Page to ‘Unpublished’ at any time to temporarily hide your Page from the site

Once you have filled out your Facebook Page and are ready to show it to the public, you need to “publish” your Page to have it display on the site to all users.

While your Facebook Page is “unpublished”, you will see a dialog at the top of your Facebook Page indicating that your page is not currently visible to users. There is a link there to ‘publish your page’. This will instantly set your Facebook Page to ‘published’ and make it visible to all users. You can also set your Page to “published” from the Edit Page while editing your Facebook Page.

You can set your Facebook Page to “unpublished” at any time. Setting your Facebook Page to “unpublished” will hide it from all users, including your supporters. Your Facebook Page will only be visible to the administrators of the Page while it is unpublished. Your Page will not be visible to users until you set it back to “published”.

You can set your Page to “unpublished” in the Settings section of the Edit Page for your Facebook Page.

Using Applications on Your Facebook Page

- You can use applications on your Facebook Page to display media and to add functionality to your Page
- Use the Application Directory to find applications you want to add to your Facebook Page
- You can build applications or design custom boxes for your Facebook Page if you have specific needs not met by existing applications

Odds are that you have a lot of media and other content that you want to show in your Facebook Page. There may also be things you would like people to be able to do on your Facebook Page, like donate money to your campaign or register to vote.

Applications allow you to extend the functionality of your Facebook Page and to show more types of content to users. There are thousands of applications that you can add to your Facebook

Page to do these things. And if you don't find one that meets your specific needs, you can always build your own applications and custom boxes for your Facebook Page.

Several applications are included by default with your Facebook Page. These applications are listed below, along with information about using additional applications and building your own custom boxes or applications for your Facebook Page.

Mini-Feed

The Mini-Feed in your Facebook Page shows a log of recent changes and additions you have made to your Page. Unlike all the other applications you use in your Facebook Page, you cannot turn off or remove the Mini-Feed from your Page. However, you may delete any story that you do not want to display.

Users will be able to get a sense of how often you update your Facebook Page based on how recent the stories in your Mini-Feed are. So it is important to regularly update content and to add new media to your Facebook Page, so users know that the Page is being actively maintained.

Wall

The Wall is a public comment board where your supporters can leave messages that will be visible to everyone who views your Facebook Page. Only your supporters can write on your Wall.

When you write on the Wall of your Facebook Page, you will be writing as the Facebook Page itself and not as your Personal Account. (This is more noticeable for administrators of the Facebook Page whose Personal Account is under a different name than the subject of the Facebook Page.)

You cannot write on the Wall of any supporters who write on your Wall. However, you can supply a response on your own Wall, which as noted above will appear to be from the Facebook Page and not your Personal Account. You can also send a private Message to someone who wrote on your Wall, although this private Message will come from your Personal Account and not the Facebook Page (see **Sending Private Messages to Individual Users** for more information).

You can delete any Wall post you do not want to appear on your Facebook Page. If a user violates Facebook's Terms of Use with a Wall post, you can report that user to Facebook by clicking the 'Report' link on the Wall post. Facebook will review your complaint and take action as appropriate.

If a user repeatedly writes Wall posts you do not like, you can block the user from posting on your Wall. Simply click 'Block' in one of the posts from that user, and they will no longer be able to write on your Wall.

You can turn off your Wall by clicking the 'X' in the upper right corner of your Wall on your Facebook Page. You can also turn off your Wall from the Edit Page for your Facebook Page. You can turn your Wall back on from the Edit Page for your Facebook Page.

Photos

Photos are the most popular feature on Facebook. Facebook is the number one photos site on the web, so think seriously about how you can best integrate photos into your profile.

It is a good idea to upload photos frequently to your Facebook Page. It is also a good idea to include more candid, personal photos, in addition to any official photos you add to your Facebook Page. This will give your Facebook Page a much more natural feel to users who are used to viewing their friends' profiles and photos.

To add new photos, go to the Edit Page for your Facebook Page and click on 'Photos'. To create a new album, select 'Create a Photo Album' at the top of the page. To add photos to an existing album, click through to that album, then select 'Add More Photos' at the top of that page.

To edit or remove photos, go to the album you want to edit, and click 'Edit Photos' at the top of the page. To remove photos, check the 'Delete this photo' box under each picture you want to remove, then click 'Save Changes' at the bottom of the page. Please note that no changes you make while editing an album will be saved until you click 'Save Changes' at the bottom of that page.

See the 'Photos' section of the main Help page on Facebook (<http://www.facebook.com/help.php?page=7>) for more information about Photos.

Events

You can use Events to keep people updated about where you're appearing and other events you're organizing. You can also create Events to mark other occasions or milestones that you want people to be aware of.

To create an Event, go to the Edit Page for your Facebook Page and click on "Events". Fill in the Event information and add a picture to your Event. After you have created your Event, you can add photos, videos and other content by going to the Event profile.

To edit an Event you have already created, go to the profile for that Event and click 'Edit Event' in the upper-right part of the page. You can delete an Event by click 'Cancel Event' in the upper-right part of the Event profile.

See the 'Events' section of the main Help page on Facebook (<http://www.facebook.com/help.php?page=13>) for more information about Events.

Notes

Notes is Facebook's blogging feature. You can use Notes to tell your supporters about recent news from your office or campaign, to discuss your position on various issues, to keep your supporters updated on your upcoming plans, or to tell people about anything else on your mind.

To write a new Note, go to the Edit Page for your Facebook Page and click on 'Notes'. Select 'Write a New Note' in the upper-right part of the page. To edit a Note, go to the Note and click 'Edit' near the top of the page.

In addition to writing Notes on Facebook, you can also import an external blog from another website. Go to the main Notes page by clicking on 'Notes' on the Edit Page for your Facebook Page, and then follow the instructions for importing a blog that appear on the right side of the page.

See the 'Notes' section of the main Help page on Facebook (<http://www.facebook.com/help.php?page=19>) for more information about Notes.

Posted Items

Posted Items allows you to add links to your Facebook Page to pages or content around the Web. When you add a Posted Item to your Facebook Page, a preview of the page or content you're linking to will appear. You can add a comment to the item so users know what the link is or why you added it to your Facebook Page.

For example, if you have videos on another website, you can add Posted Items linking to those videos to your Facebook Page. Or if you see an interesting article on a new websites, you can add a link to that to your Posted Items to draw attention to it.

To add a new Posted Item or to remove an old one, go to the Edit Page for your Facebook Page and click on 'Posted Items'. On the main Posted Items page, you will see a box in the upper right part of the page where you can paste a url to the website you want to link to. Simply copy the target url into that box, and add a comment if you want.

See the 'Posted Items' section of the main Help page on Facebook (<http://www.facebook.com/help.php?page=11>) for more information about Posted Items.

Video

You can use Facebook's Video application to upload any sort of video you want your supporters to see. You can also directly record videos for your Facebook Page if there is a special message you want your supporters to see. (Note that you can also send Video Updates to all your supporters; see **Sending Updates to All Your Supporters** for more information.)

To add or edit videos, go to the Edit Page for your Facebook Page and click on 'Videos'. Click the 'Upload' or 'Record' button in the upper-right part of the page to do that action. You can also edit or remove earlier videos from this page.

See the 'Video' section of the main Help page on Facebook (<http://www.facebook.com/help.php?page=26>) for more information about Video.

Discussion Board

Your Facebook Page has a Discussion Board, which users can use to discuss topics related to you or anything that interests them.

When you or any administrator of your Facebook Page writes on your Discussion Board, the post will appear to come from your Facebook Page and not from your Personal Account. (This will be more noticeable for administrators whose personal accounts are under a different name from

the subject of the Facebook Page.)

To start a new topic or to respond to an existing topic on your Discussion Board, simply click through to the Discussion Board from your Facebook Page. You will see an option to ‘Start a New Topic’ in the upper right part of the main Discussion Board page.

You can turn your Discussion Board off by clicking on the ‘X’ in the upper right corner of the Discussion Board on your Facebook Page. You can also turn off the Discussion Board from the Edit Page for your Facebook Page. You’ll see an option to turn your Discussion Board back on when editing your Facebook Page.

You can delete any Discussion Board posts or topics that you do not want appearing on your Facebook Page. You’ll see links to delete posts and topics inside the Discussion Board. If someone is violating Facebook’s Terms of Use with their posts, you should report the user by clicking the “Report” link next to one of their posts.

Groups

The Groups application works differently for Facebook Pages than for regular users. Facebook Pages cannot join or create Groups like regular users can. However, you can still promote Groups in your Facebook Page that you create with your Personal Account or which were created by other users.

To promote an existing Group in your Facebook Page, go to the Edit Page for your Page and click on ‘Groups’. Copy and paste a link to the Group you want to promote into the box on that page for adding Groups. The Group will then appear in the Groups box in your Facebook Page. Please note that your Facebook Page will not actually be a member of the Group; instead, you will only have a link in your Page to the Group profile.

If you want to create a new Group and promote it in your Facebook Page, you will need to create the Group from your Personal Account. Your Personal Account will be a member of the Group and will be listed as one of the Group admins if you do this. Go to the Groups application by clicking the Groups link on the left side of any page, and then click ‘Create a New Group’ at the top of the main Groups page. After you have created the Group, you can add the Group to your Facebook Page by following the steps above.

For help with creating or maintaining a Group, see the ‘Groups’ section of the main Help page on Facebook at <http://www.facebook.com/help.php?page=17>.

Other Applications

In addition to the applications above, there are thousands of other applications that you can add to your Facebook Page. There are applications that do almost everything you can think of. So before you decide to build your own application, you should check the Application Directory to make sure that there is not already an application that has the functionality you’re looking for.

To find applications, go to the Edit Page for your Facebook Page. Click on ‘More Applications’ at the bottom of the Applications section to go to the Application Directory. Once you’re in the Directory, you can search for specific applications or browse around for the more popular ones in

each category.

When you find an application you want to use on your Facebook Page, click through to the application and then click 'Add to Page' in the upper-right part of the Page. Be very careful to add the application to your Facebook Page and **not** to your Personal Account.

Please note that some applications cannot be added to Facebook Pages, but instead can only be used on regular user accounts. You will not be able to add these applications to your Facebook Page. When you are on the page describing an application, if you do not see a button in the upper right for 'Add to Page', then the application can only be added to regular user accounts.

Adding Applications

There are a couple ways to add applications to your Facebook Page. It is extremely important to be careful every time you try to add an application to your Facebook Page that you add it to your Page and not to your Personal Account. You will always need to click the 'Add to Page' button when you see a prompt to add an application in order for the application to be used on your Facebook Page.

You can search or browse the Application Directory at <http://www.facebook.com/apps/index.php?type=4> for applications that can be added to Facebook Pages. To get to the Application Directory, go to the Edit Page for your application and click 'More Applications' at the end of the Applications section. Click through to any application you want to add and click 'Add to Page' in the upper right part of the page to add that application.

You can also add applications you see while viewing other users' profiles and other Facebook Pages. If you see an application you like, click 'add' in the title bar of that application's box on the Page or profile you're viewing. This will take you to the application page, where you can click 'Add to Page' in the upper right to add the application to your Facebook Page.

Note that if you do not see a button for 'Add to Page' in the upper-right part of an application page, then that application is for regular users only and cannot be added to a Facebook Page.

Also note that adding an application to your Personal Account will not automatically add that application to your Facebook Page. Likewise, adding an application to your Facebook Page will not automatically add that application to your Personal Account.

Removing Applications

It is easy to remove any application you no longer want to appear on your Facebook Page. You can either click on the 'X' in the top-right corner of the application's box in your Facebook Page. Or, on the Edit Page for you Facebook Page, you can click the 'X' in the upper right corner of an application in the Applications section of that page.

If you want to re-add an application that you removed, go to the Application Directory and search for the name of the application. Click through to the application page, and select 'Add to Page' in the upper-right part of that page.

Building Your Own Applications

If you cannot find an application to do something that you want to appear on your Facebook Page, or if you have unique functionality that you'd like to add to your Facebook Page, then you should consider building your own application. You can build applications that work just on your Facebook Page, or which works on your Page and can be added by regular users to their own profiles.

While building applications is relatively simple, it does require an engineer to help you develop, deploy and maintain the application. For some tips on how to get started building applications, see **Building Applications on the Facebook Platform**.

Sending Updates to All Your Supporters

- You can send Updates to all of your supporters
- You can include media attachments or links in Updates you send to your supporters

You can send an Update message to all of the supporters of your Facebook Page at any time. These message blasts show up in the 'Updates' tab of the Inbox for each of your supporters.

To send an Update, go to your Facebook Page, and click 'Send an Update to Supporters' in the upper-right part of the Page. Use the 'Attachments' options below the Message body to add media to your message. If you have the Video application added to your Facebook Page, you will have the option of recording a message that you can send to your supporters.

Please note that each of your supporters has the option to turn off Updates from your Facebook Page. Users may choose to do this if you send Updates too frequently or if they do not wish to be contacted by you. As such, you should be sensitive to your supporters when sending Updates to avoid having a high number of them opt out of receiving these messages from you.

You can send an Update to your supporters for any reason you choose. You may wish to tell your supporters about new content you've added to your Facebook Page. You may also wish to tell them about upcoming events or about any important news you have.

Any administrator of your Facebook Page can send an Update to your supporters. All Updates will come from your Facebook Page, so your supporters cannot tell which individual administrator sent an Update to them.

Sending Private Messages to Individual Users

- Facebook Pages do not yet have an Inbox and cannot receive Messages from individual users
- You **cannot** send a Message to an individual user from your Facebook Page
- You **can** send a Message to an individual user from your Personal Account

Facebook Pages do not yet have an Inbox. An Inbox for private Messages will be added to Facebook Pages in early 2008. Until then, users cannot send private Messages to your Facebook Page, and you cannot send users private Messages from your Facebook Page.

However, you can send and receive private Messages from your Personal Account. To receive private Messages from users, you must allow people to find your Personal Account in search and allow users to Message you from your search listing. To review these privacy settings for your Personal Account, click 'Privacy' at the top of any page and click 'Edit Settings' in the 'Search' section of the Privacy page.

You can send individual users Messages from your Private Account. These Messages will come from your Personal Account, and if a user replies it will come to your Personal Account Inbox. The other administrators of your Facebook Page will not be able to see these Messages from their own Facebook accounts.

Viewing Insights about Your Facebook Page

- You can view data on who is supporting and viewing your Facebook Page
- You can export this data for use in other programs

You can view detailed data about who is looking at your Facebook Page and who is supporting you on Facebook. To view Insights for Your Facebook Page, go to the 'Pages' tab inside the Page Manager application, and click 'Insights' underneath the name of your Facebook Page.

You should spend some time exploring the data available on the Insights page to see all the data available. You can toggle what displays in the top graph by changing options in the dropdown in the upper-left part of the graph.

You can export the Insights data for your Facebook Page, by selecting 'Export Data' near the top of the Insights page. You can choose to export either weekly or daily usage data.

RALLYING SUPPORTERS AND REACHING OTHERS

This section discusses strategies to consider to get the most out of your Facebook Page and Facebook overall.

Bringing All Your Information to Facebook

While most politicians maintain their own websites – or even multiple websites – it's important that you make as much of your information available on Facebook as you can. Trying to drive users to visit multiple websites, or even just one outside website, can be challenging.

The more content you bring to Facebook, the more success you should have it getting users to engage with that content and spread it to their friends. Facebook is designed to help users spread information to their friends and others they know. The more you enable your supporters to do this, the wider your reach on Facebook will be.

There are several ways to bring your information to Facebook. The most straightforward approach is to add content to your Facebook Page. Regularly adding photos and videos, writing notes, creating events, and using other applications guarantees your Facebook Page will always have fresh content. This will get you more return visitors, which will in turn likely get you more unique visitors in the long run.

You can also add Facebook Share links to other websites, blogs or forums you maintain. By adding these Share links (available at http://www.facebook.com/share_partners.php) to your outside sites, you will make it easy for Facebook users to bring that content to Facebook for you. Users will have the option to add any of that content to their Posted Items, which generates a News Feed story to their friends. And users can also share the content directly with their Facebook friends through our Message system.

Lastly, you can integrate you outside websites with the Facebook API and our Beacon program. Each of these opt-in systems allows you to add information to a Facebook user's account while they're using your site. With the user's permission, you could tell their friends about something they did on your site, like donate money or leave a comment. Through the Facebook API, you can access some of their Facebook data to customize their experience and make it easier for them to share information with their friends on Facebook.

For more information on Beacon, go to <http://www.facebook.com/business/?beacon>. For more information about the Facebook API, visit <http://developers.facebook.com/>.

Using News Feed to Your Advantage

News Feed is a feature that tells Facebook users about their friends' recent activities on the site. The News Feed is the first things users see on their home page when they log in to their accounts.

News Feed drives the viral spread of information on Facebook through networks of friends. It can cause a snowball effect – as something becomes more popular, more people hear about their friends doing it through News Feed, and then do it themselves. This in turn causes even more

people to hear about it through News Feed, and so on. This can result in literally hundreds of thousands of people hearing about something in just a matter of days.

Harnessing the power of News Feed is crucial to accruing a high number of supporters and spreading your message to the most people on Facebook.

How News Feed Works with Your Facebook Page

There are three sets of News Feed stories that can be generated around your profile.

First, News Feed stories will be generated by actions your supporters take. When someone adds you as a politician they support, this will generate a story that may be seen by that person's friends in their respective News Feeds. Likewise, when one of your supporters writes on your Wall, comments on one of your photos, etc., this will also generate a News Feed story that their friends might see.

Second, News Feed stories will be generated when your supporters join other groups and events that you create. This is the primary way their friends become aware of these groups and events.

The last set, which is still being developed, comes from changes you make to your Facebook Page. When you edit your Facebook Page or add new content, this will generate a story that may appear in your supporters' News Feeds. It is currently expected that these stories will start appearing in early 2008.

How to get the Most out of News Feed

The biggest bang you can get out of News Feed comes from getting a lot of people to take the same action in a short period of time. This can lead to the snowball effect that News Feed is capable of producing, as described above.

For example, say you create an Event about an upcoming rally you're hosting. If you can get a lot of your core supporters to join that Event quickly, then News Feed stories will spread widely to those supporters' friends – and many will receive stories about multiple friends joining that Event, which are even more compelling. This is often enough to trigger exponential growth in Event size, as dozens, then hundreds, then thousands take that same action. And this can happen with many different types of content.

Having a core group of supporters to help initially spread things you add or create through News Feed is an excellent way to leverage the free promotion this feature offers.

Building Applications on the Facebook Platform

The Facebook Platform, launched in May 2007, allows anyone to develop applications on Facebook to go along with the ones we've built, like Photos or Groups. You can build any number of applications to further connect with constituents, campaign to potential voters, and help your core supporters spread your message.

While we provide some tips below, the Platform is a new and exciting technology, and there is endless room to explore what types of applications might work best for you. Like most Internet

technologies, the people who try the most things and strive to innovate will find the most success.

You can build applications to promote your campaign, to rally support for a cause you're working towards, or to bring together people who share a common interest or goal with you.

Let Your Supporters Spread Your Message

By building applications that your supporters can add to their own profiles, you can enable others to help spread your message around Facebook. Adding an application is very easy for users, so you may find that even casual supporters are willing to add one that promotes your campaign or cause.

Consider offering a variety of applications, with some targeted towards active supporters and organizers and others aimed at more casual fans. Also remember that applications that go in users' profiles should appeal not just to the user who adds it, but also to those who view that user's profile.

Getting Started with Platform

Building an application on the Platform will require one or more software engineers. While an inexperienced coder could build an application with basic functionality, a more skilled engineering team will be needed in order to build more advanced tools with polished designs.

Of course, you'll want to spend time brainstorming ideas for what functionality you might want to provide your supporters or add to your own profile. It is a good idea to involve your engineers in this process, as they can provide valuable feedback on what's possible and how long it will take to develop different features.

Learning More about the Technology

There are many resources available to your development team to learn all about how Platform works. Here are some tips on ways to get started:

- **Check out the Developers section of Facebook**
There is a plethora of information on the Platform in the Developers area of the site. Click on "Developers" at the bottom of any page on the site to access the full documentation on the Facebook Platform.
- **Browse the application directory**
There is a "Politics" category of applications that you can check out. But you should also look at other applications, especially the most popular ones, to see what types of tools and features most resonate with users.
- **Get involved with the Developer Community**
Beyond Facebook's documentation for Platform, there is a large and active community of engineers adding to the knowledge base around this new technology. The Developers Community can be very helpful both for getting feedback on various ideas you have, and for obtaining help when you encounter problems while developing your applications.

To get involved, add the Facebook Developer application to your Personal Account, which houses the Developers Community. (You don't have to be a developer to add this

application.)

Scaling Your Applications

Even modestly successful applications can generate huge amounts of traffic in a short period of time. The most popular applications have been adopted by millions of users in a matter of days. Many applications have been overwhelmed by the initial wave of growth they experienced, causing their servers to crash and preventing users from accessing the applications' pages. Make sure your engineers have properly scoped your hardware needs for both serving pages and storing data before you launch any applications you build.

FREQUENTLY ASKED QUESTIONS

Q. Can I message all of my supporters?

A. Yes, you can send Update messages to all your supporters. See **Sending Updates to All Your Supporters** above.

Q. Can I download all of my supporters' emails, contact info, or other demographic info?

A. No, we cannot give out any personal information about our users. Additionally, you may not use users' contact or personal info from the site without their permission; this is strictly prohibited by our Terms of Use and will result in the disabling of your account.

You may ask supporters and others to sign up for mailing lists through your profile and any groups you own as long as you are clear about what you will be doing with any information they supply.

You will be able to see aggregated data about your supporters as a group using your Facebook Page's Insights. See **Viewing Insights About Your Facebook Page** for more information.

Q. Can I view anyone's profile?

A. No. All Facebook users can see your Facebook Page, but you will not have any special access to any user profiles, including those of your supporters. The only profiles you can see on the site are your friends from your Personal Account and the people on any networks you join with your Personal Account.

Q. Can I recruit supporters to add me?

You cannot invite people to support you from your Facebook Page. We do this because of concerns about spam from our users.

You can message users from your Personal Account, but you do need to be careful about sending random messages out to users. If a lot of users report messages you send as spam, you could lose access to that functionality or even have your Personal Account temporarily disabled. This could cause your Facebook Page to not be visible on the site if your Personal Account is the only administrator of the Page.

Q. What do I do if someone is posting inappropriate things on my Facebook Page's Wall?

You can delete anything written on your Wall just by clicking "delete" on any Wall post. You can block any user who repeatedly writes inappropriate things on your Wall. This will prevent them from being able to write anything moving forward. If the user has violated our Terms of Use by writing something obscene, racist or offensive, you can report that user by clicking the "report" link on their Wall post. Facebook will review the report and take appropriate action.

Q. Where can I get help using Facebook?

You can always write us at info@facebook.com if you're having any problems with your Personal Account or your Facebook Page. But you can also get excellent advice by talking to active Facebook users on your staff, in your family or in your circle of friends. Odds are someone around you is a regular user and can both troubleshoot problems you're having and offer tips on how to get the most out of your Facebook account.

Q. Where can I get help with developing an application on the Facebook Platform?

The Developers area of Facebook has an enormous amount of information for how to get the most out of the Facebook Platform. To access this information, click 'Developers' at the bottom of any page on the site. You can also get help from the large and active Facebook Developers Community through the Facebook Developer application, which you can add to your account. (You don't have to be a developer to add this application.)

If you would like to discuss partnership opportunities involving the Facebook Platform, please email partners@facebook.com.

EXHIBIT 10



Facebook Pages

March 2009

Facebook is unifying and simplifying the way people interact on the site by making Pages similar to user Profiles. This product upgrade is the next step of the new site design, launched in September 2008, and supports Facebook's mission to make the world more open and connected.

facebook

Plaintiff's Trial Exhibit

PTX-300

Case No. 08-CV-00862



Facebook Pages

Overview

A Facebook Page is a customizable presence for an organization, product, or public personality to join the conversation with Facebook users. The Page focuses on the stream of content posted by the Page administrators.

By leveraging the real connections between friends on Facebook, a Page lets Fans become brand advocates. Posts by the Page will start to appear in News Feed, giving Pages a stronger voice to reach their Fans.

In addition, Pages now have the flexibility of multiple customizable tabs previously exclusive to user profiles.

Facebook Page





Key New Features and Opportunities

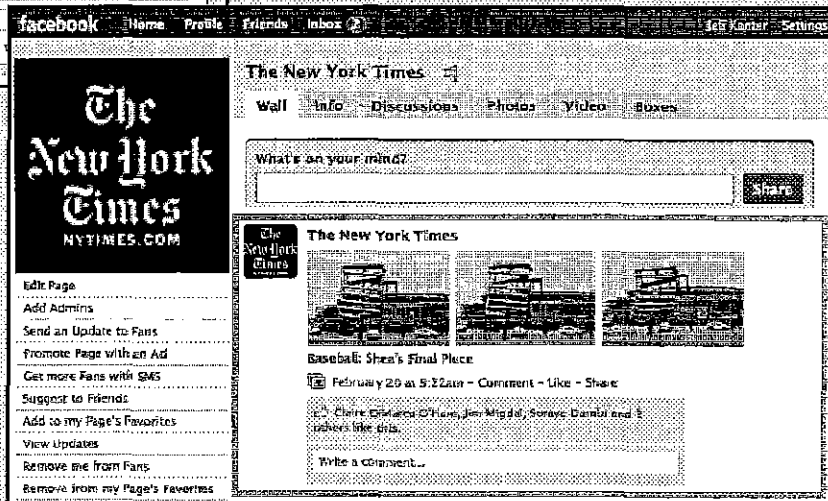
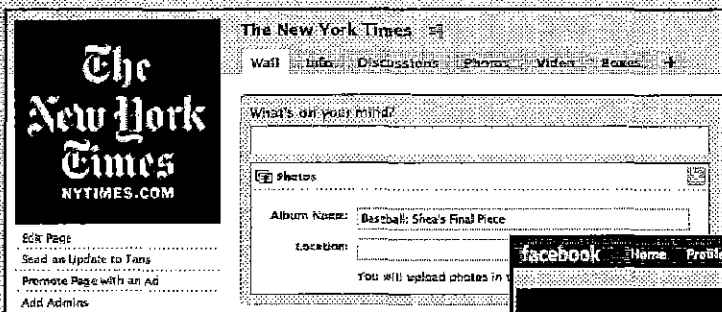
Easier Publishing

Enhanced Wall

The Page's Wall tab will enjoy the same rich, multi-media functionality as the Wall tab on a user Profile. The Wall is a central location for recent information posted by you and about you. It's where you keep your up-to-date content, and where Fans can contribute.

It's important that Facebook Page administrators have control over their own Facebook Page. When you share content (videos, photos, notes, etc.) on one of your tabs other than the Wall, you'll have the choice of whether or not to publish to your stream. If you do choose to publish the post, it will go into your Page's Wall. These posts can appear in your Fans' News Feeds.

Publishing to Wall





Key New Features and Opportunities (continued)

Encouraging More Social Actions

Update and share

Like a user profile, your Page can now update its Fans with statuses—short text-only messages. These statuses will appear in Fans' News Feeds.

Status Update

The screenshot shows the Facebook page for 'The New York Times'. At the top, there are navigation tabs: Wall, Info, Discussions, Photos, Video, Boxes, and a plus sign. Below these is a text input field with the placeholder 'What's on your mind?' and a 'Share' button. A secondary line of text says 'Join our latest conversation on the discussions tab' with another 'Share' button. Below the input field are options for 'Add: Photos' and 'Video'. A navigation bar below the update form includes 'The New York Times', 'Just The New York Times', 'Just Fans', and 'Settings'. A post from 'Josh Wiseman' is visible, stating 'love this page' at '3:27pm'.

The screenshot shows a Facebook News Feed for a user named 'Heles'. The feed starts with a 'Welcome, Heles.' message. The first post is from 'Ultras' with a 'Share' button. The second post is from 'Facebook' with a 'Share' button. The main post is from 'The New York Times' with the text 'The New York Times join our latest conversation on the discussions tab' and a timestamp of '6:46pm'. Below this is a post from 'Sean Brutch' with a link to 'Calif. Legislators Support Bid To Overturn Prop. 8' and a timestamp of '6:00pm'. The next post is from 'Brandon Brock' with a link to 'us.com.br...yaho.com' and a timestamp of '5:58pm'. On the right side of the feed, there are sections for 'TODAY' (listing birthdays), 'HIGHLIGHTS' (listing an event), and a 'Connect with more friends' section.

News Feed story



Key New Features and Opportunities (continued)

Richer Experiences

Tabbed Structure

The tabbed structure multiplies your possibilities. Similar to their functionality in user Profiles, tabs help keep Pages organized so people know where to go to get different pieces of information. The Wall tab is for dynamic content, the Info tab has static information, the Photos tab contains photos albums and Fan photos, etc.

Facebook has already made several of its core Facebook Page applications available for tabs, including Events, Reviews and Discussions. If the functionality you want for your Facebook Page isn't yet available via an existing application, you can build your own. Third party developers can also use tabs. Since each tab has its own URL, you can choose any of them as the landing Page for your Facebook Ads and off-site promotion. You can also choose which tab to set as the default when users who aren't yet Fans organically navigate to your Facebook Page from within Facebook.

Photos tab

The screenshot shows the 'Photos' tab of a Facebook Page for 'The New York Times'. The page header includes the logo and navigation tabs: Wall, Info, Discussions, Photos (selected), Video, and Boxes. Below the header, there is a '+ Create a Photo Album' button. The main content area displays 'The New York Times's Albums' with 566 photo albums and a 'View Comments' link. A pagination control shows '1 2 3 & 5 Next'. Five photo album thumbnails are visible, each with a title and photo count:

- Fashion & Style: At the Parties** (3 photos)
- Travel: A Weekend in Washington, D.C.** (3 photos)
- Home & Garden: Box of Tricks** (2 photos)
- Baseball: Sox's Final Piece** (2 photos)
- Profile Pictures** (12 photos)



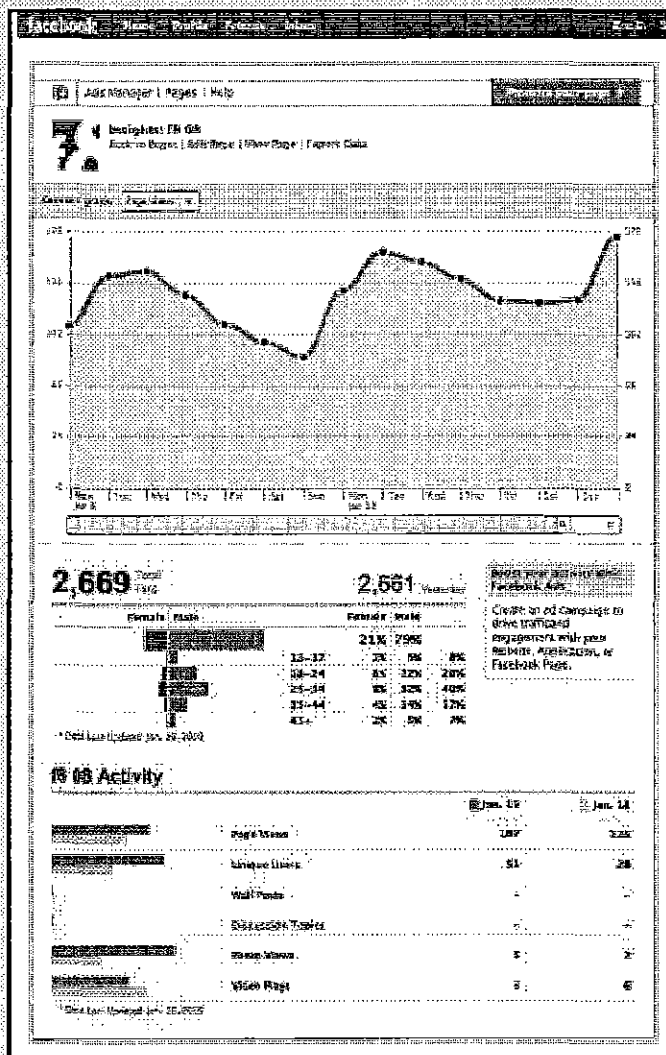
Key New Features and Opportunities (continued)

Additional Insights

Measuring Engagement and Interaction

The Facebook Pages Insights tool will include new data on Fans' engagement with posts from your Page. You'll be able to see how many comments Fans make on your posts, and you'll also be able to track how many Facebook users start and stop viewing your posts in News Feed.

Insights Tool





Product Specifications

Key Elements & Product Specifications

Getting Started

When you create your Page, you must select a permanent name and category. Thereafter, most of the settings and features you choose for your Page can be revised at any time—including your profile picture, which is the first thing to add.

Tabs

The layout of a Facebook Page is flexible. You can add up to 6 visible tabs to your Page, and more that can be exposed by the user.

Profile Picture
You can use a JPG, GIF or PNG.

Blurb Box

This short blurb can be a tagline, motto, greeting and/or a space to share more information about your business or organization or product. Can be up to 130 characters.

Application Boxes

You can also include up to 4 application boxes on your Wall/Info tab in the left-hand 200 px column.

Status

Update your Page's status. Can be up to 160 characters, not including the Page name.



Left column (static) 200 px

Main column 540 px



Product Specifications (continued)

Update Streams

Wall

The Wall tab closely resembles the Wall tab on a user profile. You and your Fans can use the turnkey publisher tool in the main column to share comments and even rich media. Posts by your Page go to your Fans' News Feeds, and comments by your Fans go to their friends' News Feeds. Those posts will hyperlink back to your Page.

Adjust your Wall tab settings to control what content Fans can post to your wall, whether that content appears in the default Wall view and what the default landing Page looks like for non-Fans (the default view for Fans and logged-out visitors will always be the Wall tab).

The New York Times

Wall Info Video Photos Discussions Boxes +

Write something...

The New York Times Just Fans

View Settings

Default View For Wall:

Default Landing Tab for Everyone Else:

Auto-Expand Comments: Comments on my stories will be expanded by default

Fan Permissions

Fans can write on the wall: Fans can write on the wall

Posting Ability: Allow fans to post photos
 Allow fans to post videos
 Allow fans to post links

Wall Tab Settings

facebook Home Profile Friends Inbox

The New York Times

Wall Info Discussions Photos Video Boxes +

What's on your mind?

The New York Times Just The New York Times Just Fans

Peter X. Deng Best paper in the world
Yesterday at 12:45pm

The New York Times

Busobath Shea's Final Piece
February 20 at 9:22am • Comment • Like • Share

Chris DeBacco, O'Hare, Jim Magdal, and 5 others like this.

Write a comment...

The New York Times

Fans
6 of 369,220 fans See All

Jana Bels-wenger
Dorothy Conway
Jackie Chang
Athalia Lagusara
Heleen Min
Jen Rosa



Product Specifications (continued)

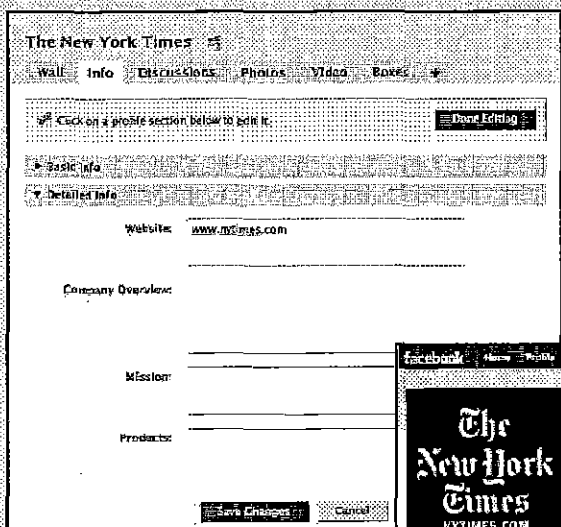
Tabs

By default, a Facebook Page has a Wall Tab, and Info Tab and a Boxes Tab if your Page has applications.

The Info tab lets you share key information about your company such as website, mission, overview, and products. Depending on which category of Page you create, different fields will be available. For example, for a film Page, fields like release date, genre, and studio are available, whereas for a restaurant Page, fields like location, attire, and culinary team are available. The information appears in the main column.

The Boxes tab is where you can add application modules in the wide and narrow columns. You can 'drag and drop' the application modules around the Page. Some applications, however, are designed for only the main or narrow column of the Page.

Info tab

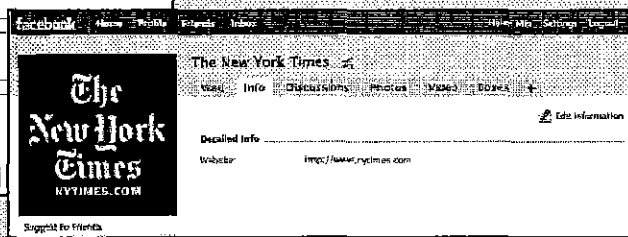


Boxes tab



Wide Column
380 px

Narrow Column
200 px



Left Column
200 px

Main Column
540 px



Product Specifications (continued)

The applications you can choose for your Boxes tab include:

Discussion Boards: Users can discuss your products, promotions, and more. This application is available as a full tab.

Video: You can upload an unlimited number of videos to your Facebook Page. You can choose whether or not to allow Fans to upload their own videos. This application is available as a full tab.

Facebook supports high definition video and audio. Please target your video to have the highest image quality possible while still under the 1GB limit.

Acceptable Formats—

.mpe (MPEG Video)	.vob (DVD Video)	3gp (Mobile Video)
.mpeg (MPEG Video)	.wmv (Windows Media Video)	3gpp (Mobile Video)
.mpeg4 (MPEG-4 Video)	.mov (QuickTime Movie)	.asf (Windows Media Video)
.nsv (Nullsoft Video)	.mp4 (MPEG-4 Video)	.avi (AVI Video)
.ogm (Ogg Format)	.flv (Flash Video)	.m4v (MPEG-4 Video)
.qt (QuickTime Movie)	.3g2 (Mobile Video)	.mkv (Matroska Format)

Photos: You can upload unlimited photos and choose whether or not to allow Fans to upload their own photos. This application is available as a full tab.

Events: Inform Fans of movie premieres, in-store sales, concert dates and more by posting an event. Once a user RSVPs, it will be added to her calendar, and her friends may see the event in News Feed. This application is available as a full tab.

Static FBML: FBML, Facebook's version of HTML, lets you customize a rich, interactive experience. You can add as many as 10 FBML modules to the Boxes and "Wall" tab of your Page (up to four on the Wall tab). The Static FBML application is also available as a full tab, where you can embed Flash animations. The FBML tab can be as wide as 760-pixels and has no restrictions on height.

Reviews: Users can write a one- to five-star review. This application is available as a full tab.

Other Platform applications: There are thousands of Facebook Platform applications built by 3rd party developers available for use on your Facebook Page. Over time, more and more of these will be available as full tabs for your Page.

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
)	
FACEBOOK, INC.,	)	PUBLIC VERSION
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

**DECLARATION OF RYAN HOPKINS IN SUPPORT OF PLAINTIFF LEADER
TECHNOLOGIES, INC.'S OPPOSITIONS TO DEFENDANT FACEBOOK, INC.'S
RENEWED MOTIONS FOR JUDGMENT AS A MATTER OF LAW**

VOLUME 2 – EXHIBITS 26-28

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*Attorneys for Plaintiff and Counterdefendant
Leader Technologies, Inc.*

Dated: September 15, 2010
Public Version: September 22, 2010

I, Ryan Hopkins, hereby declare as follows:

1. I am an attorney with the law firm King & Spalding LLP, counsel for Plaintiff Leader Technologies, Inc. I have personal knowledge of the facts set forth in this declaration and can testify competently to those facts. I make this declaration in support of Plaintiff Leader Technologies, Inc.'s Oppositions to Facebook, Inc.'s Renewed Motions for Judgment as a Matter of Law ("Leader's Oppositions to Facebook's JMOL Motions").

2. Attached hereto is a true and correct copy of documents referenced in Leader's Oppositions to Facebook's JMOL Motions:

Exhibit	Trial Exhibit	Description
1	PTX 1	U.S. Patent No. 7,139,761, bearing bates numbers LTT 000001-31
2	PTX 145	Facebook Wiki Page, bates numbered FB00109890-91
3	PTX 180	Facebook Wiki Page, bates numbered FB00109965-66
4	PTX 190	Facebook Wiki Page, bates numbered FB00109982-83
5	PTX 191	Facebook Wiki Page, bates numbered FB00109984-87
6	PTX 208	Facebook Wiki Page, bates numbered FB00110029
7	PTX 252	Facebook Wiki Page, bates numbered FB00110111-12
8	PTX 269	Facebook Wiki Page, bates numbered FB00110138-39
9	PTX 277	Facebook Mobile Client, bates numbered FB00110536-43
10	PTX 300	Facebook Pages, bates numbered FB00112895-904
11	PTX 302	Politician Users Guide To Facebook, bates numbered FB00113052-71
12	PTX 341	Facebook Wiki Page, bates numbered FB00113847

Exhibit	Trial Exhibit	Description
13	PTX 628	Facebook Website Pages, bates numbered LTI 000717-24
14	PTX 629	Facebook Website Pages, bates numbered LTI 000770-80
15	PTX 882	Facebook Website Pages, bates numbered LTI 156866-70
16	PTX 886	Facebook Website Pages, bates numbered LTI 156902-05
17	PTX 904	Facebook Website Pages, bates numbered LTI 156964-67
18	PTX 906	Facebook Website Pages, bates numbered LTI 156970-72
19	PTX 907	Facebook Website Pages, bates numbered LTI 156973
20	PTX 911	Facebook Website Pages, bates numbered LTI 156982-87
21	PTX 920	Facebook Website Pages, bates numbered LTI 157010-11
22	PTX 942	Facebook Website Screenshots, bates numbered LTI 157081-137
23	PTX 1000	Facebook Statement of Rights and Responsibilities, bates numbered LTI 157155-57
24	PTX 1001	Facebook's Privacy Policy, bates numbered LTI 157158-61
25	DTX 919	U.S. Patent No. 6,236,994 ("Swartz")
26	DTX 922	European Patent Application No. EP 1 087 306A2 ("Hubert")
27	DTX 1010	iManage DeskSite 6.0 User Reference Manual

Exhibit	Trial Exhibit	Description
28		Transcript of Trial Proceedings, Pages 244, 473-493, 506-829, 862-863, 883-884, 914-916, 969-973, 1003, 1074, 1142, 1387-1878, 1884, 1923-24
29		Chart of Testimony Supporting Literal Infringement of the '761 Patent
30		Chart regarding Dr. Giovanni Vigna's Testimony Compared to His Expert Report
31		Chart of Dr. James Herbsleb's Testimony Supporting Validity of the '761 Patent
32		Email from counsel for Leader, James Hannah, to counsel for Facebook, Jeff Norberg, dated August 26, 2010
33		Deposition transcript of Saul Greenberg taken April 30, 2010, Page 192
34		Letter from Melissa Keyes to James Hannah regarding Autonomy document production, dated November 20, 2009
35		USPTO Office Action from the reexamination proceedings of U.S. Patent No. 7,139,761, dated May 21, 2010
36		Expert Report of Dr. Giovanni Vigna, dated April 8, 2010

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on September 15, 2010 in Redwood Shores, California.


 Ryan Hopkins

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 22, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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EXHIBIT 27 PART 4

6. Click **Compare** to perform the comparison.

Using FullAuthority or CiteRite

FullAuthority and CiteRite are software applications provided by Lexis-Nexis that enable you to analyze the citations in a document. For the FullAuthority and CiteRite menu options in iManage DeskSite to work properly, these applications must be integrated correctly with iManage DeskSite.

To analyze citations in a document using FullAuthority or CiteRite:

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1. Highlight a document in the document grid.
2. Select **Applications** from the **Document** menu.
3. Select **FullAuthority** or **CiteRite** from the submenu that appears. The *FullAuthority* or *CiteRite* dialog box appears with the highlighted document listed in the dialog box.
4. In the **Output Doc Name** field, enter a filename that will be used to store the table of authorities or citation report that will be produced by FullAuthority or CiteRite.
 - Select the **Open** radio button to open the output file automatically.
 - Select the **View** radio button to view the output file in the iManage Viewer
 - Select **Import** to add the output file to an iManage library.
5. Click **Run** to run FullAuthority or CiteRite analysis on the selected document.

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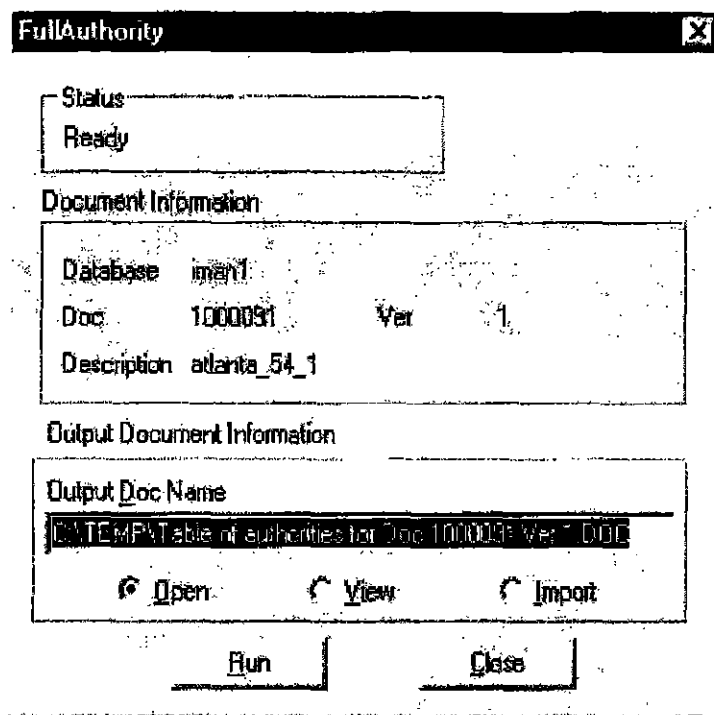


Figure 6.2: FullAuthority dialog box

Configuration Options

iManage DeskSite allows you to customize the way information is displayed. To access the *Display Options* dialog, select **Options** from the **Options** menu. The *Configure* dialog is displayed in three tabs, Select Profile Fields, Defaults, and Configure.

Select Profile Fields Tab

The **Select Profile Fields** tab allows you to customize which profile fields display in the Document Grid and the Document Profile tab in the Document Results Frame.

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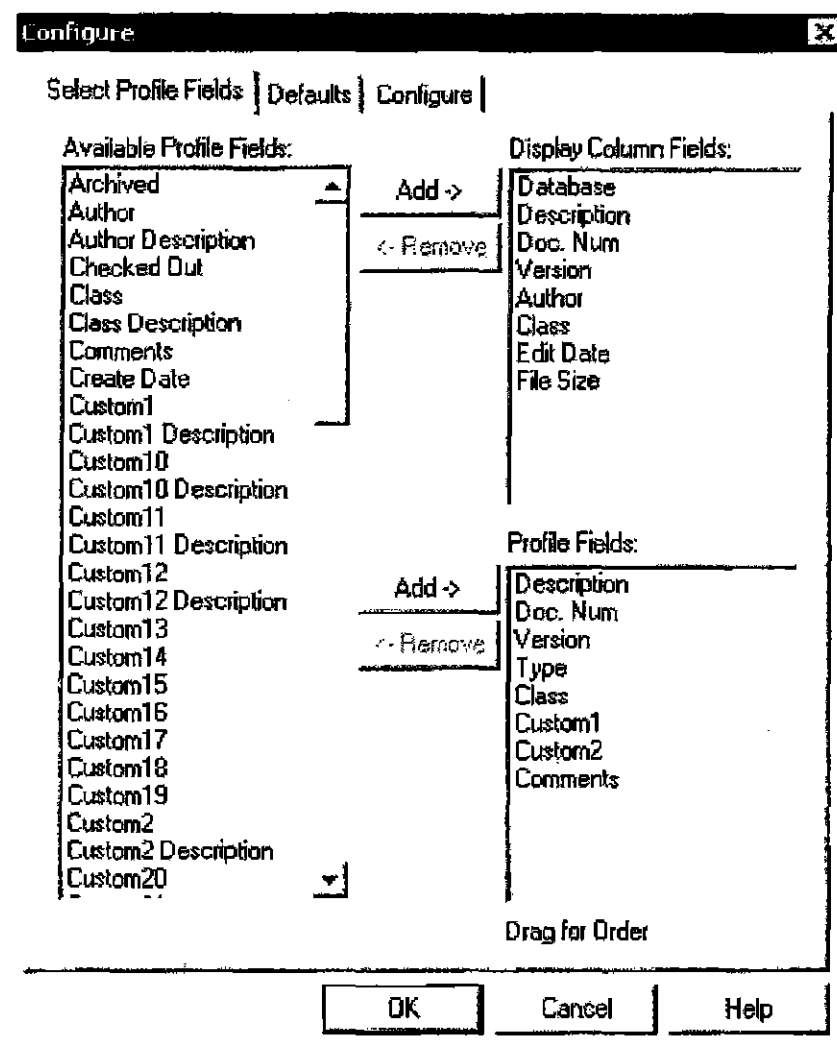


Figure 6.3: Configure dialog, Select Profile Fields tab

To customize the Document Grid

The **Display Column Fields** list contains those fields that are already selected to be included in the Document Grid (upper right side of the iManage DeskSite Desktop). The column fields appear in the Document Grid in the same order in which they appear in this list.

1. To add profile fields to this list, select the desired field(s) from the **Available Profile Fields** list and click **Add**.
2. To remove a profile field from the Document Grid, select the fields in the **Display Column Fields** list and click **Remove**.

3. Drag and drop the selected fields into the desired order.

To Customize the Document Profiles tab of the Document Results Frame

The **Profile Fields** list contains those fields that appear in the *Document Profiles* tab of the Document Results frame in the lower-right side of iManage DeskSite Desktop. These fields appear in the same order in which they appear in the list.

1. To add profile fields to the **Profile Fields** list, select the desired field(s) from the Available Profile Fields list and click **Add**.
2. To remove profile fields from the profile list, select the fields in the Display Column Fields list and click **Remove**.
3. Drag and drop the selected fields into the desired order.

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Defaults Tab

A number of different system settings are completed in the **Default** tab of the *Display Options* dialog.

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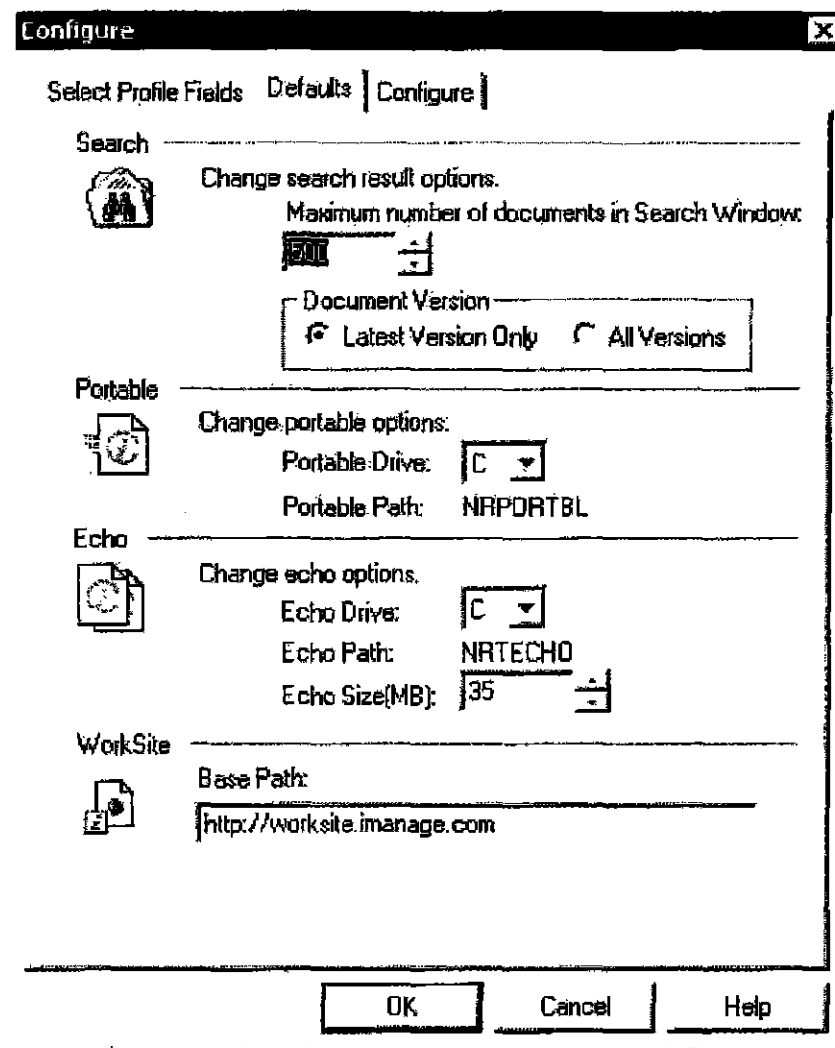


Figure 6.4: Configure dialog, Defaults tab

Options of the Defaults tab:

- In the **Maximum Number of Documents in Search Window** field, enter the maximum number of documents that should appear in the Document Grid as the result of a search. The default value is 500.
- In the **Document Version** box, select either **All Versions** or **Latest Version Only**.

Note: If you select **Latest Version Only**, you can still locate all the versions of a document in the library by highlighting the document in the grid, then clicking the *Document Versions* tab.

Chapter 6: iManage DeskSite Advance Functions

- In the **Change Portable Options** box, you can change the drive designation of your Portable directory. The Portable Path is hard-coded to **NRPORTBL**.
- In the **Change Echo Options** box, you can change the drive designation of your echo directory and the size, in megabytes, of the Echo Directory. The Echo path is hard-coded to **NRTECHO**. You can also change the size of your Echo Directory by clicking the up or down arrows next to the **Echo Size (MB)** field.
- In the **WorkSite** box, you can enter the URL for accessing imanage WorkSite in the **Base Path** field. iManage DeskSite uses this information when you enter the commands **Send Document URL Link** or **Send Folder URL Link** from **Send** on the **Document** menu.

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Configure Tab

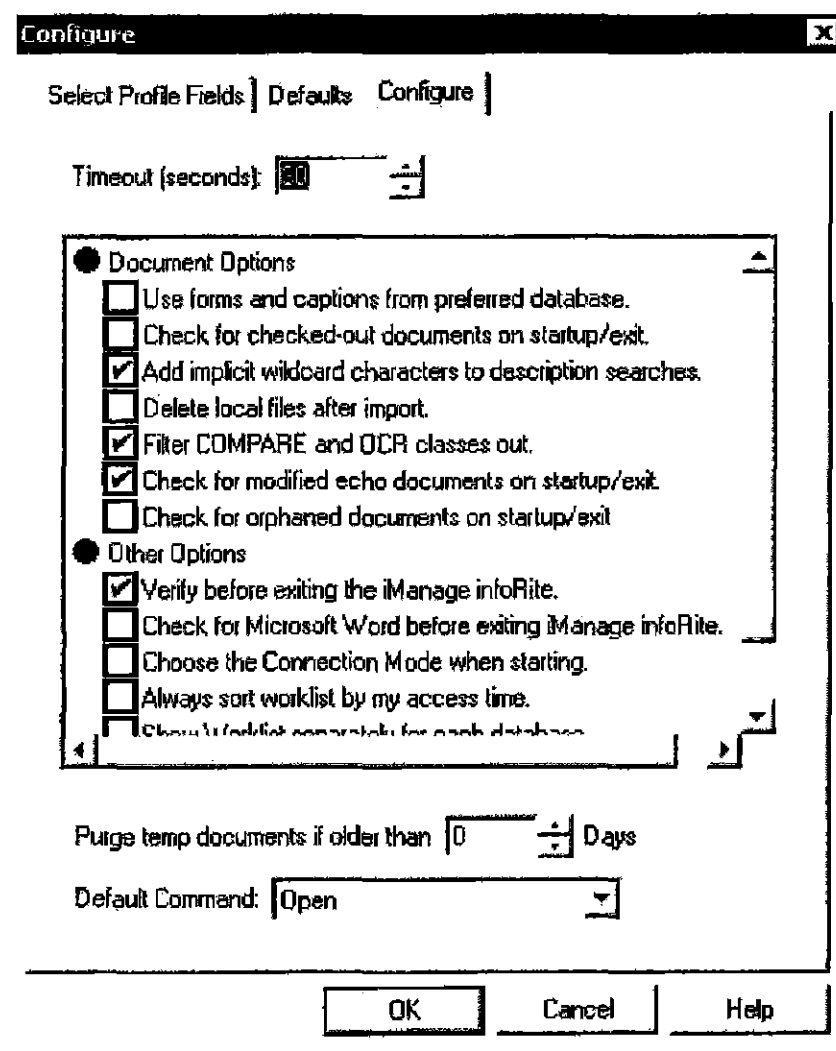


Figure 6.5: *Advanced Options* dialog, **Defaults** tab

Timeout Option

Use the **Timeout** option to determine how long the iManage DeskSite client waits before timing out. The default value is 30. You may need to increase this value when connection times are slow or when downloading large files, for example, over a WAN connection.

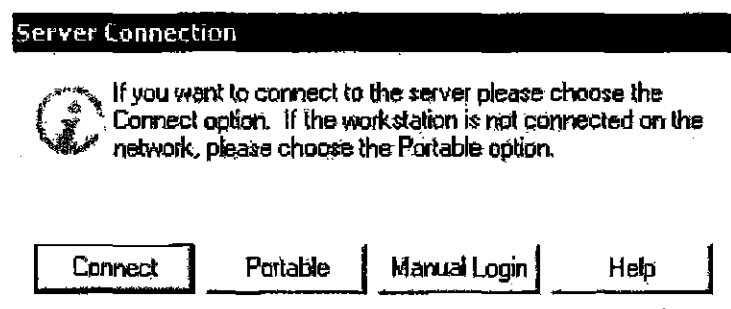
Document Options

- When **Use Forms and Captions from preferred database** is checked, the iManage DeskSite client downloads the Forms and Captions stored on the user's Preferred Database as you need them and applies these forms and captions to other databases. When this option is not checked, Forms and Captions are downloaded from each individual database as you need them.
- When **Check for Checked Out Documents on startup/exit** is checked, the iManage DeskSite client presents an alert message immediately after login whenever it detects altered checked out portable documents on your hard drive.
- When **Add implicit wildcard characters to description searches** is checked, iManage automatically inserts an asterisk at the beginning and end of the search string in the description field when performing a profile search.
- When **Delete local files after import** is checked, iManage removes documents from your local drive after you import them to iManage DeskSite.
- When **Filter COMPARE and OCR classes out** is checked, iManage DeskSite excludes all documents with the COMPARE and OCR (optical character recognition) document classes. If you want to include documents created with document comparison or OCR software, make sure this box is not checked.
- When **Check for modified echo documents on startup/exit** is checked, the iManage DeskSite client presents an alert message immediately after login whenever it detects altered echo documents on your hard drive.
- When **Check for orphaned documents on startup/exit** is checked, the iManage DeskSite client presents an alert message immediately after login whenever it detects orphaned documents on your hard drive. See "Orphan Documents" on page 195 for more information about orphaned documents.

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Other Options

- When **Verify before exiting iManage DeskSite** is checked, you get a message asking if you are sure you want to close iManage when you click the exit button or select Exit from the File menu.
- When **Check for Microsoft Word before exiting iManage DeskSite** is checked, iManage DeskSite determines if the Microsoft Word application is open. If so, you receive a warning message asking if you want to close iManage DeskSite even though Word is still running.
- When **Choose connection mode when starting** is checked, you have the option of connecting to the server, working in Portable mode, or logging in manually.



6 Figure 6.6: *Server Connection* dialog

- If you choose **Connect**, iManage DeskSite opens and connects to the servers that are registered and selected for auto login.
- If you choose **Portable**, iManage Portable opens.
- If you choose **Manual Login**, the *Register Servers* dialog opens so you can log into the servers you choose. See "Connecting to WorkSite Middle Tier Servers" on page 44.
- When **Always sort worklist by my access time** is checked, the work list on the document grid sorts in the order in which the current user accessed the documents. This order may differ from the actual edit time of some documents since the edit time of a document changes if another user accesses the file.
- When **Show Worklist separately for each database** is checked, the tree frame shows both a consolidated worklist that includes all databases and an individual worklist for each database that shows the documents that you worked on most recently from just that database.
- When **Show overflow message if search returns have more entries** is checked, you receive an indicator in the status bar showing that your search request received more matches than in the search results list.



Figure 6.7: Overflow indicator

Purge temp documents if older than __ Days

When you perform Print, View and Quick View operations in iManage DeskSite, the system creates temporary files on your computer. This setting lets you determine how long to retain these files. When you close iManage DeskSite, these files are permanently deleted after the number of days you specify here.

Default Command

Select from the list of commands in the **Default Command** drop-down menu to decide what a double-click should signify in the Document Grid. See the table below for details. Click **OK** when you have finished setting defaults.

Table 6.1: Options for double-clicking in the grid

If you select...	When you double-click on a document in the grid...
Open	iManage DeskSite opens the document in its associated application.
Edit Profile	You can view or edit profile information for the document.
Print	iManage DeskSite prints the document.
Quickview	The document appears in the Quickview frame.
View	iManage DeskSite opens the document in the View application.
Versions	The document version tab displays a list of all the versions of the document.
History	Document activity history for the document is displayed
Related Documents	The related document tab displays a list of all the document related to the selected document.
Checkout	The <i>Checkout</i> dialog box appears with the document listed as the document to be checked out.
Checkin	The <i>Checkin</i> dialog box appears with the document listed as the document to be checked in.
Checkedout Info	iManage DeskSite opens the Checkedout Info message box.
Export	iManage DeskSite opens the <i>Export</i> dialog box.
Unlock	iManage DeskSite unlocks the document.
Remove from Folder	iManage DeskSite removes the document from the current folder. The document is still in the library.
Purge	iManage DeskSite deletes the document from the library.

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CHAPTER 7

iManage View

Overview

iManage View lets you view documents without the need to launch their native applications. You can view multiple documents and print all or portions of the documents being viewed.

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To view documents from the *iManage DeskSite* program, select one or more documents you want to view in the document grid, then select **View** from the **Document** menu. A submenu appears; select **View** again from the submenu. If iManage View is not running, iManage DeskSite launches iManage View, then displays the documents in read-only format. You can also display documents in iManage View by highlighting multiple documents, then clicking on the **View** button in the toolbar.

To view documents from the *iManage Integrated Desktop*, select documents in the documents list and right-mouse-click. Then choose **View** from the pop-up menu. The iManage View program will launch with the documents displayed in a view window.

You can also launch the iManage View application manually.

iManage View allows you to:

- View documents in read-only format even when they are checked out or in use.
- Search the full text of documents currently displayed in the viewer.
- Copy portions of documents for pasting into other applications

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- Print documents

File types supported by iManage View include all major word-processing, spreadsheet, and graphics file formats.

Note: When you view documents using iManage View, those documents are not locked or checked out of the database. Instead, the iManage View program makes a temporary copy of the document, which is displayed in read-only format.

Document Types Supported

The major word processing, spreadsheet, and graphic formats supported by iManage View are listed below:

Word Processing Formats

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Word for Windows 1.0, 2.0, 6.0/7.0 and 2000
WordPerfect for Windows or DOS 5.0, 5.1/5.2, 6.0 and 7.0
Ami Pro 3.0
Word Pro
Windows Write
Word for DOS 5.x and 6.0
Professional Write 2.0
Display Write
MultiMate
OfficeWriter
Wang PC
FrameMaker Interchange Format (MIF) (text only)
StarOffice Writer 5.2 (text only)
ANSI Text

Spreadsheet Formats

Excel 3.0, 4.0, 5.0 and 7.0
Lotus 1-2-3 for Windows or DOS 3.x and 4.x
QuattroPro for Windows

Graphic Formats

- Windows Bitmap
- Windows Metafile
- WordPerfect Graphic 1.0, 2.0
- Ami Draw
- Tagged Image File Format TIFF
- Micrografx DRW
- CompuServe GIF
- Paintbrush PCX

Miscellaneous Formats

- Adobe Acrobat PDF (text only)
- Website META Language (WML)

Presentation Formats

- Microsoft PowerPoint

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iManage View Window

If you launch iManage View manually, the *iManage View* window initially contains no documents. If launched automatically—such as when you select the **View** option in iManage DeskSite—this window contains read-only copies of the documents that you selected. Below is an example of the *iManage View* window with three local documents displayed in tile format.

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iManage DeskSite User Reference Manual

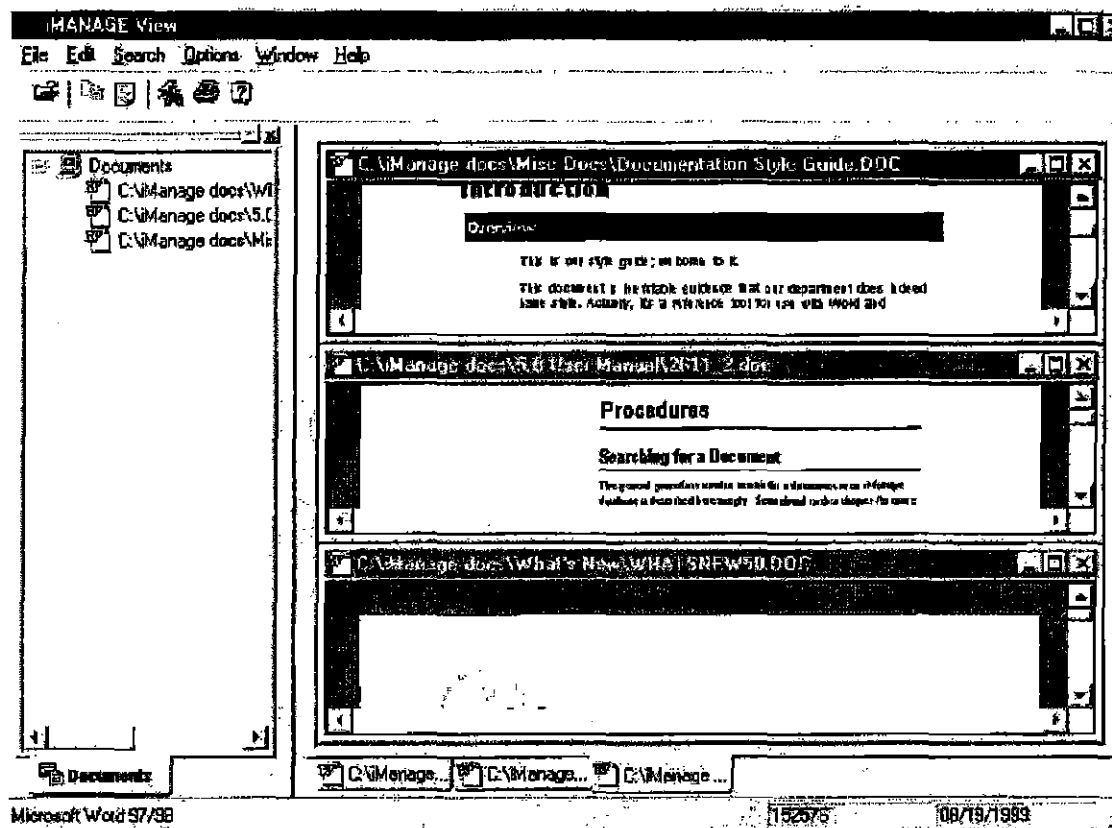


Figure 7.1: iManage View with documents displayed in cascade format

Tile and Cascade Formats

You can display documents in cascade or tiled format. Figure 7.1 shows an example of the *tiled* format. Following is an example of the same iManage View window with the three documents displayed in *cascade* format. You can also display other documents in the window as minimized icons.

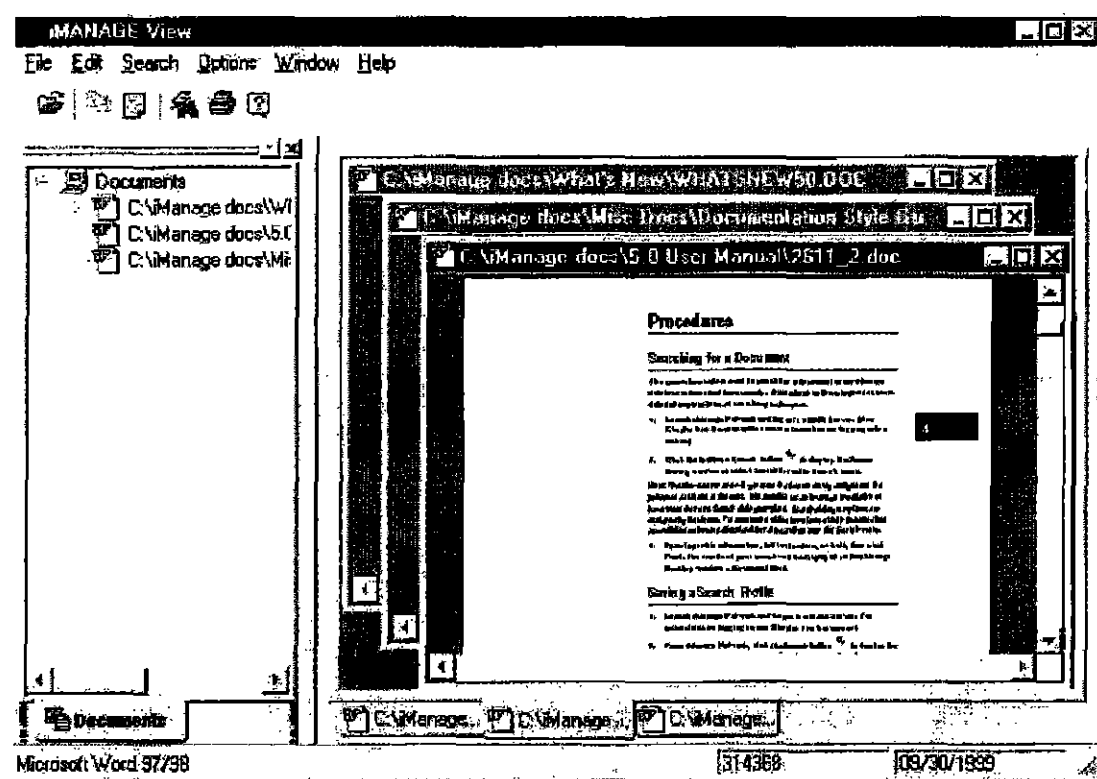


Figure 7.2: iManage View with documents displayed in cascade format

Viewing Local Files

You can use the iManage View program to view documents on an iManage database and/or documents that are stored locally on your hard drive or another network drive.

To view local documents:

1. Launch the iManage View program.
2. Select **Local Open** from the **File** menu. The *Select Local File to View* dialog box opens.

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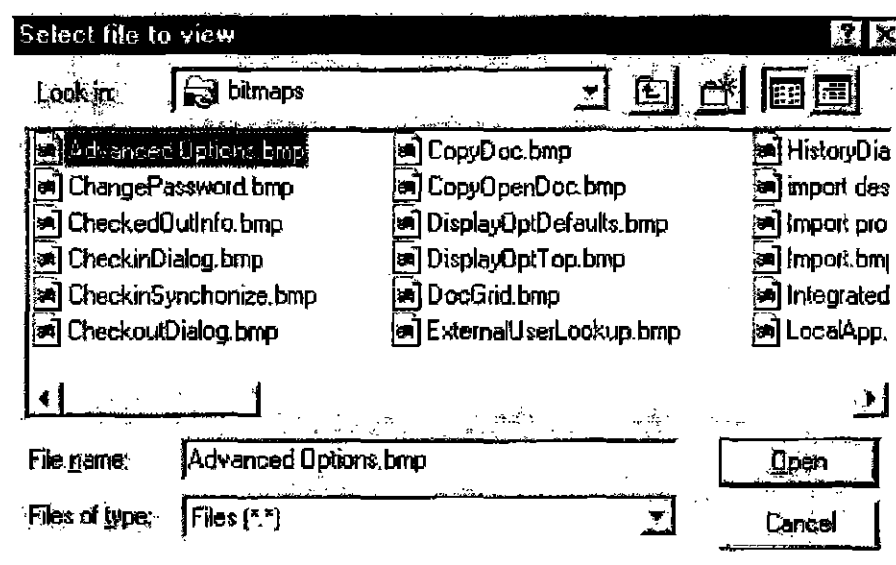


Figure 7.3: Select Local File to View dialog box

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- Use standard Windows techniques to locate and select a local file to view in the iManage View program, then click **Open** to display the file in the view program.

Searching the Full Text of Documents

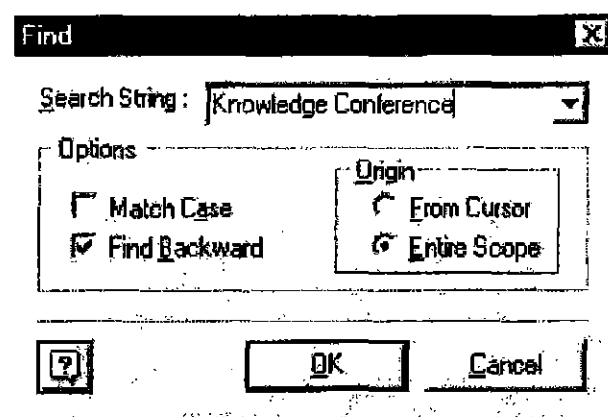



Figure 7.4: You can use the *Find* dialog box to search the full text of any documents displayed in iManage View

Note: The *Find Text* dialog box operates only on the active document displayed in iManage View. That document must be a word-processing document or spreadsheet. Textual searches cannot be performed on other document types.


1. Select **Find** from the **Search** menu.
2. Enter the text for which you want to search in the **Search String** field.
3. If you click the down arrow , you can select from a list of search strings that you entered previously.
4. Click **OK** to start searching.

Search Options

- The **Match Case** option specifies whether the search should be case-sensitive. If you do not check **Match Case**, all instances of your search string will be found regardless of whether they appear in upper or lower case.
- The **Origin** options specify where the search should start. If **From Cursor** is selected, the search will begin at the current position of the cursor in the active document. If **Entire Scope** is selected, the search will begin at the start of the document and proceed forward, or at the end of the document and proceed backward, depending on which direction is selected.
- The **Find Backwards** option specifies the direction the search should proceed.

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Printing Documents

You can print all or portions of documents that are displayed in iManage View by clicking on the Print icon  or by selecting **Print** from the **File** menu. You may also select **Copy** from the pop-up menu on a right-mouse-click. When you select **Print**, a standard *Print* dialog box appears. The **Print** option operates on only the currently active document in the iManage View window.


Setting Print Options

You can set printer options from the iManage View window by selecting **Printer Setup** from the **File** pulldown menu. A standard *Print Setup* dialog box appears.

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Copying Documents

You can copy all or portions of documents for pasting into other applications by highlighting the portion of the document that you want to copy, then clicking the

Copy icon  or selecting **Copy** from the **Edit** menu. You may also select **Copy** from the pop-up menu on a right-mouse-click.

Setting Display Options

You can display documents in iManage View in a number of different formats. Different documents can be displayed in different formats at the same time.

Word-Processing Documents

You can display word-processing documents in **Draft**, **Normal**, or **Preview** mode:

- **Draft mode** displays the document using the default font without the original formatting. Text wraps as necessary to display all text in the view window.
- **Normal mode** displays the document using the specified fonts in the documents and using the specified formatting. Text wraps inside the view window to display all text in the document.
- **Preview mode** displays the document using the specified fonts and specified formatting. Text does not wrap in the view window. Preview mode shows how the document would look when printed.

Bitmap Files

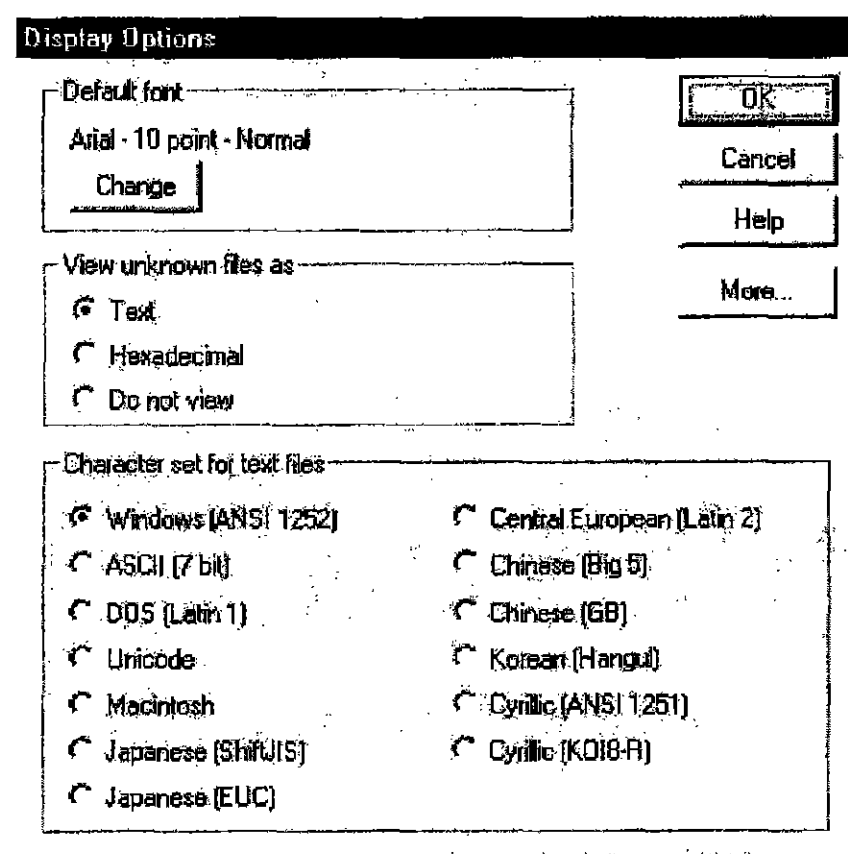
You can adjust the size of bitmap files that are displayed in the iManage View program and/or rotate these images in the display by increments of 90°. To change the size or rotation of a bitmap image, select the window in which the image is displayed, then select **Bitmap** from the **Options** menu. A submenu of display options appears. Select the size and/or rotation desired.

Vector Graphics

You can adjust the size of vector graphics files that are displayed in the iManage View program by selecting **Vector** from the **Options** menu. A submenu of display options will be displayed. Select the option desired.

Setting Default Display Options

You can select a default font that will be used to display ANSI text and select a file format to use to view files of unknown type. To set these options, select **Options, Document, then Font**. The *Display Options* dialog box will be displayed. The *Display Options* dialog box lets you specify iManage View's default fonts and file formats.



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Figure 7.5: *Display Options* dialog box

- To change the default font of ANSI files, click the **Change** button. A standard *Windows Fonts* dialog box appears, allowing you to specify the font.
- To set the default display mode for documents of unknown file type, select the corresponding display option.
- To display additional options, click **More**. The *More Display Options* dialog box appears.

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More Display Options

You can also set display options that specify how to display database tables and spreadsheet information. If you want to show gridlines for either of these displays, check the **Show gridlines** options.

The *More Display Options* dialog box is displayed by clicking on the **More** button in the *Display Options* dialog box.

Note: The options included for specifying display options for archived documents are not implemented.

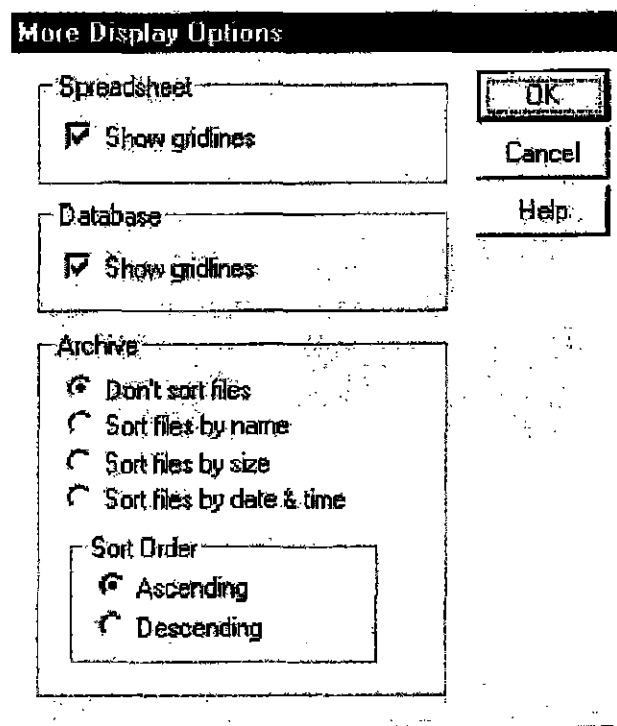


Figure 7.6: *More Display Options* dialog box

CHAPTER 8

iManage Portable

Overview

A portable mode of operation allows you take the iManage DeskSite document management system on the road with you and helps you synchronize your work with the network when you get back to the office. The process works like this:

1. A user checks out the desired iManage DeskSite documents, individually or en masse.
2. Once disconnected from the network, you can access portable documents through the iManage Portable application or through the standard commands (open, save, etc.) of an integrated application.
3. When the user re-attaches to an iManage DeskSite database, you can automatically check in the checked out documents and synchronize them with iManage DeskSite.

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From Portable mode while disconnected from the network you can perform the following standard iManage functions:

- Import documents and assign a new document profile
- View and Quickview documents
- Save edited documents as new documents
- Save edited documents as the same document, thereby replacing the network version when synchronized with iManage DeskSite
- Edit and View document profiles
- Send documents as attachments to emails

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What you cannot do in Portable Mode:

- Save document as a new version of the same document
- Edit document security

Note: Echo documents are also accessed through portable mode. See Chapter 9: Using Echo Documents.

Setup Procedures

Portable-mode operation does not require extraordinary amounts of memory or resources on the portable PC and does not require a separate stand-alone SQL database on the portable PC.

To access portable documents effectively, you need to set up your PC in the following manner:

- The PC must be registered for portable-mode operation.
- The PC should be able to run from a local copy of the Windows operating system.
- Local stand-alone versions of the application programs associated with the portable documents should be available on the PC.

Application Setup in iManage Portable

The local application table contains information that is used by iManage Portable to launch applications and to associate particular document types with appropriate applications. It is recommended that you do NOT edit the local copy of the application table UNLESS you understand the way applications are integrated with iManage. Information on how the application table is created and maintained and how iManage is integrated with other applications is provided in the *iManage DeskSite Administrative Reference Manual*.

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Reasons why you might need to change the local copy of the application table include:

- The path to an application changes
- You want to associate a document type with a different application
- You want to integrate an application that is not listed in the application table on the database

To Add or Edit an entry to the local application table:

1. Click the App Setup icon  or select **Local Applications** from the **Options** menu.
2. Click the **Add** or **Edit** button in the *Application Setup Information* dialog.
3. Complete the fields in the *App Setup Entry* dialog. Click **OK** when finished.

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Note: iManage Portable's on-line help contains a detailed explanation of each field appearing in the *App Setup Entry* dialog.

Checking Out Portable Documents from iManage DeskSite

iManage DeskSite provides you with the ability to check out multiple documents in a single operation for portable-mode access. The checked-out documents are marked as in use in iManage DeskSite.

The checkout process copies the documents to the portable-document location on the local PC. This location is defined during portable-mode registration.

The profile information of the checked-out documents is also copied to the local portable-document location. iManage Portable uses the local profile information to find and access portable documents. You can change the profile information in portable mode.

To checkout a document in portable mode:

1. Select a document by clicking on it in the iManage Desktop window's Document List. The document row becomes highlighted.
2. Click the Checkout toolbar button. The *Checkout* dialog box appears.

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Figure 8.1: Checkout dialog box

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3. Place a checkmark in the **Portable Checkout** field. The **Destination Path** field becomes deactivated because all portable documents are stored in the same directory.
4. Note your reason for checking out the document in the **Comments** field, specify the due date, and click **OK**. The iManage Desktop window reappears.

Working with Portable Documents from within Integrated Applications

You can open documents that are checked out in portable mode from within integrated applications.

Steps:

1. Launch iManage Portable if it is not already running.

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2. Launch the integrated application
3. Select **Open** from the **File** menu in the integrated application. The *Integrated Portable Desktop* dialog box appears.

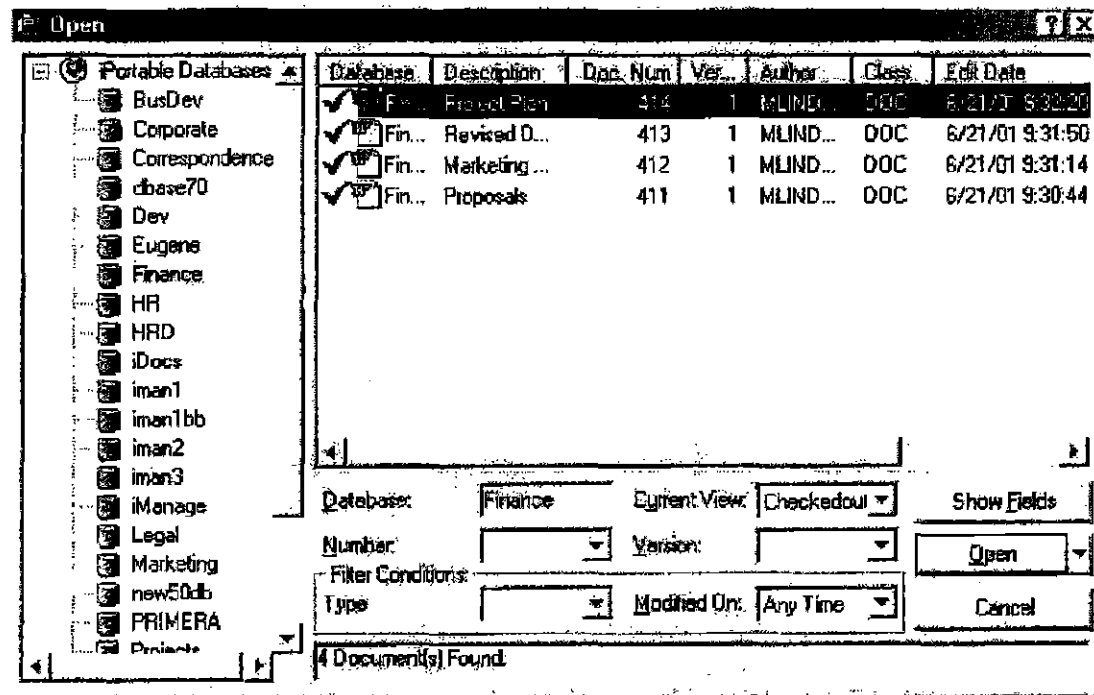



Figure 8.2: *Integrated Portable Desktop* dialog box

Working with Portable Documents from within *iManage Portable*

You may access documents directly from the iManage Portable application.

Read-only documents are indicated in the Portable directory by a locked icon .

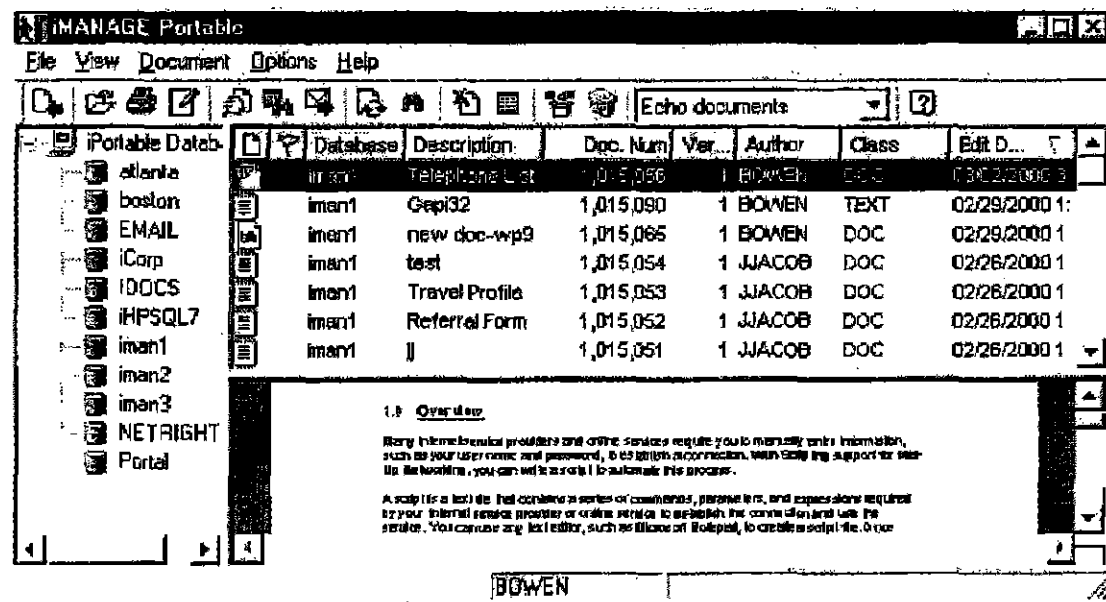



Figure 8.3: iManage Portable Application Desktop window

To Open Portable Documents

1. Launch iManage Portable and select **Checkedout Documents** from the drop down list. The *Checkedout Documents* list appears in the panel.
2. Select the desired document and click the Open icon  or just double-click on the desired document. The document opens in the local application that is associated with the document's type.

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Note: The Portable program looks for documents that were checked out by the same user whose ID was used to log into Windows. If you checked out documents for portable use using a user ID other than the one you used to log into Windows, the Portable program will not be able to find those documents. If that happens, log out of Windows and log back in using the user ID that you used to log into the WorkSite Middle Tier Server when you checked out those portable documents.

To View Portable Documents


There are two options to view portable documents.

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To view a portable document using the iManage View program:

iManage View is a sophisticated viewer program allowing you to view multiple documents at the same time and in different formats. To view a document this way, highlight the desired document(s) and click the View icon  or select **View** from either the **Document** menu or the right-click pop-up menu on the selected document.

To view a portable document using Quickview:


Quickview is an easy way to view a document without leaving the Portable application. To view a document this way, highlight the desired document and click the Quickview icon  or select **Quickview** from either the **Document** menu or the right-click pop-up menu on the selected document.

Editing/Viewing Portable Document Profiles

Portable document profile information can be accessed and edited by highlighting a document in the document list and clicking the Edit Profile icon  or by selecting **Edit Profile** from either the **Document** menu or the right-click pop up menu of the highlighted document. Profile information can then be viewed and updated. Updated profile information is verified when the portable documents are checked back into iManage DeskSite.

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Printing Portable Documents

You can print documents directly from iManage Portable by clicking on the Print icon  or by selecting **Print** from either the **Document** menu or the right-click pop-up menu on the highlighted document. This will automatically launch the document in its associated application and perform a print command.

Note: This portable print command does not launch a *Print Options* dialog box before printing. See the next section about Print and Page setup options.


Print and Page Setup Options

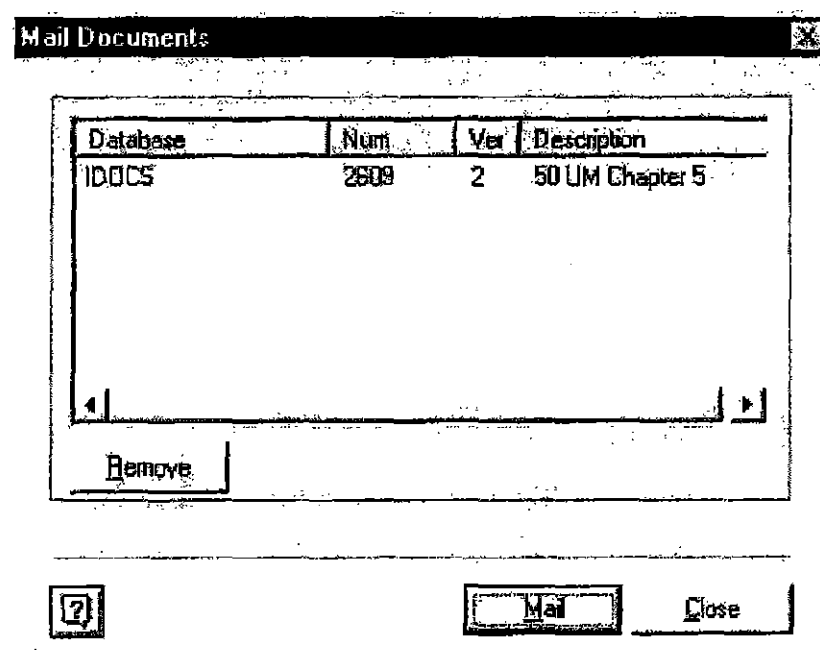
Select **Printer Setup** from the **File** menu to launch the *Printer Setup* dialog. This dialog provides choices of printers, page types and Portrait/Landscape ori-

entation formats.

E-mailing Portable Documents

From the iManage Portable application you can create a new e-mail message with selected documents as attachments.

3. Select the document or documents you wish to attach and click the Send icon  or select **Send** from either the **Document** menu or the right-click pop-up menu of the highlighted document. The *Mail Documents* window opens.



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Figure 8.4: *Mail Documents* window

4. If this is the document you want to send, click **Mail**. A new e-mail launches automatically from your e-mail application with the selected documents as attachments.
5. You can remove any document from the list by highlighting the document and clicking **Remove**.


Import Documents to iManage Portable

If you have created a brand new document while away from the network you can integrate it with iManage DeskSite when you return to connectivity. Do this with

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the Import feature.

Steps to Import:

1. Launch iManage Portable.
2. Click the Import icon  or select **Import** from the **File** menu.

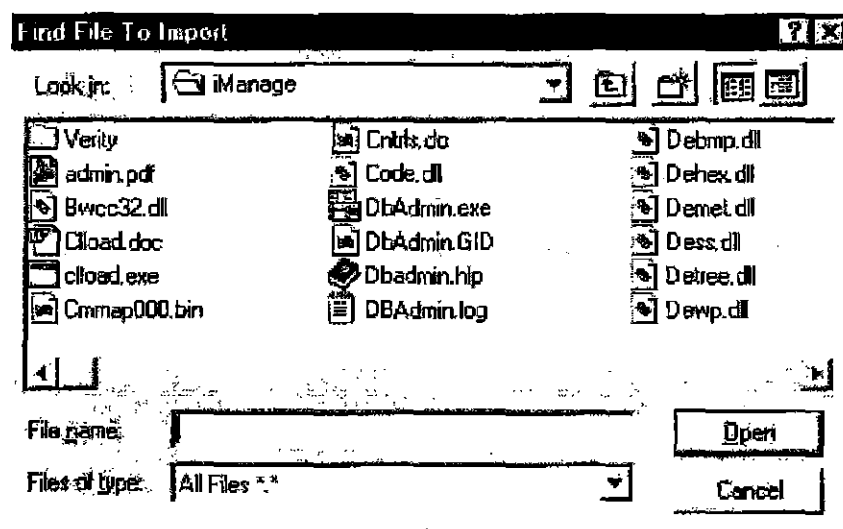


Figure 8.5: Find File To Import dialog box

3. Use the *Find File To Import* dialog to navigate to the document you want to import. When highlighted, click **Open**.
4. The *New Document Profile* dialog launches. Complete the document's profile and click **OK** when complete.

The document then appears in the document list of iManage Portable. It is ready to be checked in with all the other documents when you re-connect to the network.

Check-in Portable Documents

When you have been working in portable mode and you attach to an iManage DeskSite database, you can check in the checked out documents and synchronize them with iManage DeskSite. The check-in process verifies the profiles of the portable documents against the profile-entry tables. If errors are detected, you are prompted to enter correct information.

To check-in a portable document:

1. Launch iManage DeskSite and click **Checkin** on the toolbar. The *Checkin Documents* dialog box appears.
2. Select the documents to be checked in using standard Windows techniques.
3. Click the **Checkin** button. The *Checkin Options* window appears.
4. Select either the **Replace Original** or **New Version** option. To apply the selected option to the entire group of documents that you're checking in, select **Apply to All**.
5. Click **OK** to check in the documents and return to the *Checkin Documents* dialog box.

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CHAPTER 9

Using Echo Documents

Overview

All computer networks fail at some point. iManage has created a safeguard for such an event. It's called *document echoing*.

Every time you close an iManage document, iManage DeskSite saves a duplicate copy to your hard disk. This is done to ensure that you can still access and perform functions to your important and recently used files, even when the network fails.

If you make revisions to these documents offline, iManage DeskSite provides a synchronize function to integrate revised echo documents back into the network.

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Setup

Enabling Document Echoing

iManage DeskSite echoes documents on your PC only if Document Echoing is enabled.

Your iManage DeskSite administrator can disable document echoing globally or for any given class of documents. If your PC is registered for portable mode but iManage DeskSite is not echoing documents to your hard drive, contact your system administrator for more information.

If you are enabling document echoing as a safeguard against network failure, you should also ensure that your PC is able to run a local copy of the Windows operating system and local, stand-alone versions of the application programs associated with your echoed documents. In the case of a network failure, networked copies of Windows and of essential application programs are not available.

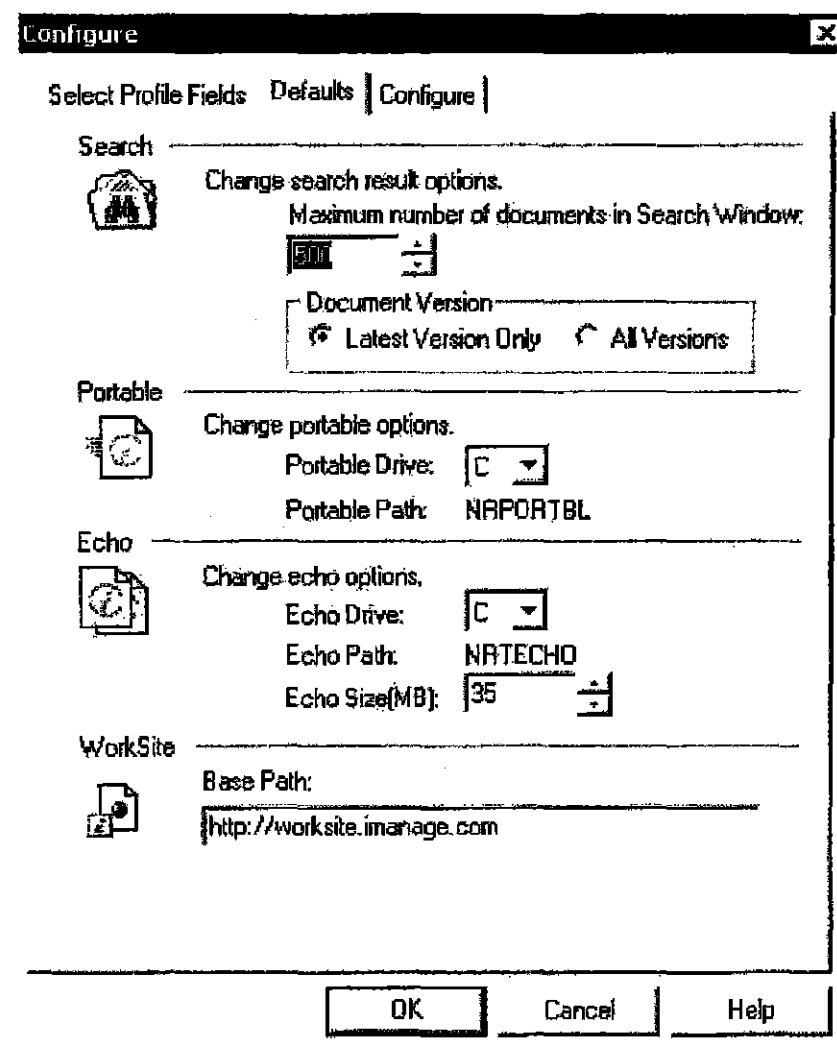
Even in the absence of the application programs associated with your echoed documents, if you have a local copy of the Windows operating system on your PC, you can view your echoed documents using iManage View.

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Setting the Default Drive for Echo Documents

You can select the disk drive where iManage DeskSite saves echo documents. Normally, the echo documents are stored on a disk drive on the user's local PC. While the disk drive for the echo directory can be changed, the name of the directory is always `nrtecho`.

1. Choose **Options** from the **Options** menu to open the iManage Desktop window's *Configure* dialog.



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Figure 9.1: *Display Options* dialog where Echo defaults are set.

- Specify the disk drive where iManage should store your echoed documents and the maximum size of the echo directory. If the total size of the echo directory exceeds the specified limit, iManage DeskSite prompts you to purge the echo directory. For instructions on how to purge echoed files from the echo directory, see [“Purging Echo Documents” on page 196](#). You can change the size of the echo directory, if you need to, by clicking the up or down arrows in the Echo Size (MB) field.

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Using Echo Documents

You can access echo documents either through the iManage Portable application or through an integrated application such as MS-Word, WordPerfect, etc.

Note: If you attempt to open a document that is currently in your Echo directory because you worked on it previously and made changes to it that are not reflected in the copy on the file server, iManage DeskSite will not let you open the document. Since iManage DeskSite copies a document to your Echo directory when you open it, this feature prevents you from overwriting changes that you made to the document.

Access Echo Documents from an Integrated Application

Steps to open documents that are checked out in portable mode from within integrated applications:

1. Launch iManage Portable if it is not already running.
2. Launch the integrated application.

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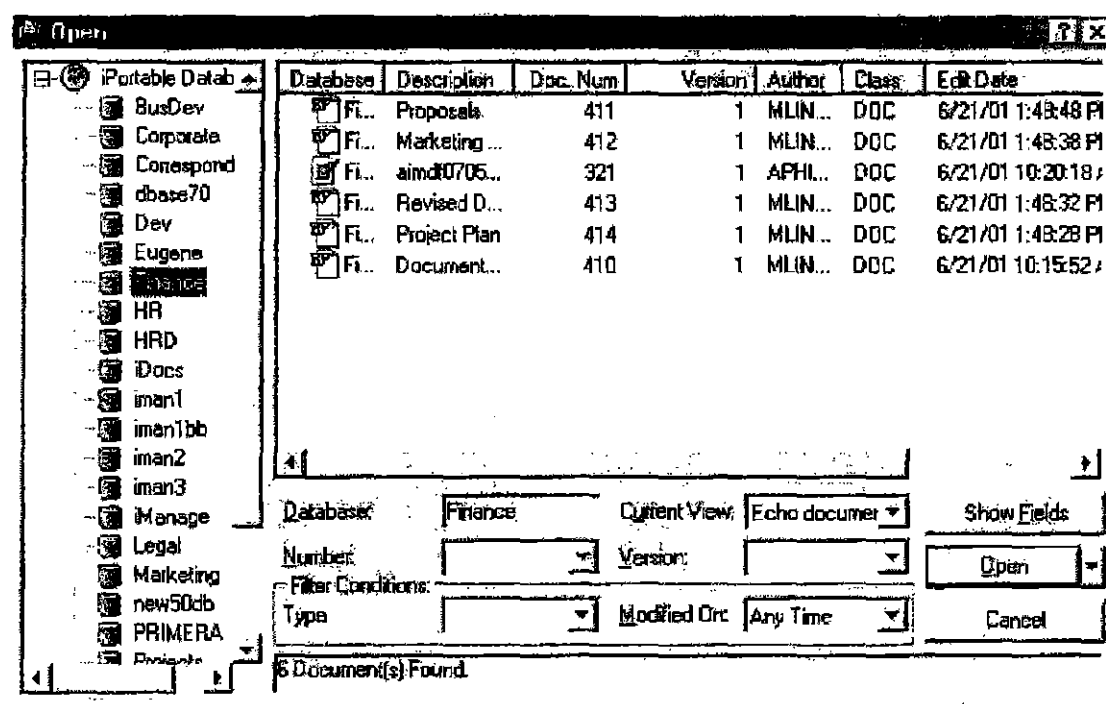


Figure 9.2: Integrated Portable Desktop

Access Echo Documents from the *iManage Portable* Application

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Launching iManage Portable allows you to perform a variety of functions with echo documents. The main desktop screen looks like this:

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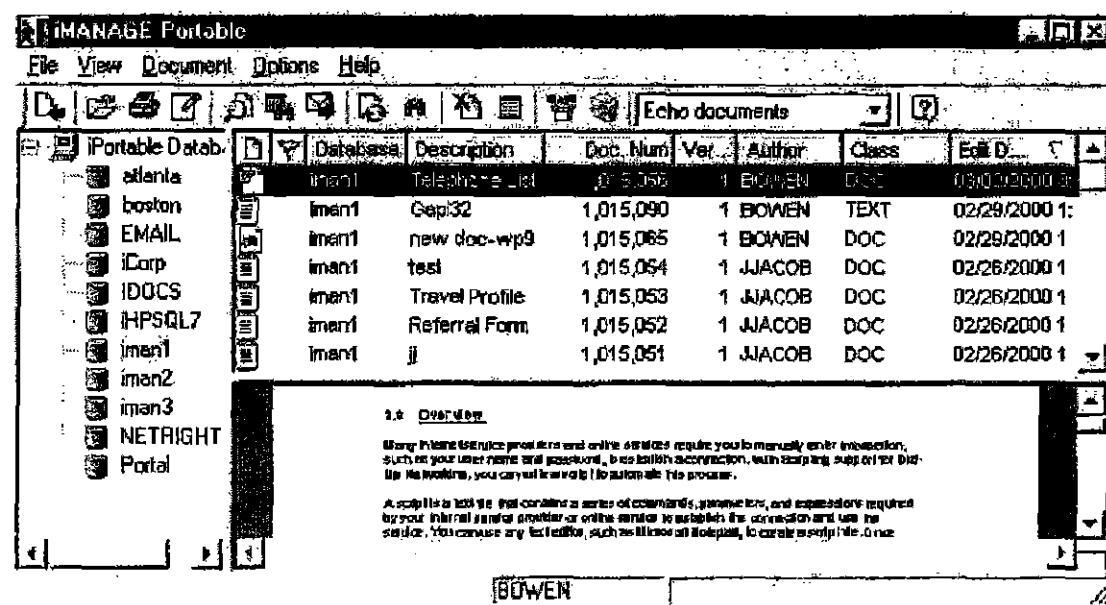



Figure 9.3: iManage Portable Desktop Window

Functions within iManage Portable

Because both Echo Documents and Portable documents are accessed through same Portable application the document functions are identical. Chapter 8 contains greater detail of the following document commands:

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Open Echo Documents

Double-click on the desired document in the Echo Document List or highlight the document and click the **Open** icon . You then get a message that the document may have been changed by another user. If this is the case, you can check in the document to iManage DeskSite only as a new document.

Your system administrator may have configured your machine to display echo documents for all users on your machine.

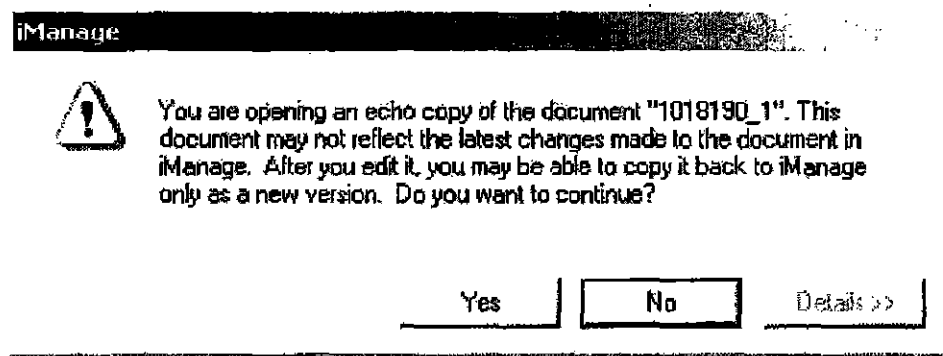




Figure 9.3: Echo document warning message


View Echo Documents:

Highlight the document(s) and click the View icon . This will launch **iManage View** - a sophisticated viewer application. See [Chapter 7](#) for more information.

Quickview Echo Documents

Highlight the desired document and click the Quickview icon . The document will be displayed in the bottom right frame of the Portable Desktop Window.

Printing Echo Documents

Highlight the desired document(s) and click the Print icon . The document's associated application will launch and the document will be printed. Please note that this portable print command will not launch a *Print Options* dialog box before printing. See the next section about Print and Page setup options.

Printing a List of Echo Documents

To print a list of the documents currently displayed in the Document List of the Portable Desktop select **Print Preview** from the **File** menu. This will launch the list in the *Print Preview* dialog where you can execute a print command.


Sending Echo Documents

Highlight the desired document(s) and click the Send icon . A new e-mail will launch automatically with the selected documents as attachments.

Saving Echo Documents

After opening an echo document, you can save changes or revisions to it with the **Save** command under the **File** menu in the application associated with that document. Documents saved using the save command will be recognized in iManage DeskSite as echo documents. If you use the **Save As** command to create a new document from a revised echo document, however, the document will be identified as a new portable document in iManage DeskSite.

Deleting Echo Documents

Highlight the desired document(s) and click the **Delete** icon . You can also delete Echo documents from the *Checkin/Synchronize* dialog box in iManage DeskSite.

Editing and Saving Echo Documents

After opening an echo document, you can save changes or revisions to it with the **Save** command under the **File** menu in the application associated with that document. Documents saved using the save command are recognized in iManage DeskSite as echo documents. If you use the **Save As** command to create a new document from a revised echo document, however, the document is identified as a new portable document in iManage DeskSite.

9 Synchronizing Echo Documents into the Network

If you edit and save an echo document while offline, you will eventually want to copy the document back to the network after network connections are restored. iManage DeskSite provides an easy way to copy echo documents that have been revised and saved locally back to the network. This process of copying altered echo documents back to the network is referred to as *synchronization*.

When you start iManage DeskSite you will get a warning if you have echo documents with changes that are not reflected in the copy on the file server. This feature helps prevent you from overwriting changes that you made to the document.

Requirements for synchronization of a document

- Only the last user who edited a document through iManage DeskSite may synchronize an echo document. Other users who attempt to do so receive a warning message and are instructed to contact the particular user who last edited that document.

- Your echo copy of a document must be newer than the copy on the network. iManage DeskSite does not allow you to synchronize an echo document back to the network if the network copy of the document is newer than your echo copy.
- You must have *write* access to the network copy of the document. You cannot synchronize a document if you have read-only access to the document.

You have the option of copying a document back as the original document, importing it as a new version of the original document, or importing it as a new document. If you are unable to use iManage DeskSite's synchronization process to copy your updated echo document to the network, you can instead **import** the echo document as a new document or a new version of the same document.

To synchronize an echo document:

1. In iManage DeskSite open the *Checkin/Synchronize Documents* dialog by selecting **Checkin/Synchronize** from the **Portable** menu.

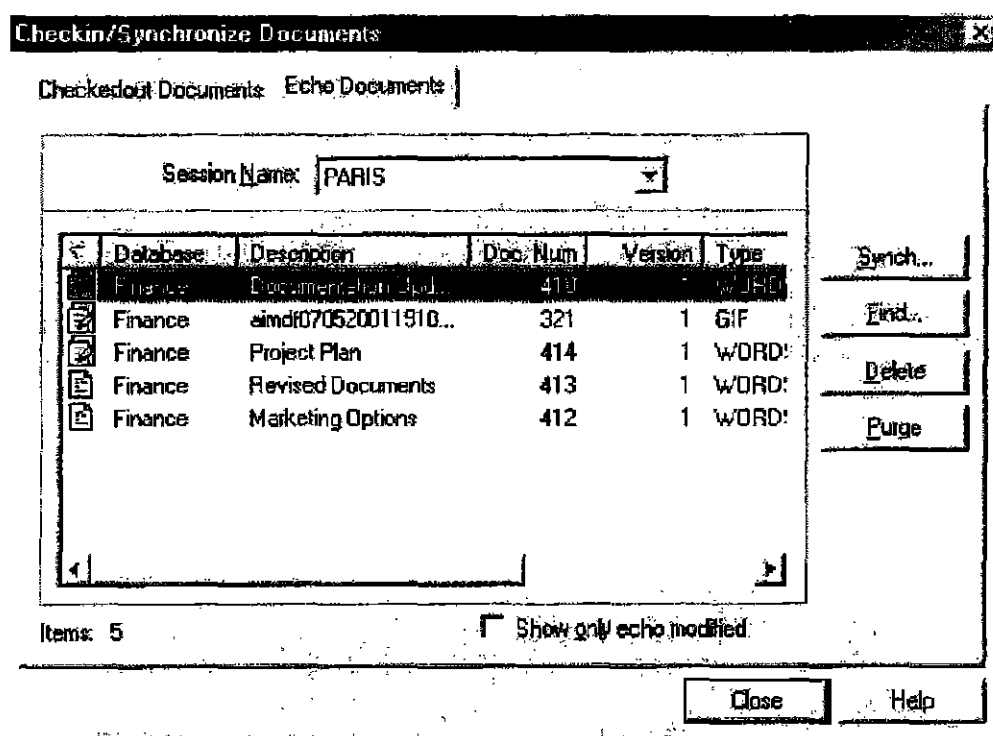


Figure 9.4: Synchronize/Purge Echo Documents dialog box

2. Profile information for echoed documents appears in the display table. Use the horizontal scroll bar to display more profile fields.

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- Use the vertical scroll bar or **Page Up** and **Page Down** buttons to display all the echo documents.
 - Use the **Find** button to search for echoed document profiles if the list is large.
 - Check **Show only echo modified** to display only the echo documents that have been changed.
3. Use standard Windows techniques in addition to the **Select All** and **Deselect** buttons to select documents for synchronization back into the iManage DeskSite database.
 4. Click **Synch** to begin the synchronization process. The **Confirm Synchronize** dialog box opens.

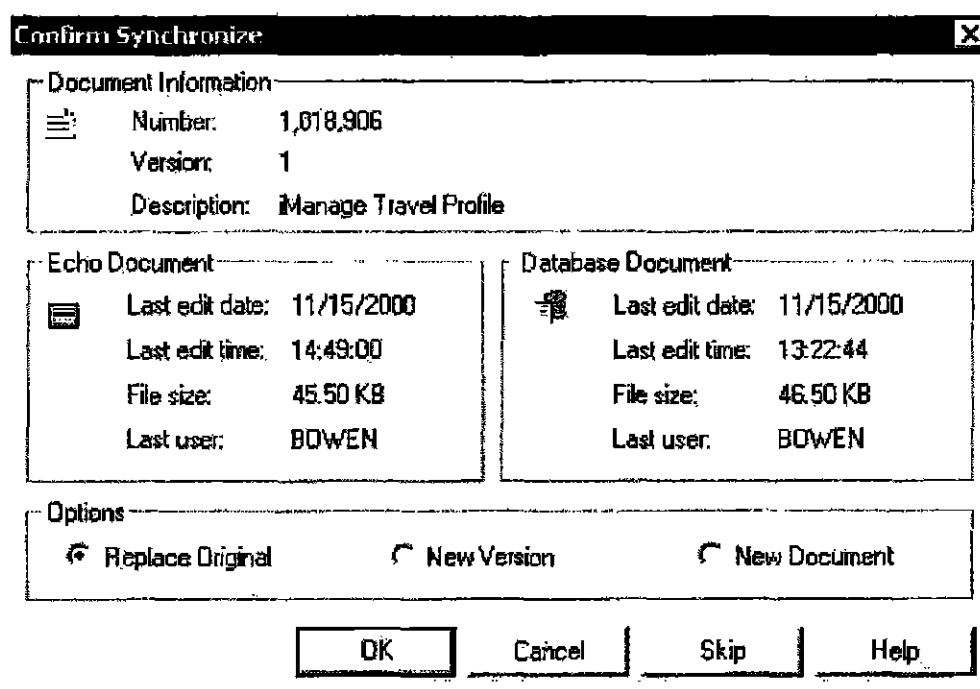





Figure 9.5: *Confirm Synchronize* dialog box

5. Verify the comparison between the Echo document and the Database document. Choose whether you want to replace the original document, create a new version of the document, or create an entirely new document. Not all of these options are available in every circumstance.
 - If the document is checked out in the iManage library, you can return the Echo document to the library only as a new document.

- If the document is *not* checked out in the iManage library and you were the last user of the document, you can return the Echo document to the library as a new version, a new document, or replace the original document.
 - If the document is *not* checked out in the iManage library and you were *not* the last user of the document, you can return the Echo document to the library only as a new version of the document or as a new document.
6. Click **OK** to synchronize the document, **Cancel** to cancel the synchronize operation for all documents you have highlighted, or **Skip** to cancel the synchronize operation for the specified document only.

Icons in the Checkin/Synchronize Documents dialog box

Icons in the *Checkin/Synchronize Documents* dialog indicate the condition of the documents displayed in the windows. The list explains what the icons mean:

-  – This icon appears in the document display area of Checkedout Documents tab. The document that it is associated with is a checkedout document.
-  – This icon appears in the document display area of both the Checked-out Documents and Echo documents tab. In the Checkedout Documents tab, this icon indicates that an “orphan” document exists in the NrPortbl directory. In the Echo Documents tab, this icon is used to indicate unmodified echo documents that exist in the NrEcho directory.
-  – This icon appears in the document display area of Echo Documents tab. This icon identifies echo documents that have been modified and need to be synchronized.

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Orphan Documents

A user may have documents in his or her Portable or Echo directory which are not checked-out by that user (Orphan documents). When the user starts working in Portable mode, iManage DeskSite shows that the document is checked-out. The user can modify the document in Portable mode. However, when the user starts iManage DeskSite, he or she needs to know the local copy of the document has modifications that are not in the iManage file server copy.

iManage DeskSite identifies documents in the user's NRPortbl or NRTEcho directory and determines if they are checked out by the user. If there are docu-

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ments in the NRPortbl or NRTEcho directory that are NOT checked out by the user, iManage DeskSite distinguishes those documents from documents checked out by the user or created in Portable mode that need to be checked in.

You can then import the orphaned documents into iManage DeskSite as new documents.

Purging Echo Documents

1. In iManage DeskSite, open the *Checkin/Synchronize* dialog by selecting **Checkin/Synchronize** from the **Portable** menu.
2. Click **Purge**. The *Set Purge Criteria* dialog box appears:

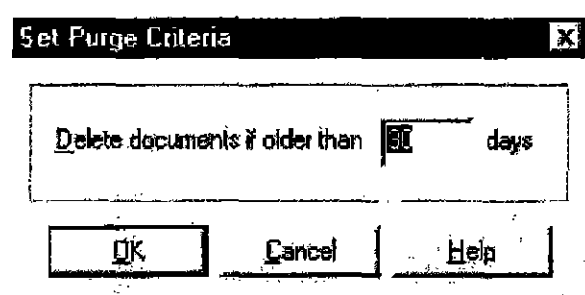


Figure 9.6: *Set Purge Criteria* dialog box

3. To delete all documents older a certain number of days, enter the maximum age in days of echo documents that you want to keep and click the **OK** button. All documents older than the specified number of days are deleted.

Note: The number of days set in the *Set Purge Criteria* dialog box is only for this manual purge of the directory. Echo documents continue to accumulate unless you purge the directory in this manner again. For instructions on how to purge the echo directory automatically, see the *iManage DeskSite User Reference Manual*.

Purging Echo Documents Automatically

You can set up your computer to automatically delete echo documents based on age at startup of iManage Portable. To implement this feature:

1. Create a shortcut to Portbl32.exe
2. Right-click on the shortcut and select **Properties**.
3. In the *Properties* dialog that appears, click the Shortcut tab.

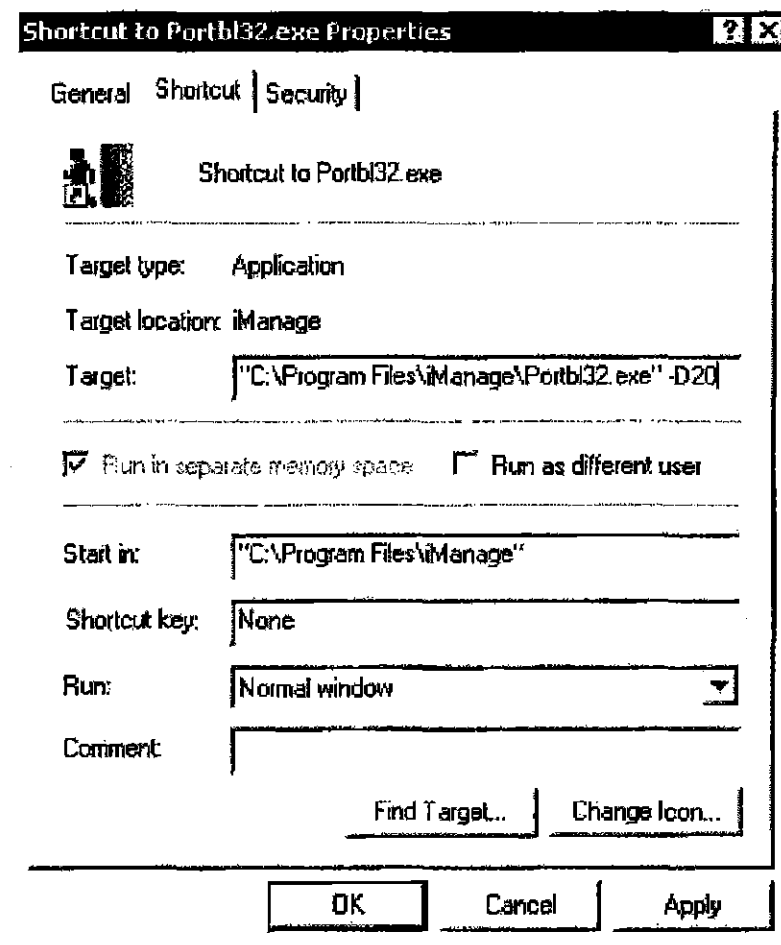


Figure 9.7: *Shortcut Properties* dialog box

4. In the Target field, enter the path to the portable executable file followed by -D then the maximum age of echo documents in days.
5. Example: If iManage is installed in the default installation path, you might enter the following in the Target field:

"C:\Program Files\iManage\Portbl32.exe" -D 20

Where 20 represents the maximum age of an echo document in days. Documents older than this specified number of days will be deleted.

6. When you double click on this shortcut to run the Portable application, any echo documents older than the specified maximum age are deleted.

Silent Mode

You can also use this command line feature in silent mode. Silent mode means that when you double click on the shortcut, the Portable application only runs long enough to delete any echo documents older than the specified maximum age, then exit. To implement this feature in silent mode, substitute -DS for -D.

Example: "C:\Program Files\iManage\Portbl32.exe" -DS 20

This command line opens iManage Portable, purges echo documents older than 20 days from the echo directory, then exits from iManage Portable.

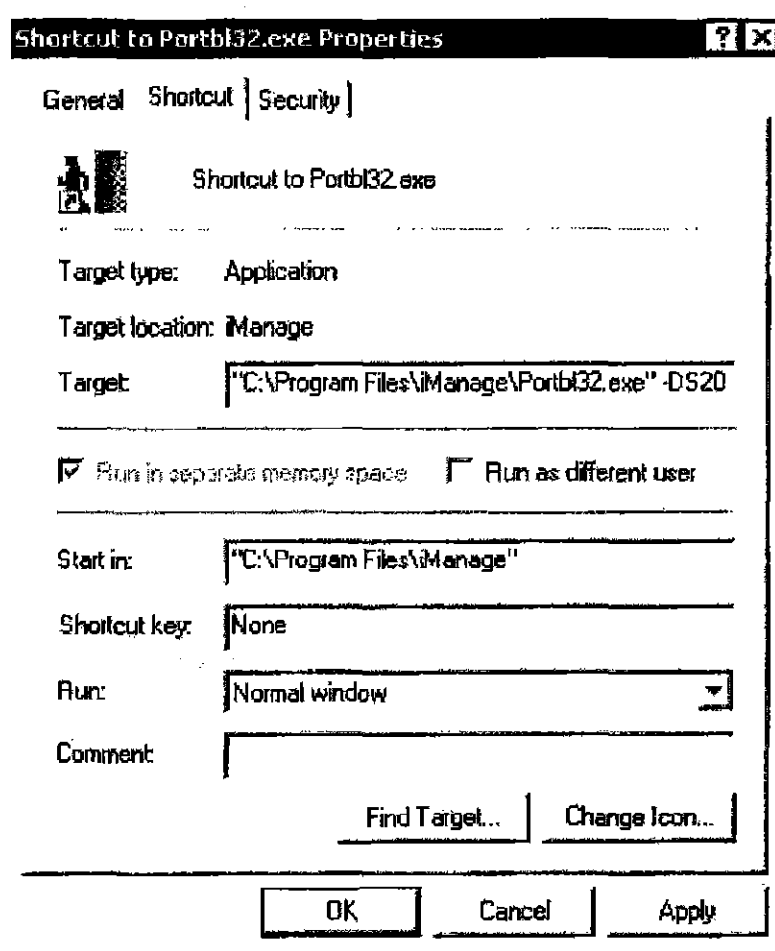


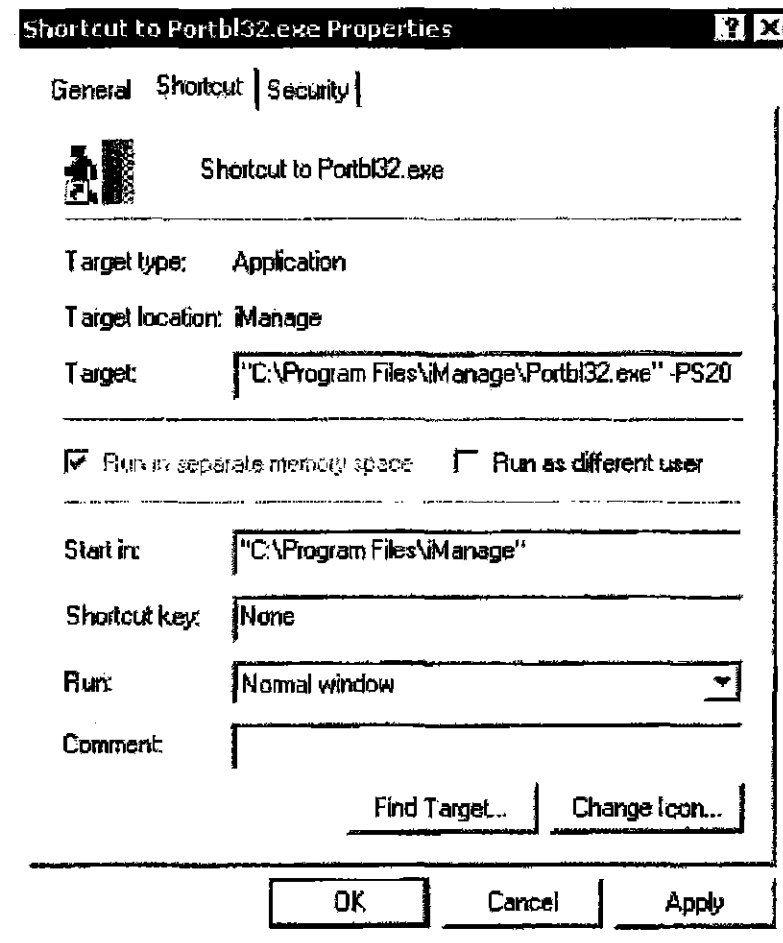
Figure 9.8: *Shortcut Properties* silent mode dialog box

Purging Documents for All Users

You can use this command line to purge echo documents for all users, not just the current user. To do this, substitute `-PS` for `-D` or `-DS`.

Example: `"C:\Program Files\iManage\Portbl32.exe" -PS20`

This command line opens iManage Portable, purges echo documents older than 20 days from the echo directory, then exits from iManage Portable.



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Figure 9.9: *Shortcut Properties* silent mode dialog box to purge echo documents for all users

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EXHIBIT 27 PART 3

Table 4.1: Fields of Profile Information that may be searchable in your database

Profile Field	Description
Format Type	This field indicates which application should be used to open the document. In most cases, this field is automatically set when the document is added to the database
Author	Author of the document
Operator	The Operator is another user, who like the author, has read/write access to the document, its profile information, and can set document access rights
Class	A classification used to help identify the document
Client	Another custom classification field. This field determines the valid entries for the Matter field
Matter	Another custom classification field used to identify and classify the document. The list of valid entries for this field depends on the entry in the Client field. (In effect, this field can be conceived of as a subclassification)
Custom Fields	Other custom fields may appear in the profile information for documents in your database. These fields may be additional fields used to classify the document, or numeric entry fields, checkboxes, or date entry fields.
Creation Date	Date document was created or installed
Last Edit Date	Most recent date when document was edited
Last EditTime	Most recent time when document was edited
Last User	Name of the user who most recently edited the document.
Size	Size of the document in number of bytes
Retain Days	This is the number of days that the document can remain inactive in the database before iManage DeskSite tags it for archiving.
Index Flag	Indicates whether the document should be indexed by the full text indexer
Comment	Comment associated with the document, up to 8,000 characters, fully searchable

4

A Sample Profile Search

Profile searches are performed by entering information into the profile fields in the *Document Search* window. Documents are found that have profile fields that match the search information specified. This type of search is sometimes called a query-by-form search. In the example below, an Author name and Document Type are specified. For documents to match the search criteria, BOTH fields of

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profile information must match the entries in the *Document Search* window.

Figure 4.6: Sample *Document Search* window

The documents returned from this search must have **CLIFF** in their **Author** field and **WINWORD** in the **Document Type** field.

A More Detailed Search

If you find that your search results include too many documents, you need to restrict the scope of your searches further. You can restrict the scope of your search and usually decrease the number of hits by adding more criteria to the search profile. Below is an example of a more detailed profile search. Fields that contain no information always match.

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Figure 4.7: A more detailed search

Notice the differences between the search performed in [Figure 4.6](#) and the search performed in [Figure 4.7](#). In [Figure 4.7](#), three Authors are specified, a Client is Multiple Entries in the Same Field

When you specify multiple valid entries in the same field of profile information, such as in [Figure 4.7](#), where AMARTINEZ, APHILIPS and BOWEN are all specified in the Author field, iManage DeskSite will return documents in the search results that match ANY of these entries. This is different from when you specify entries in multiple fields of profile information. In [Figure 4.6](#), for instance, in which information was specified in the Type and Author fields, iManage DeskSite would only return documents whose profile information matched BOTH of these fields. When you include multiple entries in a single field of profile information, iManage DeskSite will return documents that include at least one of these entries in that field of profile information. Hence, after the search shown in [Figure 4.7](#) is performed, all of the documents found will contain WINWORD6 in the Type field AND MONTAGE in the Client field AND either AMARTINEZ, APHILIPS or BOWEN in the Author field. The documents

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returned will also have a Create date after 12/01/98.

Note: When multiple entries are provided in a single search field, use commas to separate each entry.

Wildcard Characters

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In addition to being able to select validated entries from selection lookup tables, you can also use wildcard characters to expand and simplify searches. Wildcard characters allow you to match only parts of entries in document profile fields. There are two principal wildcard characters: the asterisk and the question mark.

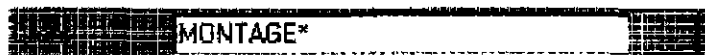
- The asterisk or percent sign stands for any sequence of multiple characters
- The question mark stands for any single character

An Example

Let's say that you want to search for all of the documents pertaining to a particular client, called The Montage Company. However, because there are so many documents in the database pertaining to this client, multiple Client classifications were created. Some of these are:

- MONTAGE
- MONTAGE CO
- MONTAGE EST
- MONTAGE MFG

You could enter all of these in the Client field in the *Search Dialog* window to perform a search that would find all of the documents that include any one of these entries in the Client field of profile information. You could also do the same thing by entering



MONTAGE*

in the *Search Dialog* window. **MONTAGE*** or **MONTAGE%** will instruct iManage DeskSite to match any entries that begin with MONTAGE and that are following by any string of characters.

If the library also including documents pertaining to The Montage Company that were classified with the Client classification THE MONTAGE COMPANY, you could include these documents in your search results by adding an asterisk or percent sign to the front of the entry in the Client field, namely:

A screenshot of a search field with a grid background. The text '*MONTAGE*' is entered in the field.

The Question Mark

The question mark is used to match any single unspecified character. If you wanted to match Client field entries of the type:

- MONTAGE1
- MONTAGE2
- MONTAGE3
- MONTAGE4

You could use **MONTAGE?** in the Client field in the *Search* window.

Caveat

The danger in using wildcard characters is that you will increase your search results by including undesired matches. For instance, you could match all of the example Client classifications mentioned earlier that pertain to our fictional example, The Montage Company, using this entry in the Client field:

A screenshot of a search field with a grid background. The text 'MONT*' is entered in the field.

However, this entry would also match such possible Client entries as:

- MONTHLY REPORTS
- MONTGOMERY CO
- MONTSOON FLOWERS CORP

Wildcard Characters in the Description Field

Wildcard characters can be particularly useful in searching the Description field. By default, iManage DeskSite automatically inserts wildcard asterisks as shown. This finds all documents that have the terms WINSOR TRUST in the Description field:

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Description

You can change the default in the *Advanced Options* dialog box explained in Chapter 6. If you did not include the leading asterisk, iManage DeskSite would only find documents whose Description field began with WINSOR TRUST. On the other hand, if you omitted the ending asterisk, iManage DeskSite would only find documents whose Description field ended with the terms WINSOR TRUST.

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Searching by Document Numbers

One of the most direct ways to locate documents in the database is to search for specific document numbers. If you know the document number for a document, this can be an effective way of locating the document quickly, because every document in the database has a distinct document number and version number.

Numbers can be entered in the Number and Version fields in the *Search Dialog* window either as single numbers or as ranges. The following search would find documents with the numbers 1, 10 to 20, and 100 to 110 (if they exist), and would return only versions 1 to 3 of these documents (if those versions exist).

Search Dialog	
Number	1, 10-20, 100-110
Version	1-3
Description	
Type	...
Doc Type	...

Figure 4.8: Partial screen shot of the *Search Dialog* window.

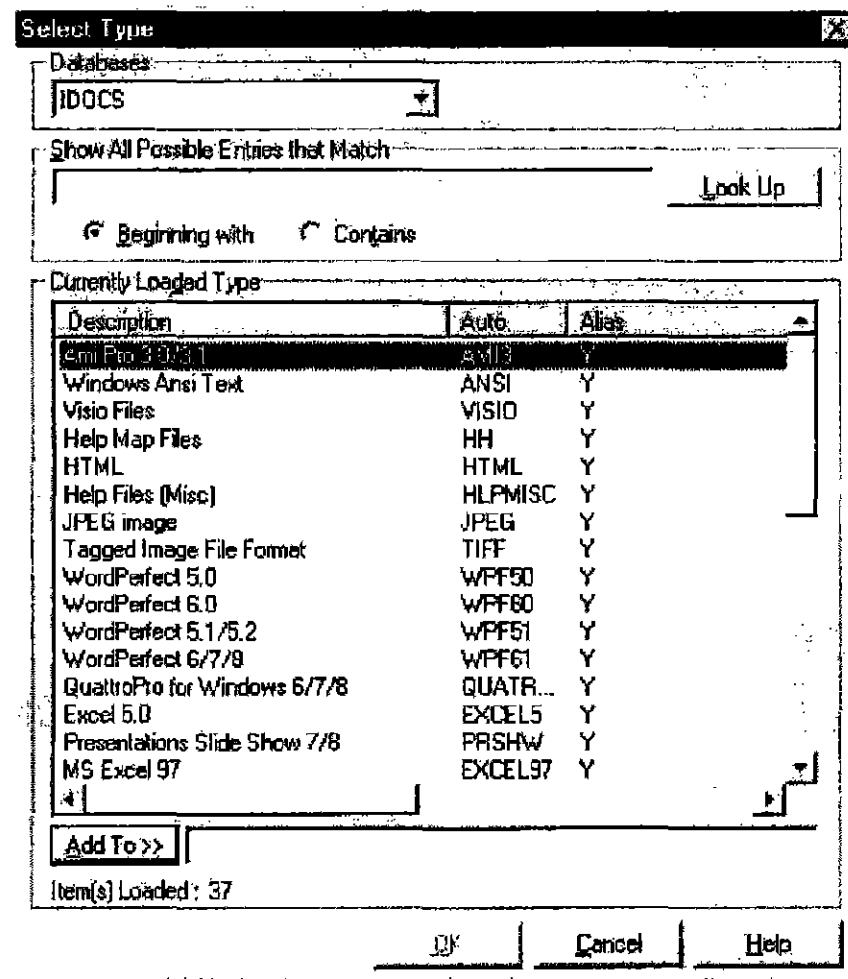
You can also use the less than (<) and greater than (>) symbols to find a range of document numbers.

Using *Lookup* Dialog Boxes

The fastest and most accurate way to enter search criteria in the *Search Dialog* window is to select entries from *Lookup* dialog boxes. *Lookup* dialog boxes list

valid search entries for each field of profile information. If the field of profile information that you would like to use to search the database has a browse button next to it, clicking on the browse button will display a *Selection* dialog box and a list of valid entries from which you can choose.

Below is an example Selection dialog box where you can select or look up values for the Type profile field.



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Figure 4.9: Selection dialog box for Type entries in a sample database.

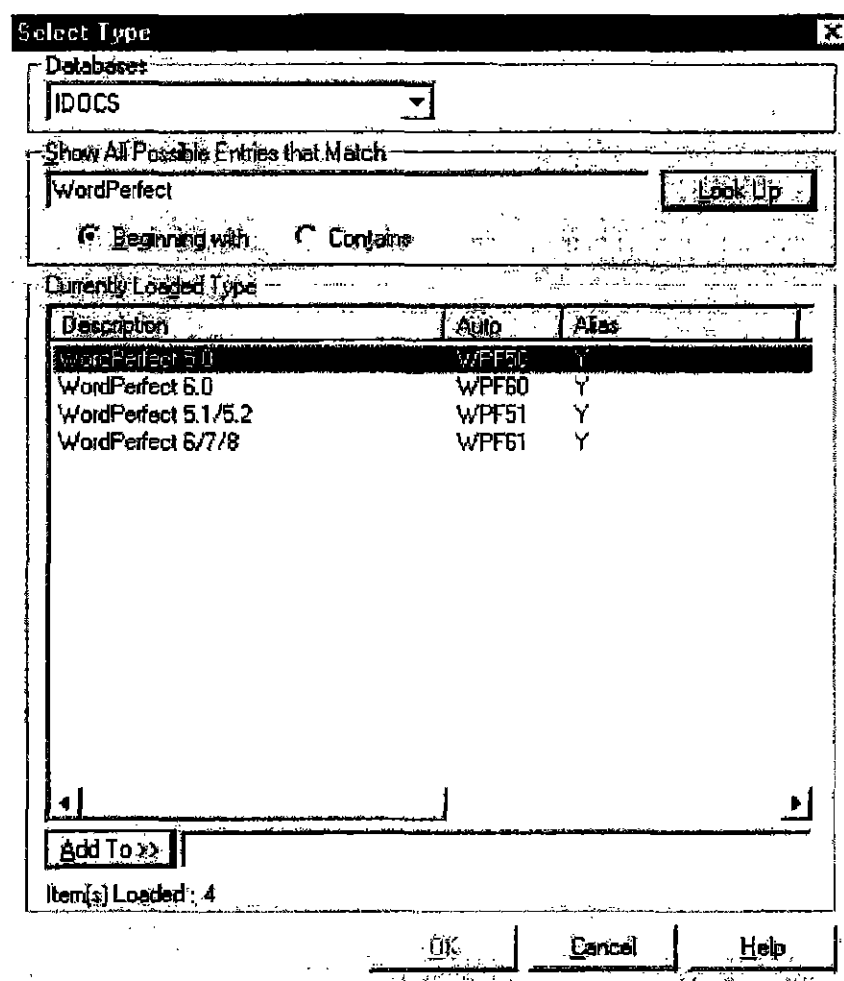
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Note: The Lookup dialog boxes only displays up to the first 500 valid entries listed for that field of profile information in the database. If there are more than 500 possible valid entries, use the Find option at the top of the Selection dialog box to locate your entry. When you enter a value in the Find field at the top of the Selection dialog box, iManage DeskSite searches the entire list of valid entries for matches -- not just those listed in the Selection dialog box.

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The Lookup Feature in all Selection Dialogs

Use the Lookup feature at the top of all Lookup dialog boxes to locate valid entries in especially long lists. When you enter search criteria in the Lookup field, the table of available options immediately highlights the first match. Click the **Look Up** button and the table displays only those options that match.



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Figure 4.10: Selection dialog box after search was performed for the string "WordPerfect"

Selecting Multiple Entries

Figure 4.10 also shows that you can select multiple entries in the Selection dialog box before clicking the **OK** button. When you click **OK**, all selected entries appear in the appropriate field in the *Search Dialog* window.

Double-clicking an entry in a Selection dialog box selects the entry and returns you to the *Search Dialog* window.

Full Text Searches

Overview

iManage DeskSite's full text searches find documents based on the occurrence of individual words, partial words, and phrases, referred to collectively as *terms*. You can search for occurrences of terms either in the contents of documents or in the text of profile comment fields. You can also perform a search of documents that are within multiple libraries at once.

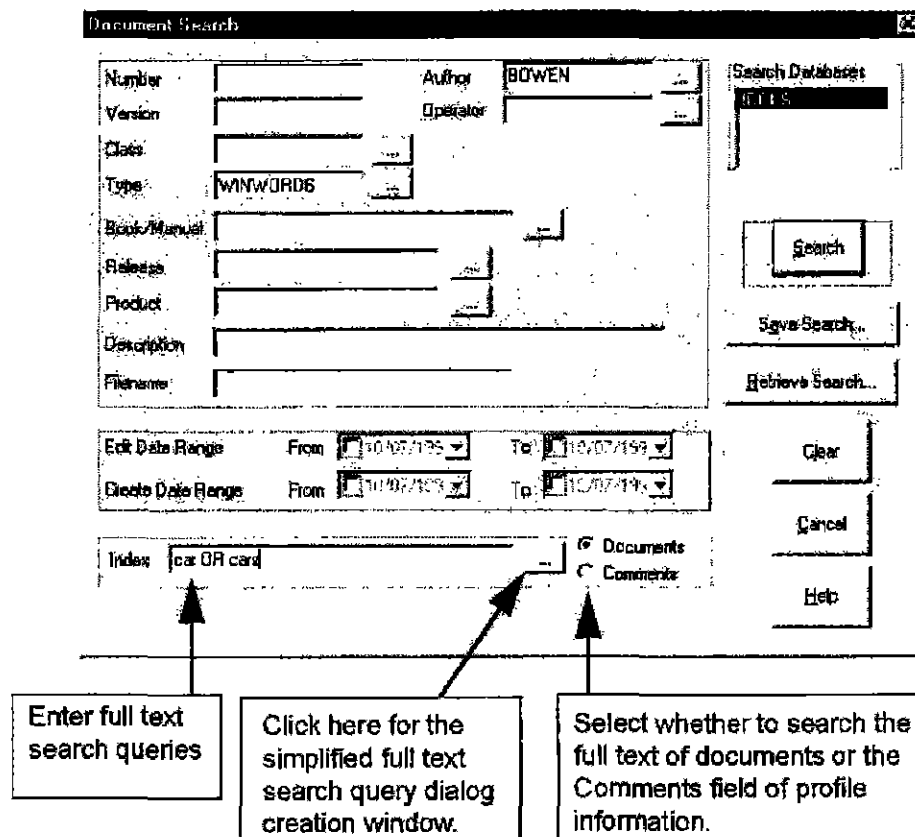
Full text searches can be performed in conjunction with profile searches. The documents that are found must meet the profile search criteria *and* contain the words or phrases specified by the full text search.

By default, full text searches are not case sensitive.

Entering Full Text Search Criteria

You can enter full text search criteria at the bottom of the *Search Dialog* window. You can also select whether to search through the entire body of the document or the comments field of profile information by clicking the **Documents** or **Comments** radio buttons. In the example below, the user is searching for occurrences of the word "car" or "cars" in the full text of documents that were written by CLIFF and are of the type WINWORD2:

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Figure 4.11: Document Search dialog

Simplified Full Text Searching

A simplified full text search window is available for users who are not familiar with Boolean logic or who do not want to learn how to construct full text search commands. This dialog box enables you to enter key terms or phrases and to construct a simple full text search query automatically.

To access the simplified full text search window:

Click on the browse button next to the Index field, which is used to enter full text search queries. When you click this browse button, the *Find Documents Containing* dialog box appears:

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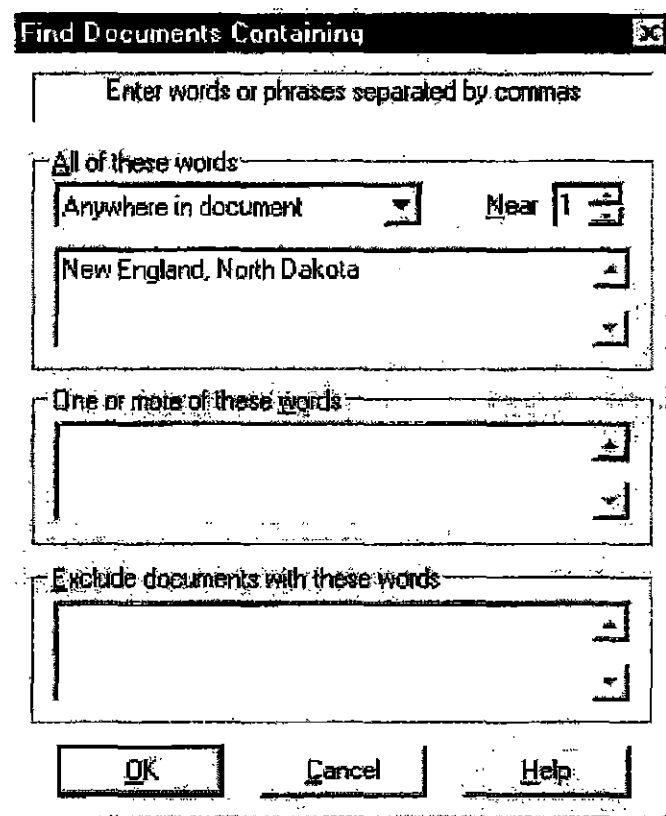


Figure 4.12: Simplified full text search dialog box

Using the Find Document Containing Dialog Box:

You can use the intuitive *Find Documents Containing* dialog box to create simple full text search queries automatically. When the *Find Documents Containing* dialog box appears, enter words or phrases separated by commas into the appropriate fields. In the topmost field, enter a list of terms which must ALL appear in the document in order for it to appear in your search results.

The drop-down list box available above this field lets you set the proximity with which these terms must appear near each other. If you select **Anywhere in document**, then iManage DeskSite will return documents in which these terms appear anywhere in the document, not necessary within any proximity of each other.

If you select **Near each other** from the drop down list box, then the words listed in the topmost field must appear within a defined proximity of each other in a document for that document to be listed in the search results. The **Near** field indicates the proximity within which the words in the topmost field must appear in

the document in numbers of words. If the **Near** field is set to 10 and two words are listed in the **All of these words** field, then these words must both appear in a document and cannot be separated by more than 9 words for iManage DeskSite to list the document in the search results.

In the middle field, enter a list of terms only one of which must appear in the document for it to appear in your list of search results.

In the bottom field, enter terms that should exclude a document from the search results if they appear in that document.

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Examples

The example in [Figure 4.11](#) finds documents that include both the phrase *New England* and the phrase *North Dakota*. It does not return documents that contain the word *New* and the word *England* in separate places – these words must be next to each other and in that order. The same applies to the two terms in the phrase, *North Dakota*.

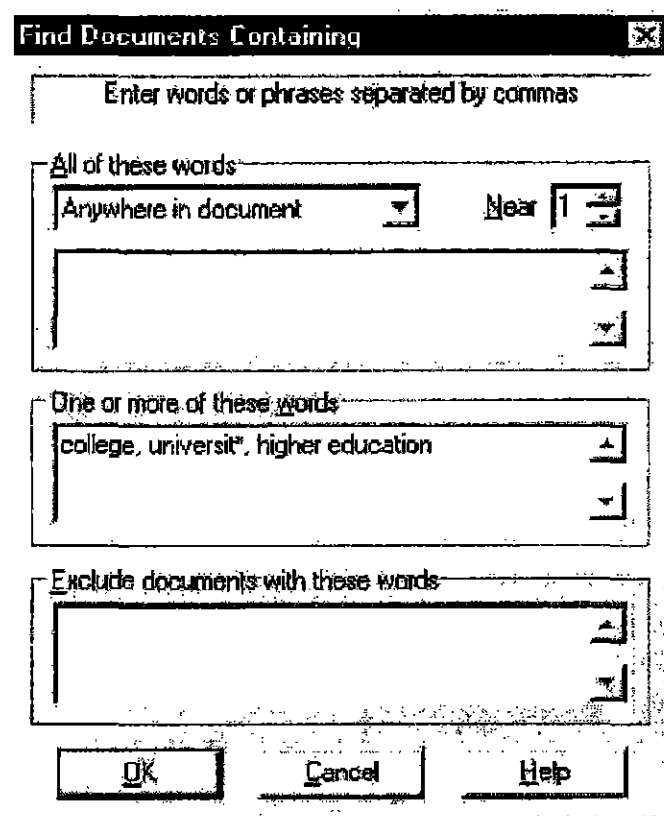
Error Checking

When you click **OK** in the *Find Documents Containing* dialog box, iManage DeskSite checks the syntax of the terms you have entered and reports any error that you may have entered. If no errors are found, iManage DeskSite constructs a valid search query, which appears in the Index field in the *Search Dialog* window.

Example with Wildcard Characters

You can also enter wildcard characters in the *Find Documents Containing* dialog box. [Figure 4.12](#) shows the use of a wildcard character in the *Find Document Containing* dialog box with terms entered in the middle field.

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Figure 4.13: Another example of *Find Documents Containing* dialog box

The example search query shown in [Figure 4.13](#) would return documents that included the term *college*, or the phrase *higher education*, or the terms *university* and *universities*.

Proximity Searches

[Figure 4.14](#) below shows how to enter a proximity search in the *Find Documents Containing* dialog box. By “proximity search,” we mean a search based on the proximity of words in relation to each other in the document, not just on their occurrence in the document.

Find Documents Containing

Enter words or phrases separated by commas

All of these words:

Near each other Near: 14

client,complaint

One or more of these words:

Exclude documents with these words:

OK Cancel Help

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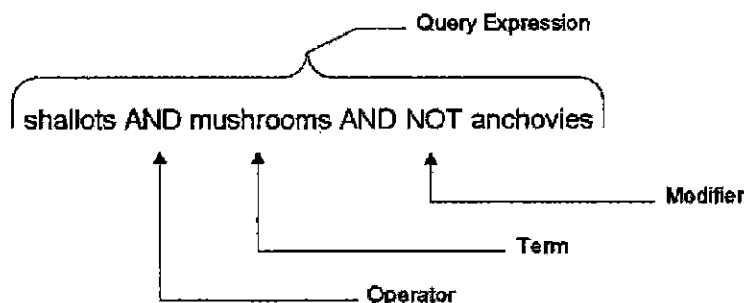
Figure 4.14: *Find Documents Containing* dialog box with search criteria entered for a proximity search.

In [Figure 4.14](#), the **Near each other** option has been selected from the drop-down list and the **Near** numeric value has been set to 14. When this search is performed, iManage DeskSite finds only those documents in the database that contain the words **client** and **complaint** within 14 words of each other. The two words can appear in any order, but they cannot be separated by more than 13 words.

Search Elements

A query expression is the criteria used to perform a full text search. It is comprised of several elements, either explicit or implicit: operators, modifiers, and terms.

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Operators

Operators are codes that represent logic to be applied to a search. These are listed and defined in the following section, *Operators*. To specify an operator in a search, type the operator in less than/greater than brackets and then the word or phrase that you want to find, as in *<STEM> facilitate*.

Although operators need not be entered in all caps, they appear in this chapter as such for the sake of clarity.

Modifiers

Modifiers adjust the default meaning of a given operator. For example, the CASE modifier would make the WORD operator case sensitive. The modifiers are listed and defined under "Modifiers" on page 124.

Simple and Explicit Syntax

You can perform a full text search according to *simple* or *explicit* syntax.

Simple Syntax

Simple syntax refers to when you enter just terms with no accompanying codes or punctuation. iManage DeskSite produces matches as if the terms are preceded by the STEM operator. Although they are less exact, simple searches net more matches than explicit ones.

Explicit Syntax

You can use explicit syntax by enclosing a word in double quotation marks. When you double-quote a word, iManage DeskSite performs a literal search; *facilitator* and *facilitation* would **not** be offered as matches to *"facilitate"*.

Other Syntax Options

Parentheses

Parentheses indicate the order in which the search is to be executed. iManage DeskSite reads information within parentheses before looking at whatever may be outside them. For example, suppose you were to enter the following search:

(Homer AND Marge) OR Bart

iManage DeskSite would look for documents that refer to *Homer* and *Marge*—not just one or the other. Any documents that referred to *Bart* also would be included.

Parentheses can also be placed within each other. The following example means, “Find documents that contain either *Homer* or *Marge*—it doesn’t matter which—as long as the document also contains *Bart*. Also, give me any documents that mention *Lisa*.”

(Bart AND (Homer OR Marge)) OR Lisa

Double Quotation Marks to Search for Operator Words

To search for a word that happens to be an operator, such as AND or NOT, put the word in double quotation marks to indicate that the word should be considered as such, not as an operator. For example, to search for the phrase *Lewis and Clark*, you would enter:

Lewis “and” Clark

Operators

This section lists each of the operators used in full text and profile searches.

Profile Field Operators

Some operators work only in profile fields.

> (Greater Than)

The greater than sign can be used to search for documents that contain a value in a particular profile field that is greater than a specified minimum value. For example, to select documents with a document number greater than 2500, enter the following criteria in the Document Number profile field:

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> 2500

>= (Greater Than or Equal To)

The greater than or equal to sign searches for documents that contain a value in a particular profile field that is greater than or equal to a specified value. To search for documents with a document number greater than or equal to 2800, enter the following criteria in the Document Number profile field:

>= 2800

< (Less Than)

The less than sign can be used to search for documents that contain a value in a particular profile field that is less than a specified maximum limit. For example, to search for documents with a version number less than 3, enter the following criteria in the Version Number profile field:

< 3

<= (Less Than or Equal To)

Like the greater than or equal to sign, the less than or equal to sign combines the searching power of the less than and equal to signs. To search for documents with a version number less than or equal to 3, enter the following criteria in the Version Number profile field:

<= 3

Full Text and Comment Operators

The following operators work in full text searches of profile comments and full documents.

<AND>

This Boolean operator finds documents that contain both terms on either side of it. While the OR operator broadens a search, the AND operator narrows it. Use AND to connect terms with different meanings. The search query *New England AND North Dakota* would find only documents that contain **both** phrases; if a document contained only one of the terms, it would not be included in the search results. Enclosing brackets are optional on the AND operator.

<NEAR>

The NEAR operator is similar to AND in that only documents that contain both terms are included in the search results; however, NEAR presents matches that contain both terms close together. For example, suppose you enter the following search:

lincoln <NEAR> beard

The search criterion finds documents with the words lincoln and beard near each other.

4**<NEAR/n>**

The <NEAR/n> operator is a more specific variety of the NEAR operator in that you specify the maximum distance allowed between each term. The N variable can be any whole number between 1 and 1,024 (exclude the comma in numbers greater than 999), where 1 indicates that the terms are adjacent. For example, suppose you enter the following criteria:

jefferson <NEAR/7> crop

The search criterion finds documents with the words jefferson and crop within seven words of each other.

<OR>

OR is a Boolean operator that finds documents that contain at least one of the terms to which it is applied. The OR operator enlarges the search topic and is normally used to look for terms that have similar meaning or refer to similar subjects. The search criterion *louis armstrong OR satchmo* would find documents with one or both of the terms. The enclosing brackets are optional on the OR operator.

<PARAGRAPH>

The <PARAGRAPH> operator searches for documents that include all of the given search elements within a paragraph. You can specify search elements in a sequential or random order.

To get documents that contain variations of the word *wombat* and the phrase *ice cream* in the same paragraph, enter:

wombat <PARAGRAPH> ice cream

If you search for more than two words or phrases, you must include the PARAGRAPH operator between each word or phrase. For example, suppose you enter the following criterion:

oak <PARAGRAPH>maple<PARAGRAPH>ash tree

The search finds all documents that have oak, maple and ash tree in the same paragraph.

<SENTENCE>

The <SENTENCE> operator searches for documents that include all of the given search elements within the same sentence. For example, suppose you enter the following criterion:

automobile industry <SENTENCE> aftermarket

The search finds all documents that have automobile industry and aftermarket in the same sentence.

You can specify words in sequential order by using the SENTENCE operator in conjunction with the ORDER modifier.

<STEM>

The <STEM> operator searches for documents that include variations of the word you specify, as well as explicit matches. For example, to search for documents that contain a variation of the word *distill*, you would enter the following criterion:

<STEM> distill

Matching documents would include the terms *distill*, *distillation*, *distillery*, *distilling*, *distilled*, and *distills*.

Note: The <STEM> operator is used by default and does not need to be specified. To override <STEM>, put the term in double quotation marks.

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<THESAURUS>

This operator selects documents that contain one or more synonyms of the word you specify. To locate documents containing synonyms of big, enter the following:

<THESAURUS> big

Matching documents include words such as large, vast and extensive.

<TYPO/N>

The **TYPO/N** operator performs approximate pattern matching to identify words that are similar to the query term. You can use this operator to search for documents that have been scanned using an Optical Character Reader (OCR). Since the **TYPO/N** operator must scan the entire index to find potential matching words, this operator is not practical for use in databases containing over 100,000 documents or in performance-sensitive environments.

If you wish, you can specify a variable (N) to define the maximum number of errors between the query term and a matched term. This value is called the error distance. If you do not specify an error distance iManage DeskSite uses 2 as a default. This means that there can be a maximum of 2 differences between the query term and the matched term. An error is defined as a character insertion, deletion or replacement. For example, the following table shows word matches with an error distance of 1:

Query and Term	Matching Term	Explanation of Error
<TYPO/1> Mouse	House	H replaces M
<TYPO/1> Agreed	Greed	A is deleted
<TYPO/1> Cat	Coat	O is added

The following table shows a word match with an error distance of 3:

Query Term	Matching Term	Explanation of Error
<TYPO/3> Sweeping	Swimming	l, m, m replace e, e, p respectively

The following table shows a word match with an error distance of 2:

Query Term	Matching Term	Explanation of Error
<TYPO/2> Swept	Kept; wept	S is deleted and K replaces W; S is deleted (1 error does not exceed the maximum error distance of 2)
<TYPO> Swept	Kept; wept	Same as above since the error distance 2 is the default

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<WORD>

The <WORD> operator searches for documents that include a given word. For example, to search for documents that contain the word *carrot*, you could enter <WORD> *carrot*. The WORD operator is only needed when you want to use a modifier, such as CASE, as a search term.

<WILDCARD>

Using wildcard symbols lends a great deal of flexibility to full text searches. Wildcards can be used when searching for word prefixes, roots, suffixes, plurals, and to find words that have variations in spelling. The wildcard characters recognized by iManage DeskSite are listed in Table 4.2. Use the <WILDCARD> operator to indicate when you are using wildcard symbols.

Note: Wildcards usually increase the scope of a full text search and can also increase the time it takes to complete them. In particular, using a wildcard symbol at the start of a word can greatly increase search time, because every entry in the index must then be searched.

Table 4.2: Wildcard Symbols used for Full Text Searching

Symbol	Explanation
?	The question mark replaces any single alphanumeric character. For example, <WILDCARD> b?m would match <i>born</i> , <i>barn</i> , or <i>burn</i> . Similarly, <WILDCARD> ?andy would match <i>candy</i> , <i>dandy</i> , or <i>sandy</i> . You can use more than one question mark within a term, for example, WILDCARD sh??e could produce <i>shore</i> and <i>shade</i> as matches.

Table 4.2: Wildcard Symbols used for Full Text Searching

Symbol	Explanation
*	The asterisk is used to represent any number of alphanumeric characters (including none). For example, WILDCARD *vert* would match convertible, inverted, vertigo, and covert. When using the asterisk wildcard, try to narrow the potential scope of the wildcard entry as much as possible. For instance, to find documents about automobiles, the criterion WILDCARD auto* finds the words auto, automobile, and automotive, but it would also find autobiography, autocracy, and autograph. A more specific query is <WILDCARD> auto OR automo*.
[]	<p>Brackets tell iManage DeskSite to find one of any character within the brackets. For example, <WILDCARD> r[ao]t would match documents that contain <i>rat</i>, <i>rot</i>, or <i>rut</i>.</p> <p>When you enclose a caret (^) within brackets, the search excludes the string of characters to the right of the caret. For example, if you enter WILDCARD '[^block]head', the term <i>blockhead</i> is not included in the search results. Note that you must place the caret before the string of characters you want to exclude, for example WILDCARD '[^block]head', but not WILDCARD '[block^]head'.</p> <p>When you enclose a hyphen (-) within brackets between two letters, iManage DeskSite looks for every term within that alphabetical range inclusively. For example, suppose you were to enter WILDCARD 'a[a-w]a', iManage DeskSite looks for every matching three-letter term from aaa to awa.</p> <hr/> <p>Note: When you use brackets, you must enclose the word that contains character string with backquotes ('). The character string cannot contain spaces.</p>
{ }	<p>Braces are similar to brackets but let you search for groups of characters, separated by commas. For example, <WILDCARD> spill{s,age,ing} would match documents that contain <i>spills</i>, <i>spillage</i>, and <i>spilling</i>.</p> <hr/> <p>Note: When you use braces, you must enclose the word that contains character string with backquotes ('). The character group listing cannot contain spaces.</p>

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Literal Searches for Wildcard Characters

If you want a wildcard character to be interpreted as text and not as a wildcard,

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precede the character with a backslash (\). For example, if you wanted to search for the term M*A*S*H, you would enter <WILDCARD> m*a\s*h.

Modifiers

Modifiers fine-tune the performance of your chosen operators. For example, you can use the <CASE> modifier with the <WORD> operator to make the search case-sensitive.

<CASE>

The <CASE> modifier makes <WORD> and <WILDCARD> searches case-sensitive. For example, the criterion <CASE> <WORD> *President* would retrieve documents that contained the word *President*; occurrences of *president* or *PRESIDENT* would be ignored.

<NOT>

Used with the AND and OR operators, NOT tells iManage DeskSite to exclude documents that contain a given term. For example, to retrieve documents that contain the words *mushrooms* and *olives* but not the word *anchovies*, you would enter:

```
mushrooms <AND> olives <AND> <NOT> anchovies
```

<ORDER>

The <ORDER> operator matches terms based on the order in which they appear in the query expression. This modifier can be used with the NEAR/N operator.

The ORDER modifier must appear in front of the operator name. For example, if you wanted to search for the word *iced* followed by the word *mocha* in the same phrase, you would enter the following criterion:

```
iced <ORDER> <PHRASE> mocha
```

CHAPTER 5

Integrated Application Operation

5

Overview

The iManage Integrated Application Operation allows a user to perform iManage functions directly from the application they are using. This integration eliminates the need to switch to the iManage DeskSite application to perform certain iManage tasks.

iManage DeskSite is actively integrated with most major Windows applications, including:

- Microsoft Office 97 and 2000
- Corel WordPerfect Suite (8) and WordPerfect Office 2000
- Watermark Professional
- Any ODMA-Compliant Application
- Lotus Notes
- Novell GroupWise 5.2 or 5.5
- Microsoft Outlook
- Any MAPI compliant E-mail
- Lexus/Nexus Office Suite 7.x (CompareRite, CiteRite, CheckRite, FullAuthority)

In addition, if you are using Microsoft Office 2000, another integration option is available, called Passive Integration. This is an option that your system administrator may set, according to the needs of your system.

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What does it mean to be "integrated" with other applications?

Active Integration

When iManage DeskSite is integrated with another application, certain functions in the other application are slightly changed. The functions usually affected are: **Open, Close, Save, Save As, Insert, Print, and Exit**

There are also new commands that exist only in integration mode. They are: **Local Open, Local Save, Versions and Edit Profile**.

Passive Integration

When the Passive Integration option is set on systems using Microsoft Office 2000, the **iManage Open** and **iManage Save As** menu options become available.

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Non-Integrated Applications

In some cases, an application cannot be integrated with iManage DeskSite. In those cases, iManage DeskSite's functions will not be available from within the application. You can still organize, track, and store your documents using iManage DeskSite. You will need to, however, follow this general procedure to open a document:

1. Launch iManage DeskSite and log into a WorkSite Middle Tier Server.
2. Search for and find the document that you want to open.
3. **Checkout** the document from the database.
4. Launch the application, if it is not already running.
5. **Open** the document from within the application.

When you are finished editing or revising the document:

1. Launch or switch focus to iManage DeskSite.
2. Use the **Checkin** option to copy the revised document back to the database.

Startup

In most cases, when you first launch an integrated application, the application automatically detects whether iManage DeskSite is running and launches it if

necessary. In other cases, the integrated application launches iManage DeskSite when you select an integrated function from the **File** pull-down menu.

If iManage DeskSite is running but you are not logged into an iManage server, iManage tries to log into a WorkSite Middle Tier Server. If Autologin settings are available, iManage DeskSite tries to do this automatically. If Autologin settings are not available, or if iManage DeskSite is running, but you are not logged into a WorkSite Middle Tier Server, the *Register Servers* dialog box appears, as shown in Figure 5.1.

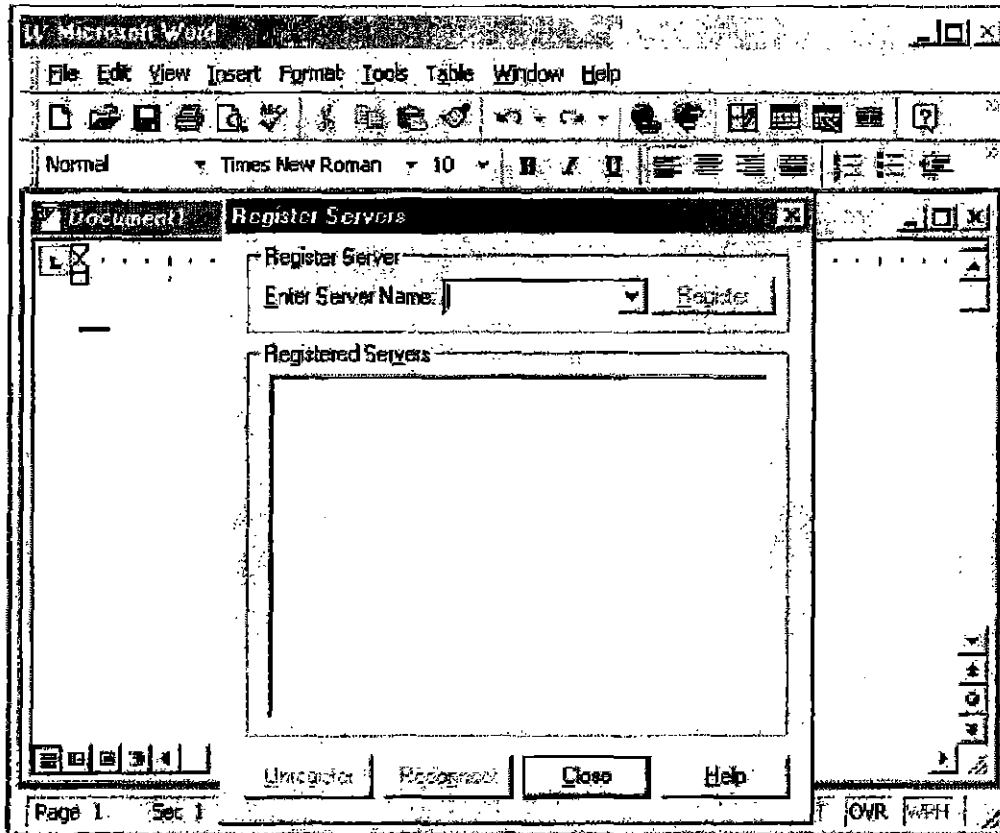


Figure 5.1: Login to iManage Server dialog from an integrated application

1. Type the name of the server in the Enter Server Name field, the click **Register**. The *Login* dialog box opens.

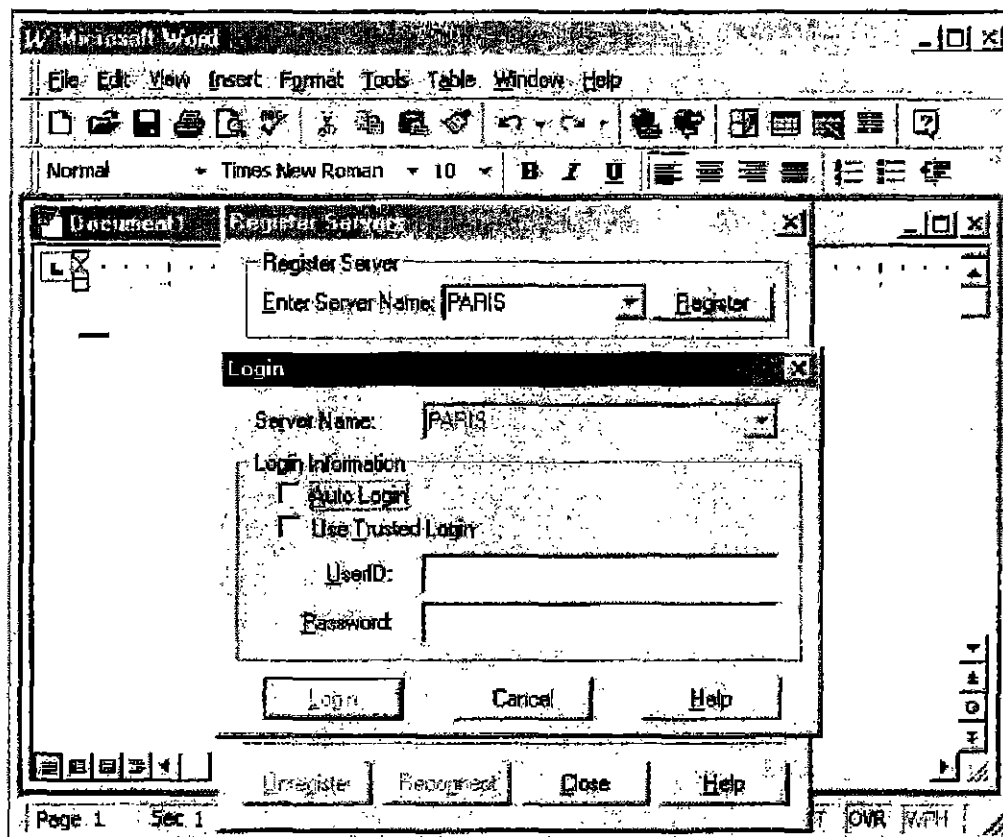


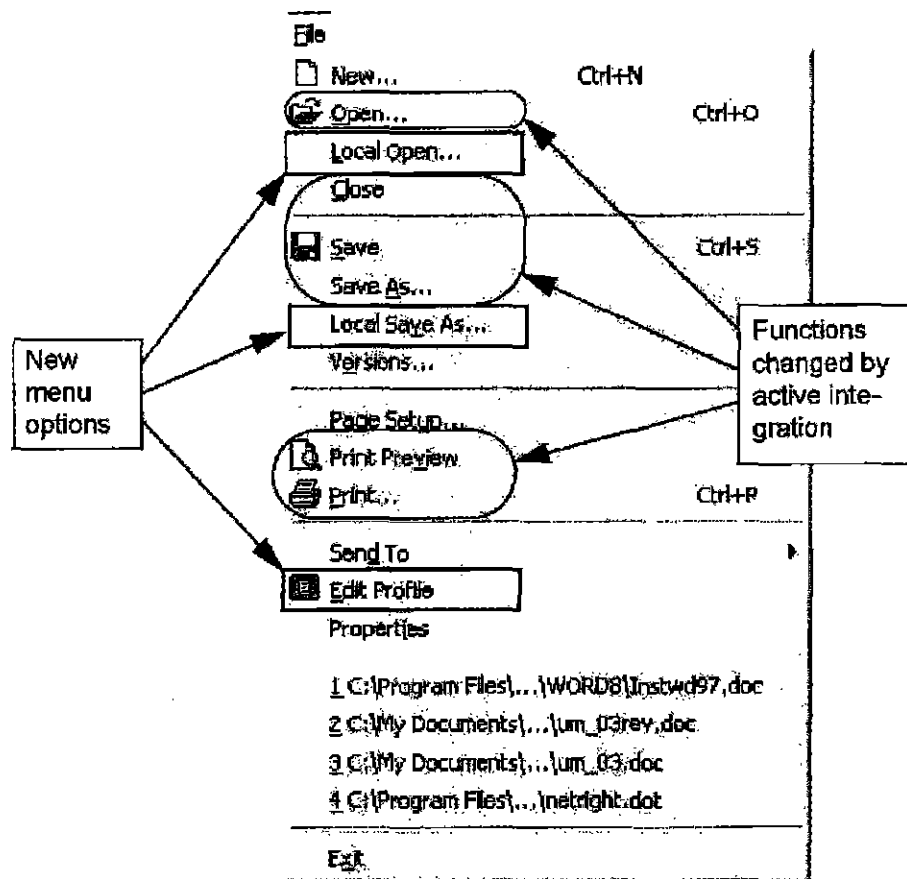
Figure 5.2: Login dialog box in an integrated application

2. Select the type of **Login** that you want to use. See Chapter 3 for more information about connecting to the DMS.
3. (Optional) Complete the **UserID** and **Password** fields. You will complete this step only if **Login** that you have selected requires this information.
4. Repeat Steps 1 through 3 for each server you want to use and then click **Close**.

File Menu From within Integrated Applications

Active Integration

An application's file menu changes in a number of ways when the application is integrated with iManage. The figure below displays what the MS-Word 97 File menu looks like when integrated. Many of the command's behaviors change and some new options appear. This section details each of these commands.



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Figure 5.3: File menu from Microsoft Word 97 while in Active Integration mode with iManage DeskSite.

Open:

When an application is integrated with iManage DeskSite, and a user selects the **Open** command in the application, iManage launches the *iManage Integrated Desktop*. The next section of this chapter outlines all the functionality of the *iManage Integrated Desktop*.

Local Open:

The **Local Open** command exists only if the application is integrated. Selecting it launches a standard Windows *Open* dialog box, which you can use to locate files on your local hard drive or on the network. You can use this option to open a document that is not in an iManage library.

5**Save:**

If the document already exists in iManage DeskSite the **Save** command simply replaces the original document. For documents that do not exist in an iManage DeskSite the **Save** command launches a *New Document Profile* dialog to allow you to enter profile information for the new document.

Save As:

When you select the **Save As** menu item from the **File** menu in an integrated application the *Save As Options* dialog box is launched. You now have three options:

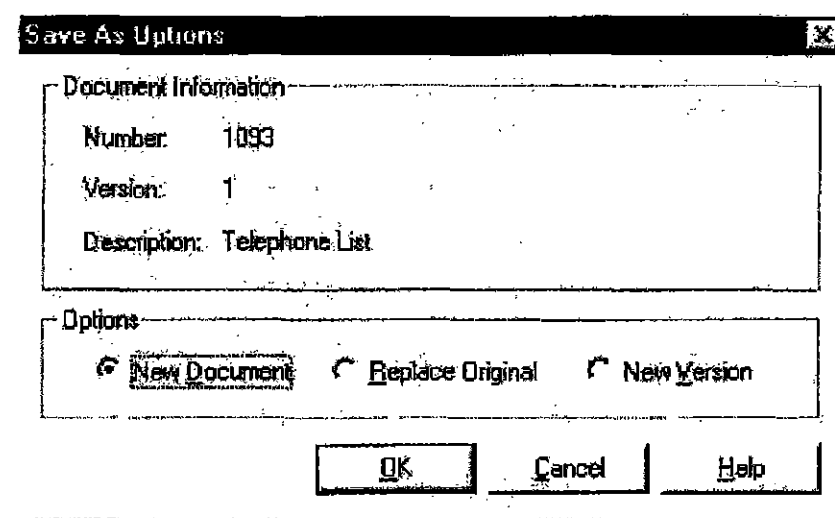


Figure 5.4: The *Save As Options* dialog box appears when you select **Save As** from the **File** menu in an integrated application.

- **Save as a new document:** This launches a *New Profile* dialog box. Enter the new document's profile information.
- **Save as a replacement for the original document:** This saves the document as the same document number and version. It replaces the iManage DeskSite version. This option is, in effect, the same as selecting **Save** from the **File** menu. If you have read-only access to the document you cannot use this option. Instead, save the document as a **New Document** or **New Version** of the original document.
- **Save as a new version of an existing document:** iManage DeskSite automatically assigns a new version number to the document and a dialog box displays to enter the new version's profile information.

If your application is ODMA-compliant, iManage DeskSite remembers the option you used the last time you performed the **Save As** command and uses that option as a default. However, your system administrator can set a specific option to use as the default all the time.

If the active document does not exist in iManage DeskSite when you select the **Save As** command, then a *New Profile* dialog opens for you to enter the new document's profile information.

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Local Save As:

When you select **Local Save As** from the **File** menu in an integrated application, a standard Windows *Save As* dialog displays. Use this dialog box to save your file on a local hard drive or other directory available on the network. When you use the **Local Save As** option, you are saving the file independently of iManage DeskSite and any libraries to which you may be connected. If your document originated from an iManage database, the **Local Save As** option does not automatically update the original copy of the document with any changes you may have made.

Note: The **Local Save As** command is a convenient method of making a copy of a document outside the iManage DeskSite document management system. Simply open a document that is in an iManage database, then use the **Local Save As** command to save a local copy of it. The **Local Save As** option is equivalent to using the **Export** function in iManage DeskSite.

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Note: **Local Save As** and **Local Open** may be disabled in selected applications by your system administrator.

Print:

Printing documents in integrated applications is the same as printing documents in non-integrated applications. The only difference is that the document's activity history in iManage DeskSite is updated to show that the document was printed, how many pages were printed, and who printed the document. If a document is printed that does not currently exist in iManage DeskSite, a warning message may appear.

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Edit Profiles:

When you select **Edit Profile** from the **File** menu in an integrated application, iManage DeskSite's standard dialog box for viewing or editing document profile information appears. Users who have read-only access to a document cannot change the information displayed in this dialog. Users with read-write access can change certain fields, such as the comments. Only the Author and Operator of a document have the full authority to change such criteria as the access privileges to the document.

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Profile Edit and View -Default [X]

Document Number	284	Last Edit Date	6/15/01
Document Version	1	Last Edit Time	3:15:41 PM
Creation Date	6/15/01	Size	0 bytes (0 bytes)
Last Edited By			

Profile Fields:

Description: Enrollment Form

Author: PVINCENT ... Pamela Vincent

Class: DOC ... Document

Subclass: [Empty]

Custom3: [Empty]

Custom4: [Empty]

Operator: BBYEN ... Bette Owen Kelley

Type: WORDST ... MS Word 97

Index Document

Security: Public

Access Rights: [Empty]

Buttons: OK, Cancel, Help

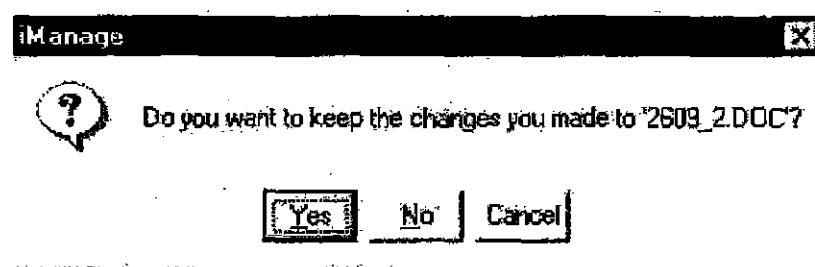


Figure 5.6: Example of the message box that appears when you close a document in an integrated application.

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If you select **Yes** from this message box, iManage DeskSite responds as if you selected **Save** from the **File** menu. If the document is not already in an iManage database, you are prompted to enter profile information for the new document.

Passive Integration

If you are running Microsoft Office 2000 applications, your system administrator may set up passive integration. Most menu options remain the same as with Active Integration. There are a few differences.

For more information about using infoLook with Microsoft Office 2000 applications, see the *iManage Office 2000 Integration Module Installation and User's Reference Manual*.

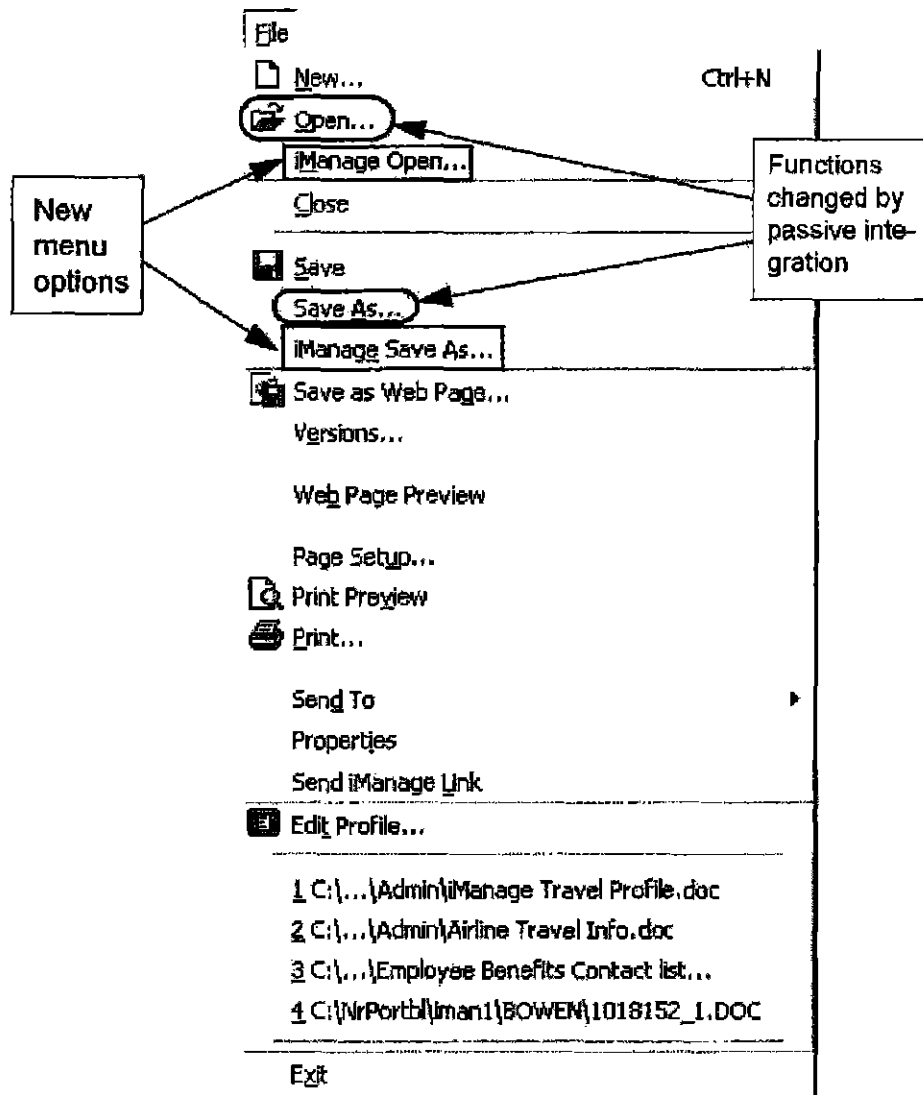


Figure 5.7: File menu from Microsoft Word 2000 while passively integrated with iManage DeskSite

Open

The **Open** command launches a standard Windows *Open* dialog box, which you can use to locate files on your local hard drive or on the network. You can use this option to open a document that is not in an iManage library.

iManage Open

When an application is passively integrated with iManage DeskSite, and a user selects the **iManage Open** command in the application, iManage launches the *iManage Integrated Desktop*, explained in detail in the next section.

Save As

When you select **Save As** from the **File** menu in a passively integrated application, a standard Windows *Save As* dialog opens. Use this dialog box to save your file on a local hard drive or other directory available on the network. When you use the **Local Save As** option, you are saving the file independently of iManage DeskSite and any libraries to which you may be connected. If your document originated from an iManage database, the **Save As** option does not automatically update the original copy of the document with any changes you may have made.

iManage Save As

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When you select the **iManage Save As** menu item from the **File** menu in a passively integrated application the *Save As Options* dialog box launches. You have three options:

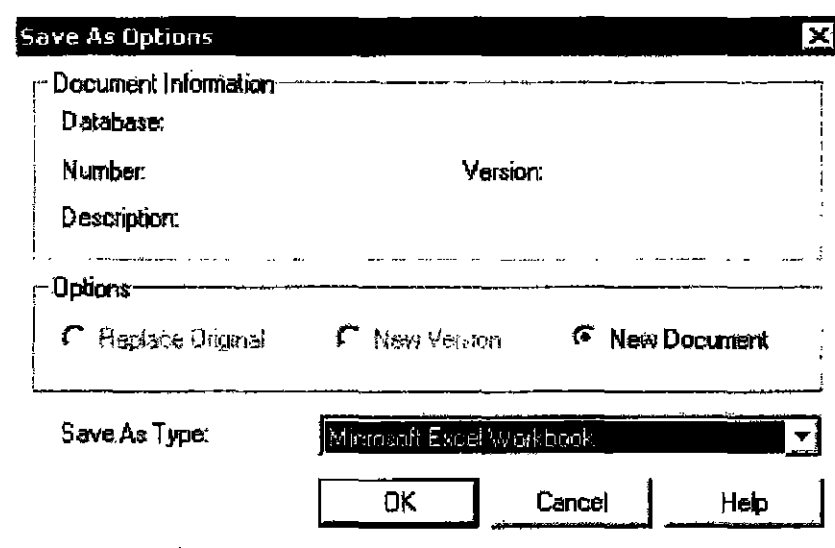


Figure 5.8: *Save As Options* dialog box for Microsoft Office 2000 applications

- **Save as a new document:** You may select the **Save As Type** by selecting from the drop down list. The list is the same as the list you would see in the Microsoft Office 2000 application you are using. When you click OK, a *New Profile* dialog box launches. Enter the new document's profile information.
- **Save as a replacement for the original document:** This saves the document as the same document number and version. It replaces the iManage DeskSite version. This option is, in effect, the same as selecting **Save** from the **File** menu. If you have read-only access to the document you cannot use this option. Instead, save the document as a **New Document** or **New Version**

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of the original document. This option does not allow you to select the **Save As Type** from the drop down list.

- **Save as a new version of an existing document:** iManage DeskSite automatically assigns a new version number to the document and a dialog box displays to enter the new version's profile information. This option does not allow you to select the **Save As Type** from the drop down list.

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iManage Integrated Desktop

As has been detailed earlier in this chapter, iManage documents can be accessed directly through an Integrated Application. The Integrated Desktop is the dialog that appears instead of the standard Windows dialogs that normally appear in non-integrated applications.

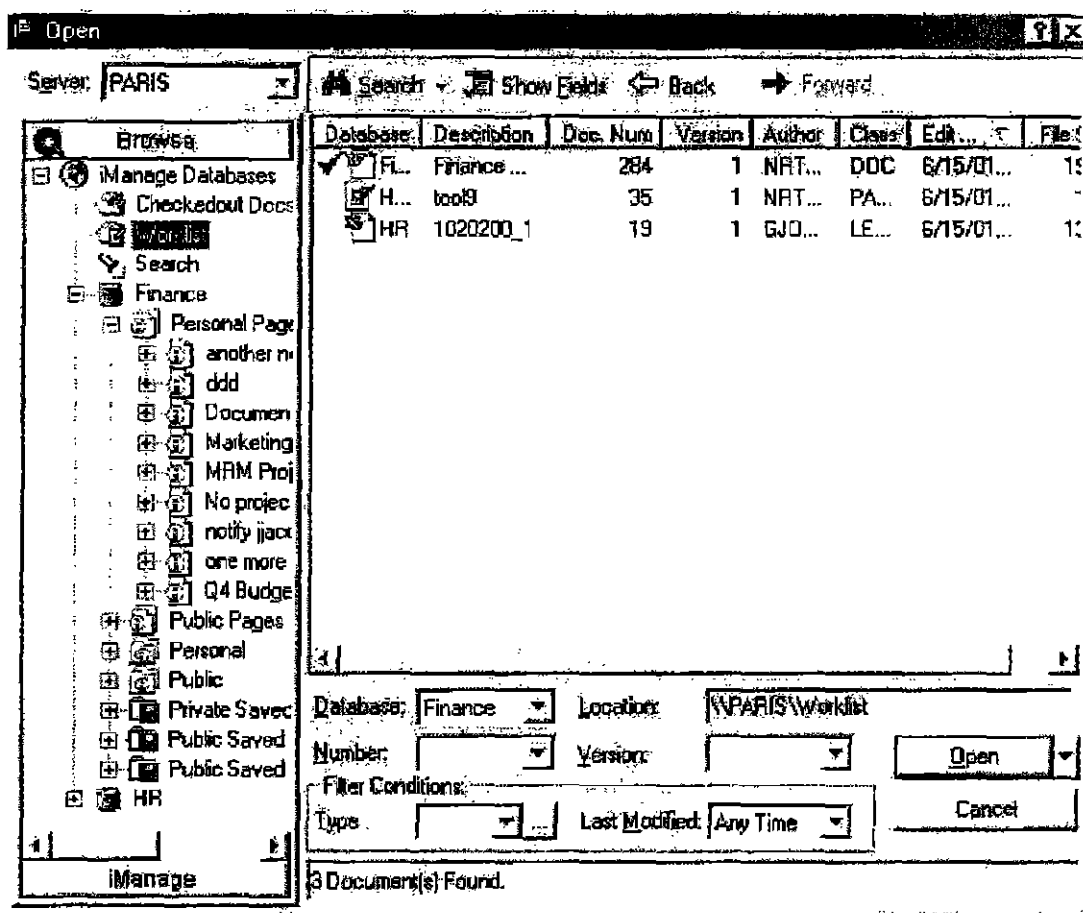


Figure 5.9: Integrated Desktop Main Window

Integrated Desktop: Main Window

Tree Frame:

On the left side of the Integrated Desktop is the Tree Frame. It contains the organizational structure of all servers, libraries, iManage WorkSite pages if any, folders, worklists and saved searches. Clicking a page icon displays the folders listed

on an iManage WorkSite page. Clicking a folder icon displays the contents of that folder in the **Document List**.

Pages

If Pages were created in the iManage WorkSite application, you can see the page structure in iManage DeskSite. You can access documents from folders on these pages and perform all activities on them that you can perform to documents in other folders. The activities you can perform depend on your Role and the access rights you have to the Pages and Folders. You cannot create Pages in the iManage DeskSite application.

Folders

Libraries contain folders, which are static groups of documents you can create or share with other users. Folders provide a method for organizing and sharing documents easily. To display the contents of a folder, click the icon for that folder and the documents within it appear in the Document Grid.

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Document List:

All the documents of a highlighted folder in the **Tree Frame** are displayed in this Document List view. You can organize the list in Ascending or Descending order by clicking the column heading.

You can also narrow the focus of documents in the Document List by using the Document Number and Document Version pull-down menus in the Filter Conditions section at the bottom of the window.

To configure which columns appear in this Document List, click

 **Show Fields**. The *Document List Column Selection* dialog launches.

Shortcut Bars:

The **Browse Bar** contains the **Folder Tree** to locate any document on the server you are logged on to. A user can create Shortcut bars beneath the Browse Bar to keep folders. The iManage Shortcut Bar exists as a default and can not be deleted.

To Create a Shortcut Bar:

1. Right-mouse click on the iManage Shortcut Bar.
2. Select **Add Group** from the pop-up menu.

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3. Name the new group in the space provided.
4. Click on any other Shortcut Bar.

To Delete a Shortcut Bar:

1. Right click once on the Shortcut Bar you wish to delete.
2. Select **Remove Group** from the pop-up menu.

To Insert Folders into your Shortcut Bar:

1. In the Folder Tree, right-mouse click on the folder you would like to add to a shortcut bar.
2. In the menu displayed, select **Add to Shortcutbar**.
3. Select the specific Shortcut Bar where you wish to insert the folder.

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Integrated Desktop: Searching for Documents

New Search

Click **Search** at the top of the Integrated Desktop Window to perform a standard iManage search. The *Search* dialog form is customizable so the options available on the form vary. The *Document Search* dialog is designed in the iManage Dialog Editor application that is usually not accessible by anyone but the System Administrator. For detailed information on searches, see *Chapter 4: Searching for Documents*.

Navigation Buttons

Forward

Click **Forward** to navigate to a folder lower in the tree structure that you looked at previously and then moved back from.

Back

Click **Back** to navigate to a folder higher in the tree structure.

Integrated Desktop: Document Commands

Open, Insert, Insert Link, etc

The user launches the Integrated Desktop most often because he or she simply

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wants to access a document in iManage. If you reach the Integrated Desktop by clicking Open from an application's File menu then you most likely just want to open the document in the application. To do this, double-click the document. If you reach the Integrated Desktop by clicking Insert File or Insert Link from an application, navigate to the document and click open. iManage inserts the document or link at the point of your cursor. You can perform all the usual functions from the Integrated Desktop.

Versions

To view a list of document versions, highlight the desired document and right-mouse click. Select **Versions** from the pop-up menu.

History

To view the document history of a particular document, highlight the desired document and right-mouse click. Select **History** from the pop-up menu.

The *History* dialog displays the activity record for a particular document in chronological order. The fields displayed in the activity table are User, Application, Activity, Date-Time, Duration, Pages Printed, Location, and Comments. The Document History table is not customizable.

The kinds and number of activities recorded for this history is up to your system administrators but typically include:

- Opening and closing the document in an integrated application.
- How long the document was open.
- Editing the document's profile.
- Changing the access rights of the document.
- Printing a document and how many pages were printed.
- Checking out, copying and/or checking in the document.
- Viewing the document.
- Mailing the document through e-mail.
- Creating a new version of the document
- The computer (location) where the activity took place.
- Comments about the activity.

Related Documents

To view related documents, highlight the desired document and right-mouse

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click. Select **Related Documents** from the pop-up menu.

Document relations are one of the ways you can organize and group documents, in addition to folders and document classifications. See Chapter 3 for more information about related documents.

Edit Profile

To Edit or View a document's profile information, highlight the desired document and right-mouse click. Then choose **Edit Profile** from the pop-up menu.

The *Edit Profile* dialog box displays the document's current profile information. You can edit the information displayed in these fields and then record your changes. For detailed information on document profiles see Chapter 3: iManage DeskSite: Basic Functions.

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Checkout

To checkout a document from the Integrated Desktop, select the document(s) from the **Document List** and right mouse click. Then choose **Checkout** from the pop-up menu.

Use this Checkout feature when you want to work on a document outside the Document Management System (i.e. on your local workstation, away from the network) AND you intend to return the document to the system as the same document. The Checkout feature will prevent anyone else from editing the document while you have it.

Checkin

To check in a document that is marked checked out, select the document(s) from the document table and right-mouse click. Then choose **Checkin** from the pop-up menu:

The *Check In Options* dialog box essentially 'puts back' a document that you previously checked out.

This dialog box presents a number of check-in options:

- **Replace Original:** The checked in copy of the document replaces the original in the database.
- **New Version:** The checked in document is added to the database as a new version of the original document. The original document remains intact.

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- **New Document:** The checked in document is added to the database as a new document.
- **Keep Checked Out:** The checked in document remains on the local drive. However you will no longer be able to check the local copy back into the database.
- **Delete Local File:** The local file is deleted after adding it to the database. (This option does not apply if you are checking in portable documents.)

Checkedout Info

If a document is checked out, you can display information about the checked out document by highlighting the document in the Document Grid and selecting **Checkedout Info** from the pop-up menu.

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Export

To **Export** a document, highlight the desired document and right-mouse click. Select **Export** from the pop-up menu.

The document export function is essentially the reverse of document importation: it copies a document from the library to your local hard drive. If you are planning to edit a document and then return it to the database later, it is advisable to use iManage DeskSite's checkout function. See Chapter 3 for more information about exporting documents.

View

To **View** a document, highlight the desired document and right-mouse click. Select **View** from the pop-up menu.

The View command launches a read-only version of the selected document in the iManage View application. See [Chapter 7](#) for detailed information on the View application.

Viewing documents is useful to verify that you have selected the document you want before you check it out.

Unlock

To **Unlock** a document from the Integrated Desktop, select the document(s) from the document table and right mouse click. Then choose **Unlock** from the pop-up menu.

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About Unlock

If you have suffered a network failure or system malfunction while you were using documents you may find that those documents are still marked as IN USE. In such instances, you can use the Unlock feature to tell the system to consider the document 'not-in-use'. This allows you or others to checkout the document.

Implications of Unlocking

Any copy of a document that exists locally will be 'orphaned' from the network version after an Unlock is complete. You can only put the local document into iManage as a new document. Therefore, you should only use the Unlock option to free up documents that appear to be in use or checked out, but are erroneously marked as such due to a network or system failure.

Note: You can only unlock documents that are currently marked as IN USE by you. You cannot unlock documents in use by other users.

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Remove from folder

The **Remove from folder** menu option removes selected document(s) from a particular folder. To delete a document from a folder, highlight the document(s) to be deleted and right-mouse click. Then choose **Remove from folder** from the pop-up menu.

Note: The **Remove from folder** menu option does NOT remove a document from the network or a particular database. Removing a document from the network or database requires a Purge command. Not everyone who has **Remove from folder** menu option permissions will have Purge permissions. Contact your System Administrator for more information.

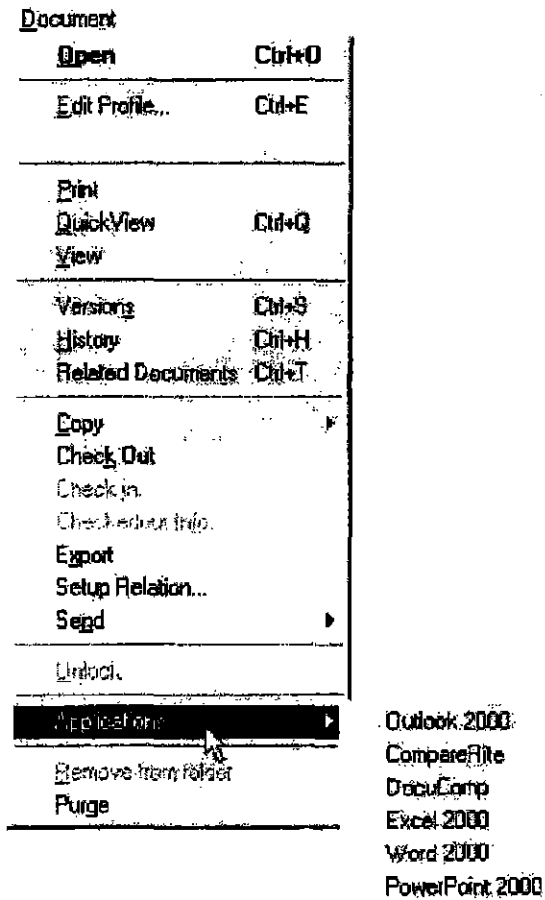
Purge

To *purge* a document is to remove it entirely from the database.

You purge a document from the database by highlighting the desired document in the Document Grid and selecting **Purge** from the pop-up menu. Only the author or operator of a document are allowed to purge a document. This option may also be disabled for some users.

Other Applications

Integration with CompareRite, DocuComp, FullAuthority, and CiteRite



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The iManage DeskSite program includes a direct interface to the following document utilities: CompareRite, DocuComp, FullAuthority, and CiteRite. CompareRite and DocuComp allow you to compare versions of documents with each other and to produce a report of variations. FullAuthority and CiteRite are citation utilities that allow you to analyze the citations that appear in a document. Access to these utilities is provided in iManage DeskSite by selecting **Applications** from the **Document** menu, then selecting the appropriate application.

Users must have a path established to the directories for these utilities. Each iManage database automatically provides entries in the application table for each

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of these document utilities.

E-mail Integration

iManage DeskSite is integrated with electronic-mail products through the MAPI interface standard. E-mail systems supported include:

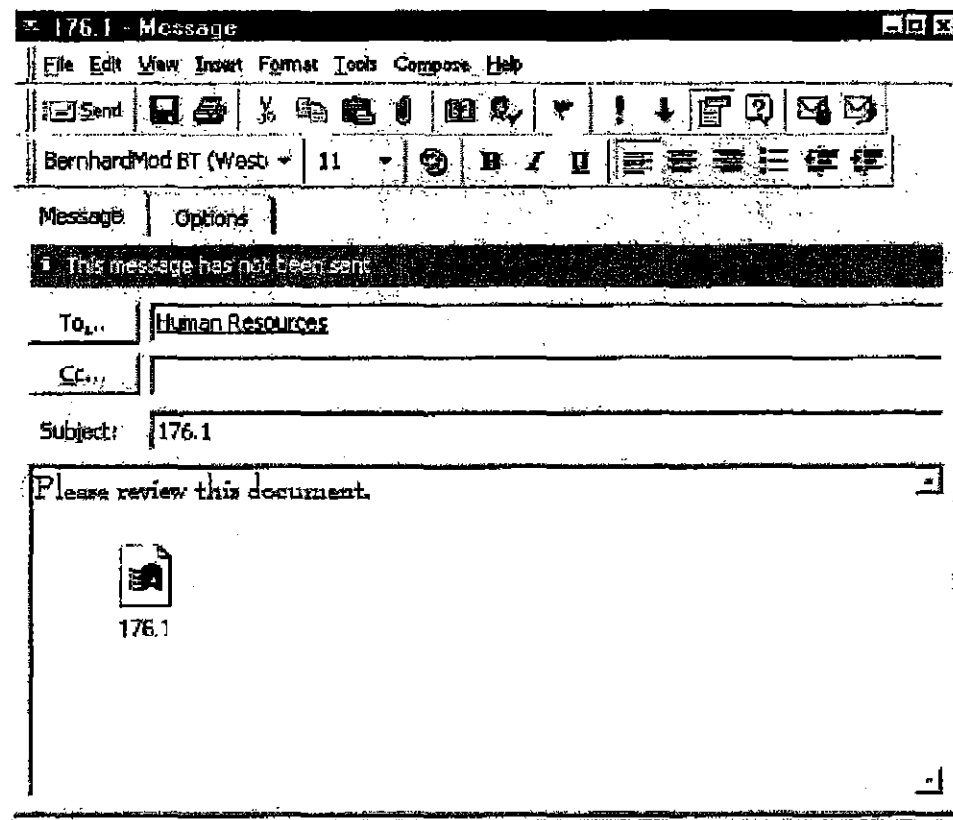
- Network GroupWise
- Microsoft Mail
- Microsoft Outlook
- Lotus cc:Mail
- Lotus Notes
- DaVinci

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About E-mail Integration

The iManage DeskSite program includes a user interface where you can select documents and mail them through electronic mail.

Using standard drag-and-drop techniques, you can select documents that need to be mailed from the iManage Desktop window's Document Grid. Once you have selected the documents, iManage DeskSite can automatically invoke the e-mail-send mechanism. iManage DeskSite uses the MAPI standard to display *Mail To* windows appropriate to the e-mail system present. When sent via e-mail, document profiles have the extension TXT while document filenames have the application's extension—DOC for Word files, WRI for Write files, etc.



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Figure 5.10: Documents selected for emailing appear as attachments in your email application. This screen shot shows how a document appears in Microsoft Outlook.

Additional Integrated Functions

Microsoft Word 97 and 2000

Additional integrated functions are available in selected applications. The following additional integrated functions are available in Microsoft Word 97 and 2000. Your system administrator can disable or enable some of these options selectively.

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iManage Mail Merge

When you select **iManage Mail Merge** from the **Tools** menu, you can perform a mail merge using documents from an iManage database as your master document and data source document. To perform an iManage Mail Merge, select **iManage Mail Merge** from the **Tools** menu, identify a master document and data source document, then perform the mail merge. Links to the data source document are removed when you close the master document.

Compare iManage Documents

When the **Compare iManage Documents** menu option is enabled by your system administrator, you can compare the currently open document against a document in an iManage database by selecting **Tools**, then **Track Changes**, then **Compare iManage Documents**. If this menu option does not appear, then this option has not been enabled by you iManage Administrator.

iManage Footer

When you select the **iManage Footer** option from the **View** menu, the following information will be inserted in the footer of the currently open document:

Document Name : Document Number – Version Number

If the document name field is empty, only the Document Number and Version Number will be displayed. Other footer information, such as author name, page number, file path information, etc., can be inserted automatically using built-in options in Microsoft Word.

CHAPTER 6

iManage DeskSite

Advance Functions

6

Overview

This chapter describes some advanced functions available in the iManage DeskSite program.

- Using CompareRite and DocuComp
- Using FullAuthority and CiteRite
- Setting display options

CompareRite, DocuComp, FullAuthority and CiteRite are not provided with iManage DeskSite.

Other advanced features, such as portable mode and document echoing, are described in [Chapter 7](#) and [Chapter 8](#) of this manual.

Using CompareRite and DocuComp

CompareRite and DocuComp are applications that enable you to compare versions of documents and to produce comparison reports automatically. For the CompareRite and DocuComp menu options available in iManage DeskSite to work properly, these applications must be integrated correctly with iManage DeskSite.

To compare documents using CompareRite or DocuComp:

1. Highlight the two versions of the document that you want to compare in the document grid.

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Note: To compare versions of the same document you must show all versions of the document. See “[Defaults Tab](#)” on page 155 for details.

2. Select **Applications** from the **Document** menu.
3. Select **CompareRite** or **DocuComp** from the submenu that appears. The *CompareRite* or *DocuComp* dialog box appears. The version of the document shown first in the document grid is listed as the original document. You can sort the grid by version number by clicking the column heading.

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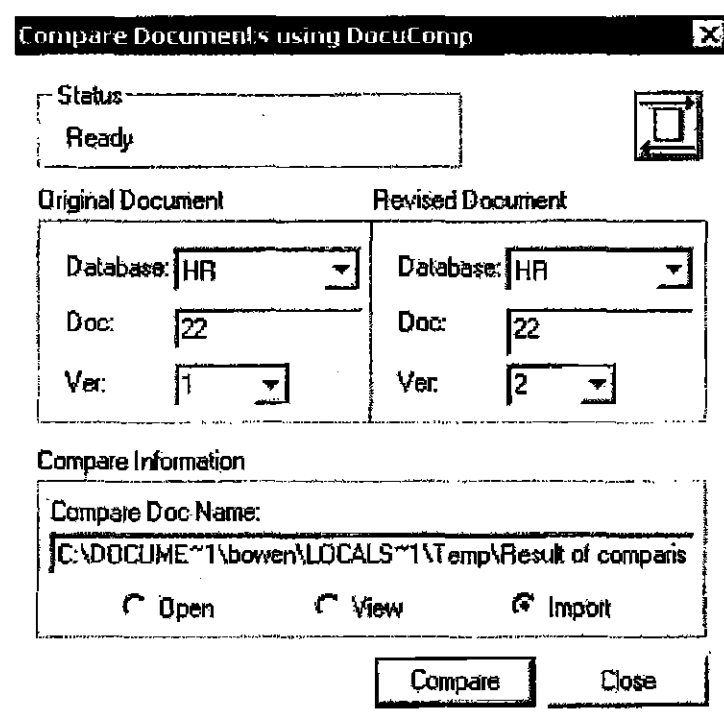


Figure 6.1: *CompareRite* dialog box

4. The application saves the comparison results to the file named in the **Compare Doc Name** field. Enter a filename in this field.
5. Select how you want to handle the resulting comparison document.
 - Select the **Open** button to the results document.
 - Select the **View** button to view the comparison results with the iManage View program.
 - Select the **Import** button to import the comparison results document automatically into iManage DeskSite.


EXHIBIT 27 PART 2

ments that are contained in an iManage database from inside the application by selecting **Open** from the application's **File** menu. If the application is integrated with iManage, the *iManage Integrated Desktop* appears and allows you to search for documents, display your worklist, or view the contents of a folder or saved search.

If your application is not integrated with iManage DeskSite

If you do not see the *iManage Integrated Desktop* when you select **Open** from an application's **File** menu, then the application is not integrated with iManage DeskSite. To open documents that are located on an iManage database in an application that is not integrated with iManage DeskSite:

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1. Locate the document(s) in the database using iManage DeskSite.
2. Use iManage DeskSite's **Checkout**  function to save a local copy of the document(s) on your hard drive.
3. Open the document(s) from within the non-integrated application.
4. When you are finished working on the documents, save them again on your local hard drive.

IMPORTANT! Do not change the filename of the documents when you save them.

5. Use iManage DeskSite to check the documents back into the database using the **Checkin** function.

If you are using an application that you think should be integrated with iManage DeskSite, but you do not see the *iManage Integrated Desktop* when you select **Open** from the **File** menu in that application, consult your company's technical support department.

Viewing Documents

Instead of opening a document, you can view it with iManage View program or in the iManage Desktop's Quickview Frame. Documents that are merely being viewed are not locked or marked as being in use; instead, View or Quickview makes a temporary copy of the document. Thus, you can still view documents that are marked as busy (e.g. those that are in use or checked out), even though you cannot open them. You can view most word-processing, spreadsheet, and


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graphics documents in the Quickview frame or iManage View program.


You can only view one document at a time in the Quickview frame. To view multiple documents simultaneously in read-only format, you must use the iManage View program. iManage launches this program automatically when you highlight the document and click the view icon or select **View** from the **Document** menu.

3

To view a single document in the Quickview frame:

Highlight a document in the Document Grid and click the Quickview icon  or the **Quick View** tab or select **QuickView** from the **Document** menu or right-click pop-up menu.

To view multiple documents simultaneously:

Highlight multiple documents in the Document Grid and click on the View button  or select **View** from the **Document** menu. The documents open in read-only form in the iManage View program.

From iManage View, you can search the full text of documents displayed in the View frame, copy sections of documents to the clipboard, or print documents. See [Chapter 7](#) for more information about the View program.

Note: Documents are not locked in the database while you are viewing them. You can view documents whether or not they are in use or checked out of the database.

Printing Documents

You can print a copy of a document directly from iManage DeskSite. To print a document:

1. Highlight the document(s) in the Document Grid.
2. Select **Print** from the **Document** menu.

Note: Because this print routine uses the document's native application to print the document, it is not possible to change the printer setting directly from the iManage DeskSite application. It will print using the Windows default settings.

Note: Selecting **Print** from the **File** menu prints a list of documents currently displayed in the Document Grid (i.e. the contents of a folder or search).

3

Entering Document Profile Information

Whenever you create a new document, a new version of a document, or a copy of a document, iManage DeskSite prompts you to enter profile information for that document. Profile information helps identify the document and enables you and/or others to find it easily when performing a search of the database. The dialog boxes used to enter profile information for a new document, new versions of documents, and copies of documents are all customizable by your database administrator. For that reason, the dialog boxes that appear in your version of iManage DeskSite may appear different from the default ones shown on the following pages. You may see fewer or more options, fields of profile information may be renamed, and the names of the dialog boxes may be different.

Table 3.1: Default Fields of Profile Information

Default Name of Field	Significance
Database	Name of the database in which the document is stored.
Type	This field usually indicates the application that should be used to open the document.
Class	This field classifies the document with a custom document classification.
Author	This field indicates who wrote the document.
Operator	This field indicates who edited or worked on the document (a typist or coauthor).
Security	This field lists the document's default security status: PUBLIC, PRIVATE, OR VIEW.

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Table 3.1: Default Fields of Profile Information

Default Name of Field	Significance
User Access (button)	By clicking this button, you can specify access privileges for individual users.
Group Access (button)	By clicking on this button, you can specify access privileges for groups of users.

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Figure 3.6: Default appearance of the *New Document Profile* dialog box, which is used to enter profile information for new documents in the database.

iManage DeskSite remembers the last five values you entered in each field in the New Profile, New Version, and Edit Profile dialog boxes.



If browse buttons appear next to the text-entry fields in your dialog box, use these

buttons to display selection boxes for each field of profile information. You can also press **F2** to display a selection box. These selection dialog boxes display lists of available options for each text-entry field. Select an option from within the dialog box and click **OK**.

iManage DeskSite offers a Type-ahead feature. When you edit profile information in a field, you can type the first few characters of the entry and then press **Tab**. iManage DeskSite fills in the entire entry if possible.

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The icons to the left of the field indicate if the field is required or whether or not you have made a valid entry:

	The green exclamation point symbol indicates that profile information is required for this field.
	The red X symbol indicates that the information entered in this text-entry box is not a valid entry for this profile field.

If the entry is invalid, enter or select a valid entry. If the entry that you need is not available, your iManage administrator must create it.

Note: Your system administrator can enable your system to enter Child field information (such as Matter) without first entering Parent field information (such as Client).

Setting Access Privileges

If you have the ability to set the access privileges on your documents (when you create a new document or when you select **Edit Profile** from the **Document** menu), then you will notice that there are two basic kinds of settings available to you.

- You can select a default security setting for the document. This can be **PUBLIC**, **PRIVATE**, or **VIEW**.
- You can specify access privileges for individual users or groups.

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Rules and Definitions:

Public, Private, and View

- When the default security setting is set to PUBLIC, then all users who have access to the library will be able to view and edit the document and its profile information EXCEPT those users and groups of users to whom you specifically deny access.
- When the default security setting is set to PRIVATE, then no users have access to the document EXCEPT the Author and Operator named in the document's profile record AND those users and groups to whom you specifically grant access.
- When the default security setting is set to VIEW, then all users have read-only access to the document EXCEPT the Author and Operator named in the document's profile information AND those users and groups to whom you specifically grant full access, read-write access or no access.

Author and Operator Privileges

The Author and Operator named in the document's profile record ALWAYS have full access to the document. Only the Author and Operator can change the Author or Operator of the document or edit access privileges.

Group Access

When a group is granted access privileges to a document, all users who are a member of that group are granted the same access privileges to the document.

Conflicting Access Privileges

When there is any conflict in access privileges, such as when a user is granted greater privileges individually, then granted lesser privileges as a member of a group, the greater access privilege apply. Generally speaking, iManage DeskSite always seeks to MAXIMIZE users' access to documents.

Read-only access...

Means that the user can view the document in read-only form, but cannot make changes and save them to the library as the same document.

Read-write access...

Means that the user has full view and edit privileges to the document. Users with read-write access can change profile information for the document, but they cannot change the Author or Operator, or edit access privileges. Only the Author or Operator and those to whom they grant full access can edit these fields.

Full access...

Means that the user has full view and edit privileges to the document, plus they can change the security settings for the document. The Author and Operator have full access, and they can grant full access to others.

No Access...

Means that the user cannot access the document. If a user has no access to a document, the document does not show up in any search of the library that he or she performs. If the document is in a public project, users who have no access to the document do not see the document when they click on that project icon.

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Editing Security on Multiple Documents

There may be times when you need to edit the security for a large group of documents at the same time, for example, if a new employee joins your group. You can edit the security settings on two or more documents in the same operation. This feature functions only on documents that are currently checked in; you cannot edit security on documents that are archived, locked or checked out.

To edit security settings on multiple documents:

1. Highlight the documents whose security you want to edit and select **Bulk security edit** from the **Document** menu.

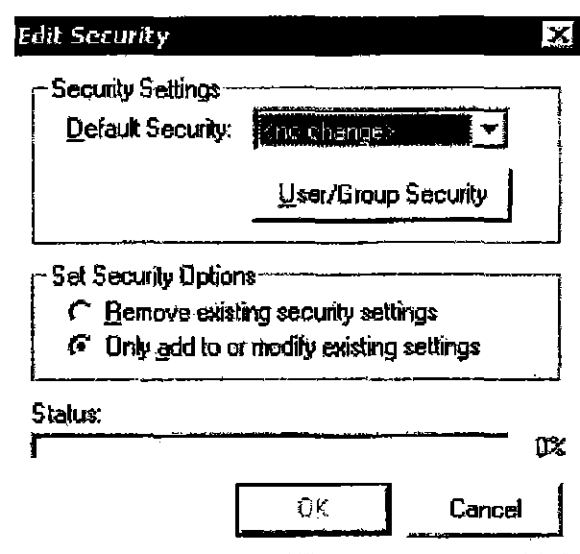


Figure 3.7: *Edit Security* dialog

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2. Select the **Default Security** for all the documents in the **Default Security** drop-down list. You can select **<no change>**, **Public**, **Private** or **View**.
3. Click **User/Group Security** to add Users and/or Groups who are exceptions to the default security
4. Choose an option in the **Set Security Options** group:
 - Choose **Remove existing security settings** if you want to replace the current setting in all documents with the new settings you are entering. The security you set will be the same on all the documents you select.
 - Choose **Only add to or modify existing settings** to keep the current settings on the documents, but add or change specific users or groups. The settings you select will change but all other settings will remain as they were.

Creating and Applying Security Templates

When you add a new document to an iManage library, you have the option of entering custom security settings, including access/denial lists of users and groups, or you can apply a security template to the document that will determine the security settings to be applied to the document. You can only apply a security policy to a document when you add the document to an iManage library. Once you add the document to the library, changes to the security policy do not affect the document's individual security settings. If you want to make the document available to other users or change the security settings after adding it to the database, you must make these modifications to the document individually using the **Edit Profile** option.

You can optionally select a security policy that should be applied by default to all new documents in the *New Document Defaults* dialog box. If you select a default security policy to be applied to all new documents, that security policy is selected by default in the *New Document Profile* window each time you add a new document to the database. Like all values defined in the *New Document Defaults* dialog box, however, you always have the option of selecting a different security policy or custom security settings each time you add a new document to the database.

To Create a Security Template:

1. Select **Security Template** from the **Options** menu. This launches the *Security Template Management* dialog.
2. Click **New**. This launches the *Security Template* dialog.

ID	Name	Allow L..	Access Rights
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Figure 3.8: *Security Template* dialog box

3. Enter a name for the template in the **Security Template Name** text box. After you enter the template name the enterable fields are no longer grayed out.

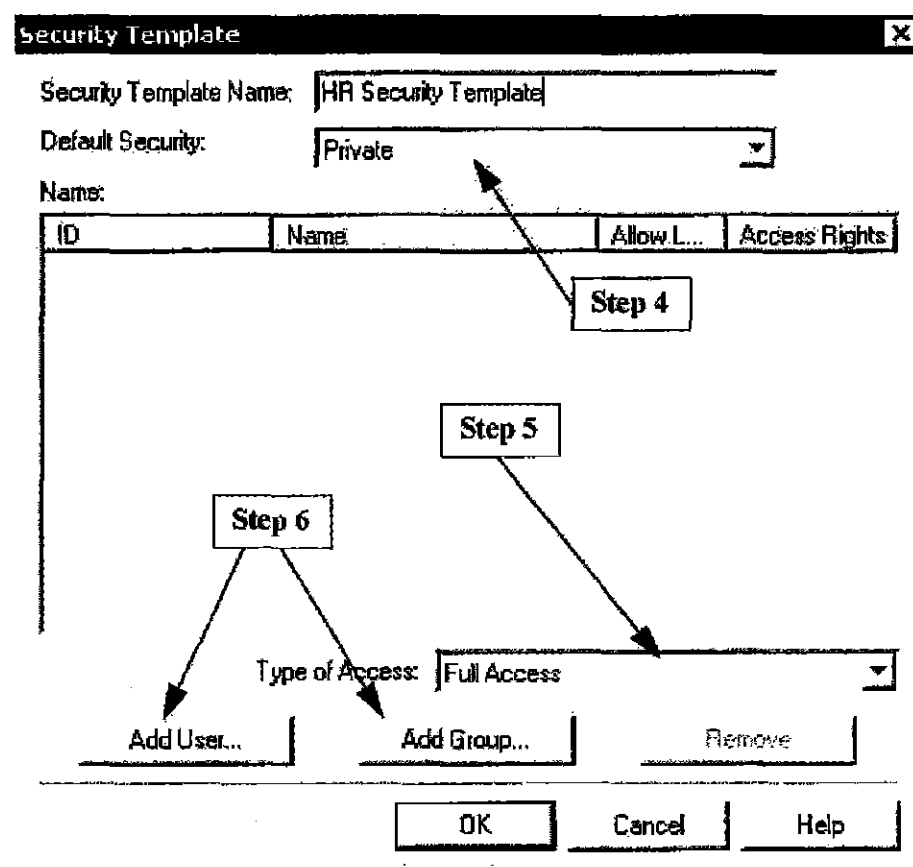
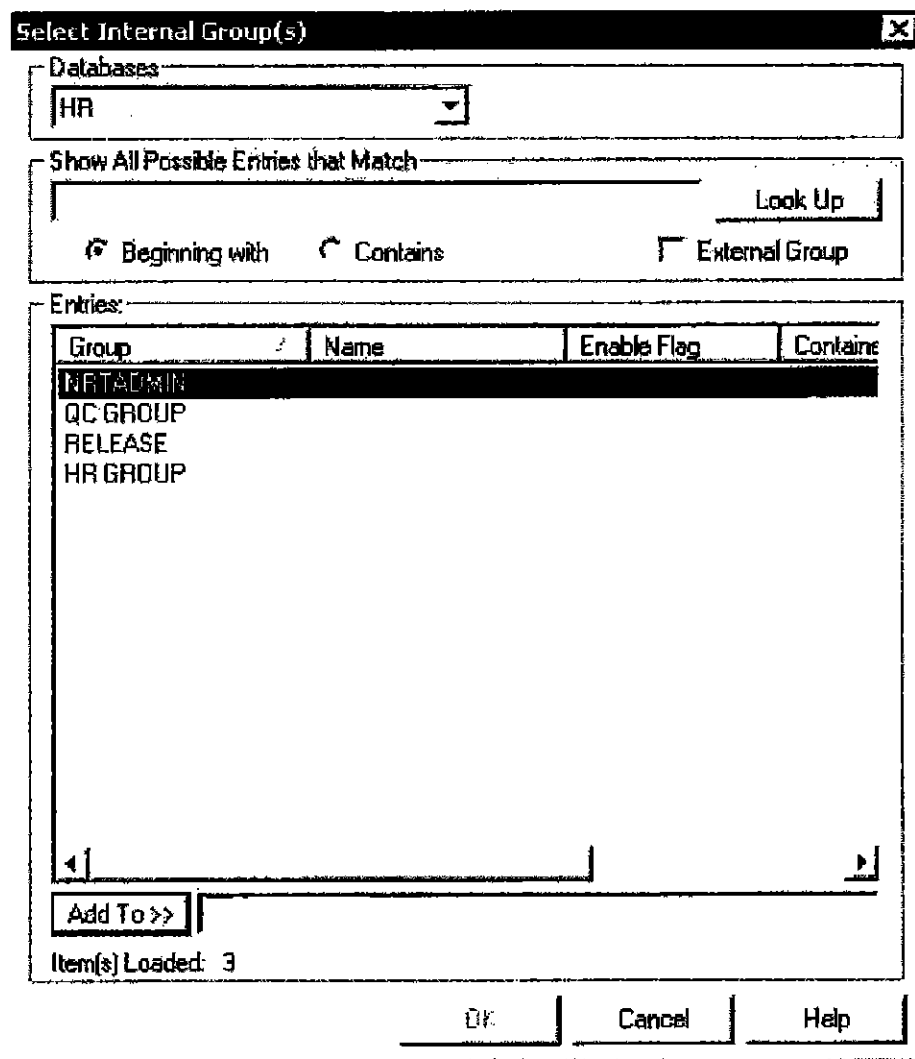


Figure 3.9: Security Template dialog box with name

4. Select a default level of security from the **Default Security** drop down menu to assign security access to anyone, except Author and Operator, not accounted for in your explicit security assignment list. This field defaults to Private. You can also select Public or View. (Public = Read/Write, View = Read Only, Private = No Access)
5. Select the type of access from the drop-down menu for the users and groups you specifically name in the template. You can choose from Full Access, Read/Write, Read, or No Access. See ["Setting Access Privileges"](#) on page 55.
6. Click **Add User** or **Add Group** to add specific users or groups to the template.



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Figure 3.10: *Select Internal Group(s)* dialog box

7. Select one or more groups or users from the list. You may select from a list of external users or groups by checking **External Group** or **External User**. Click **Add To>>** to add them to the security template. To remove users or groups from the security assignment list, highlight and delete them from the **Add To** list.

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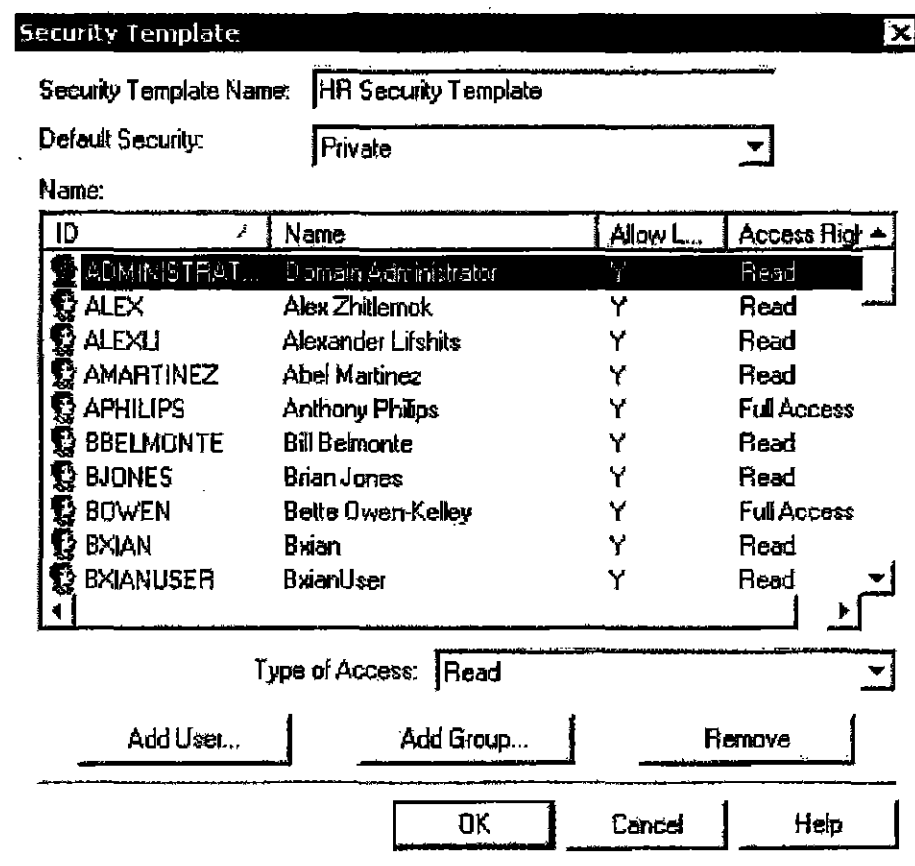



Figure 3.11: Security Template dialog box showing list of groups and users

8. To remove a user or group from the template list, highlight the user or group and click **Remove**.
9. Click **OK** to save the security template.

To Apply a Security Template

Once a security template has been created, you can apply it to any new document you add to an iManage library. In the *New Document Profile* dialog there is a **Security Template** drop down menu. This menu contains the Security Templates you have set up. Select a security template and you are finished with the security aspect of the document's profile. You can modify the access control lists when you import a document to an iManage library. However, if you assign an author-based security template, you cannot modify security settings assigned to that author.

Using *Lookup* Dialog Boxes:

If they are provided, use the lookup buttons  in the *New Document*, *New Version* or *Profile Edit* dialog boxes (or in the *Search Dialog* window) to enter profile information. When you click a lookup button in one of these dialog boxes, a selection box appears that contains a list of valid entries for that field of profile information. [Figure 3.12](#) shows an example of a selection dialog box for the *Author* field of profile information. Note that you can select either *internal* or *external* authors. To see the list of external authors, simply check **External**.

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Searching In the Selection Box

If the list of validated entries is long, enter a search string in the **Show All Possible Entries that Match** field and select whether you wish that string to occur only at the beginning of the document or anywhere in the document, then click the **Lookup** button to search the list.

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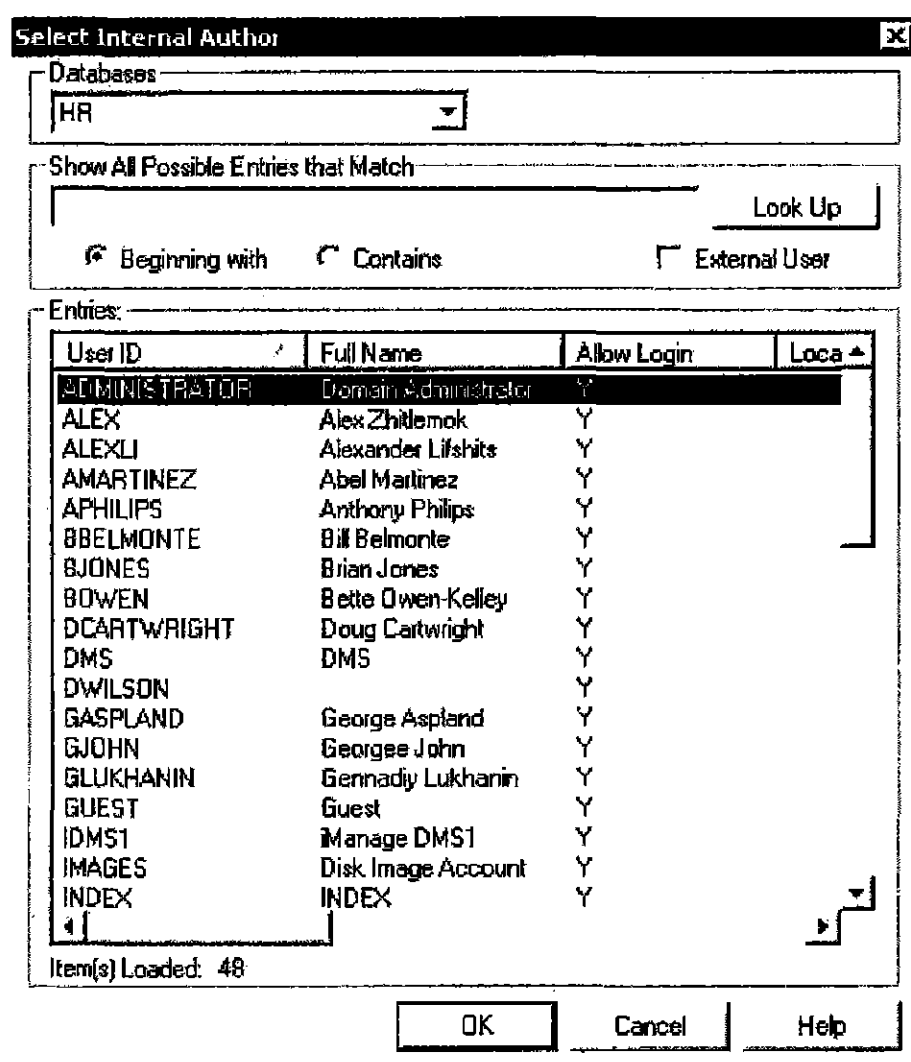


Figure 3.12: Select Internal Author dialog box

Primary Libraries

Administrators have the option of assigning each user a primary library. A user's primary library is his or her "home" library. It is where the user will store most of his or her documents; hence, when the user initiates a search or creates a new document, the user's primary library is selected automatically as the default. Users can always select a different library. The ability to assign users a primary (or default) library is intended as a convenience to users.

When creating new documents...

When a user creates a new document, the user's primary library is initially selected as the storage location for the document. If the user enters a different user's name in the author field, and that user has a different primary library, then the library selection will switch to the primary library for the user whose name was entered in the author field. Users can change the library selection, if desired, before saving the document.

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When performing a search...

Initially, whenever a user opens the Search dialog window, the user's primary library will be selected. If the user changes the target libraries for the search, the new selections will remain in effect until the user changes them or until he or she closes and restarts iManage.

Editing Document Profile Information

To edit or view profile information for a document:

1. Highlight the document in the Document Grid.
2. Select **Edit Profile** from the **Document** menu. The dialog box used to edit profile information is displayed for that document.

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Profile Edit and View -Default X

Document Number	118	Last Edit Date	6/7/2001
Document Version	1	Last Edit Time	2:15:18 PM
Creation Date	6/7/2001	Size	25.5KB (26,112 bytes)
Last Edited By			

Profile Fields

Description

Author BOWEN Bette Owen-Kelley

Class DOC Document

Subclass

Custom3

Custom4

Operator BOWEN Bette Owen-Kelley

Type WORD97 MS Word 97

Index Document

Security

Figure 3.13: Default appearance of the *Profile Edit and View* dialog box. This dialog box may appear differently in your version of iManage DeskSite.

Your capacity to edit profile information for a document will depend on whether you are the Author or Operator for the document and whether you have Read/Write or Full Access privileges. Only the Author or Operator or others to whom they have granted Full Access can change access privileges on a document. Users with Read/Write access to a document can edit profile information, but not access privileges.

Note: Your system administrator can enable your system to enter Child field information (such as Matter) without first entering Parent field information (such as Client).

Checking Out Documents

You can check out individual documents from an iManage database for use outside of the iManage system. You may want to edit a document off site or with an application that is not integrated with iManage DeskSite.


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Note: Individual document check-out is different than iManage Portable document checkout. See [Chapter 6](#) for information on checking out documents for portable use.

The document's number and version becomes its filename when it is checked out. For this reason, the document's filename must remain unchanged if you want to be able to check it back into the iManage system. If you check out a Microsoft Word document with a document number of 37 and a version number of 2, the document will be stored on your local hard drive (or other location) with a filename of 37_2.DOC.

IMPORTANT! Do not change a checked-out document's filename. It is used during the document check-in process.

To check out a document:

1. Highlight one or more documents in the Document Grid and click the **Checkout** icon  or select **Checkout** from the **Document** menu. The *Checkout* dialog box appears.
2. If you are checking out the documents for portable use, check the **Portable** check box.
3. In the **Destination Path** field, enter the path for the directory where you want to save the checked out documents. If the **Portable** checkbox is checked, the documents are saved to the **Nrportbl** directory. You can use the browse button next to the **Destination Path** field to search for a directory on your local hard drive or the network.
4. Enter a due date for the documents and a reason for checking out the documents in the comments field.
5. Click **OK** to checkout the documents.

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Document Information

Database: HR

Number: 2 Version: 1

Description: iManage Travel Policy

Options

Portable Checkout

Destination Path: C:\NFTEcho ...

Details

Due Date: 6/ 7/2001 ▾


Comments:

Figure 3.14: Checkout dialog box


Checking In Documents

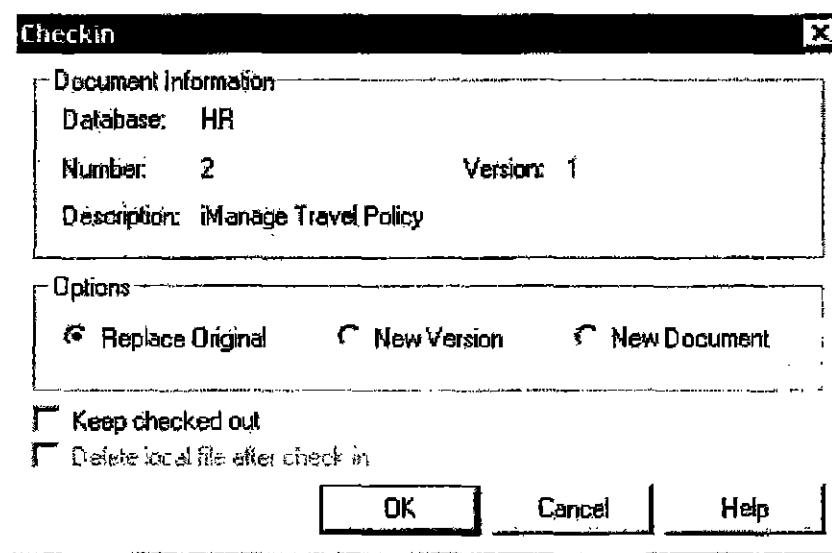
Documents that have been checked out can be checked back into iManage DeskSite easily using the **Checkin** option.

To checkin documents:

1. Launch iManage DeskSite and click the Checkedout Documents icon  within the Folder Tree. This displays all of the checkout documents for the selected server in the document grid.
2. Highlight the document(s) that you want to check in.

Note: Select multiple documents in the Document Grid by keeping the **Ctrl** key depressed and left-clicking the desired documents. If you hold down the the **Shift** key and then left click on two documents in the grid, those two documents and all those in between are selected.

- Click the Checkin icon  or select **Checkin** from the **Document** menu to check in the selected documents. A *Checkin* dialog box appears for each document to be checked in.



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Figure 3.15: *Checkin* dialog

- Select either **Replace Original**, **New Version** or **New Document**. To apply the selected option to the entire group of documents that you're checking in, select **Apply to all documents**. The **Apply to all documents** option appears only if you have multiple documents selected.

Note: Your system may not allow you to modify existing documents. In this case, you can check documents in only as new documents.

- Click **OK** to check in the documents and return to the iManage desktop.

Checking in Documents Checked Out on a Different Machine

If you checked out documents to the Portable directory (NtPortbl) on a different machine, a laptop computer for example, and try to check them in on your desktop computer, you receive an error message. You cannot check in the document. You must check it in on the computer where you checked it out to the Portable directory.

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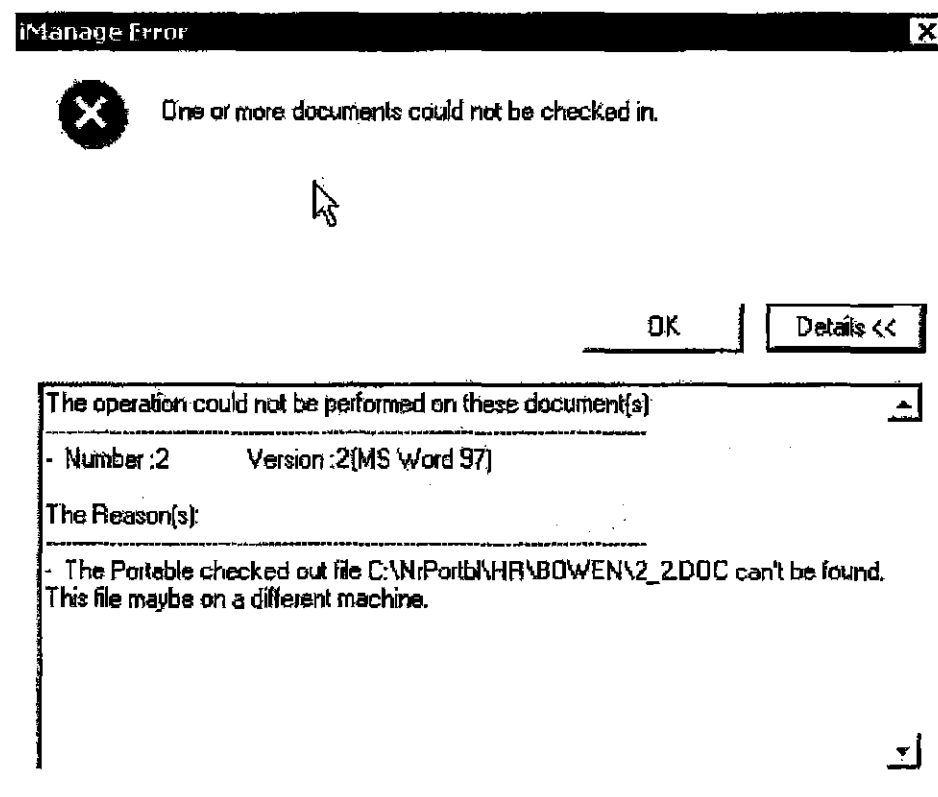


Figure 3.16: Error message you see if you attempt to check in a document that you checked out on a different machine. Click **Details** to see the reason as illustrated above.

Checking In Documents Checked Out to a Different Directory

If you checked out documents to a directory other than the Portable directory (NrPortbl), for example, your desktop or a diskette, and try to check them in on your desktop computer, you receive a warning message.

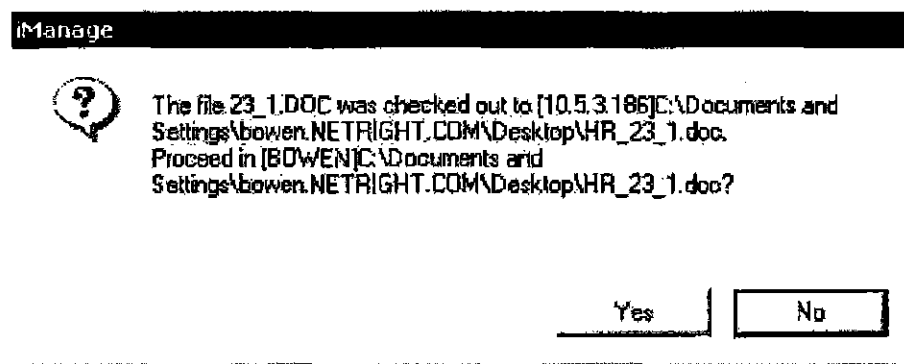


Figure 3.17: Warning message you see if you attempt to check in a document that you checked out to a different directory.

The message reminds you of the directory where you checked out the document, but does not prevent you from checking it in.

Relating Documents

You can create one- or two-directional relations between documents in iManage DeskSite. Document relations are one of the ways you can organize and group documents in iManage DeskSite, in addition to folders and document classifications. Your iManage administrator must enable two-way relations in your system. Your system can handle either one-way or two-way relationships, but not both.

To create relations between documents:

1. Highlight a document in the Document Grid. If your system is set for one-way relationships, this becomes the parent document.
2. Select **Setup Relation** from the **Document** menu or right-click pop-up menu. The *Setup Relation* dialog opens and lists any documents that are already related to the document.

Or click the *Related Documents* tab and lock the **PushPin**. See "[Document Results Frame PushPin](#)" on page 37 for more information about the **PushPin**.

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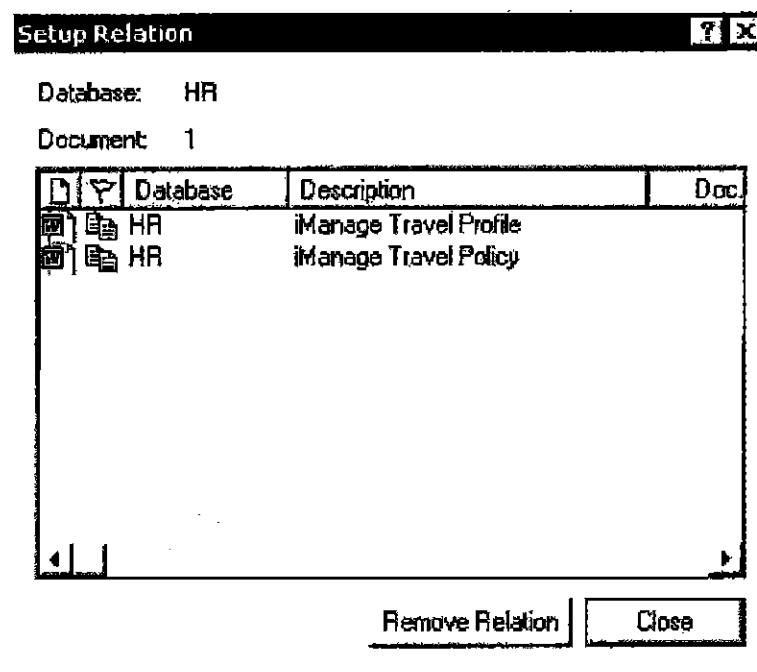



Figure 3.18: *Setup Relation* dialog

3. Using the Tree Frame and the Document Grid, navigate to the documents you want to relate to the document. The documents do not need to be in the same folder as the parent document.
4. Select the documents and drag them into the *Related Documents* tab. You can select multiple documents and drag them all at once. Or drag them into the *Setup Relation* dialog.

The  icon appears in the second column from the left in the documents grid for documents that have related documents.

5. You can see the related documents by highlighting the parent document in the document grid and clicking the *Related Documents* tab.

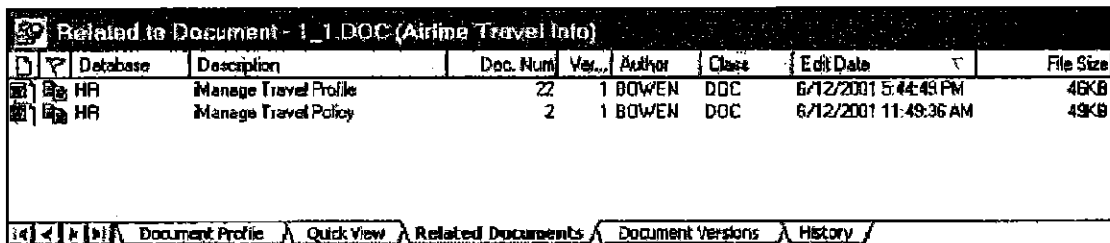


Figure 3.19: The *Related Documents* tab of the Document Results Frame

Depending on how your system is set up, each document you selected is related in a one-way or two-way relationship, to the original document. The selected documents, however, are not related to each other. For example, if you want to relate Documents B, C, and D to Document A, the following table shows how the documents relate.

Table 3.2: Document relationships

Relationship setup in your system	Document A relates to:	Documents B, C, and D relate to:
One-way	B, C, and D	Only documents you set up
Two-way	B, C, and D	A plus any other documents you set up

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Uses for Related Documents

You can use document relations to group documents and their attachments, a contract and its amendments, a contract and riders to the contract, etc. You can also use document relations to link a "parent" document with the documents that were used to create it, such as a final report with its inserts, which could be spreadsheets, graphics files, tables, figures, and charts.

Copying Documents

You can make a copy of a document that is stored in an iManage library by highlighting the document in the Table Frame, then selecting **Copy** from the **Document** menu.

Selecting **Copy** from the **Document** pull-down menu reveals four options:

- **Copy:** iManage makes a duplicate copy of the selected document.
- **Copy Document and Open:** iManage makes a duplicate copy of the selected document and opens the new copy of the document in its associated application.
- **Copy As New Version:** iManage makes a duplicate copy of the selected document and creates a new version of the document. Not available if document is checked out.
- **Copy As New Version And Open:** iManage makes a duplicate copy of the selected document, creates a new version of the document, and opens the

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new copy of the document in its associated application. Not available if document is checked out.

When you select any of the above options, you are presented with the new profile dialog box, where you can enter information for the duplicate copy of the document before iManage adds it to the library. Enter profile information in the *New Profile* dialog and click **OK** to save the new copy of the document.

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Note: You can copy a document even when it is in use or checked out. The copy will be a copy of the last version of that document that was saved to the database. You cannot copy a document as a new version if it is checked out.

E-mailing Documents

You can send a copy of a document, a link of a document, or a URL link of a document through e-mail from iManage DeskSite.

To E-mail a copy of a document

Highlight the document(s) in the Document Grid and click the **Send** button, or select **Send Copy** from the **Send** sub-menu of the **Document** menu. A new mail message launches with the desired document(s) attached.

Or open a new message in your e-mail application, go to iManage DeskSite and select the documents you want to attach. Then drag the documents to your e-mail message and drop the documents into it.

To E-mail a link to a document

Highlight the document(s) in the Document Grid and click the **Link** button, or select **Send Link** from the **Send** sub-menu of the **Document** menu. A new mail message launches with the desired link(s) attached.

To E-mail a document URL link

Highlight the document(s) in the Document Grid and click the **Send document url** button, or select **Send Document URL Link** from the **Send** sub-menu of the **Document** menu. A new mail message launches with the desired url link(s) attached.

Note: In order to send a Document URL link, your system must include an iManage WorkSite Web Component server.

Refresh

You can use the **Refresh** option on the **Search** menu to update the information displayed in the iManage DeskSite window with the latest information from the database. You can also press F5 to refresh. The refresh option is a quick alternative to re-performing the search or worklist request displayed in the iManage desktop.



Importing Documents

You can use the import document function in iManage DeskSite to add documents to an iManage library that are currently stored on your local hard drive or on some other drive accessible on the network. Use this function to import only a few documents at a time. iManage DeskSite provides an additional administrative utility for performing mass document importations.

You can select a destination folder for the imported document by selecting the database from the drop-down menu and clicking the lookup button. Then navigate to the folder where you want to place the document. Depending upon how your system is set up, the document may inherit the security settings of the folder where you place it. If your system has this feature turned on, any other security settings are ignored.

Document importation is for documents that have never been stored on the database before.

If you are trying to	You should
return a document to the library that was previously checked out	use iManage DeskSite's checkin function
return an echo copy of a document to the library after you've edited it	synchronize the echo document
synchronize an echo document and you are unable to do so	use the import function to add it to the library as a new document

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To import documents into an iManage database:

1. Launch iManage DeskSite and log into your WorkSite Middle Tier server.
2. Select **Import** from the **File** pulldown menu. A standard windows dialog box appears so that you can locate and select a file for importation.
3. Use standard windows techniques to locate the file. Double-click on the file name to select it.

A standard dialog box for entering profile information for new documents will be displayed. Enter appropriate profile information for the document.

4. Click **OK** to add the file to the library.

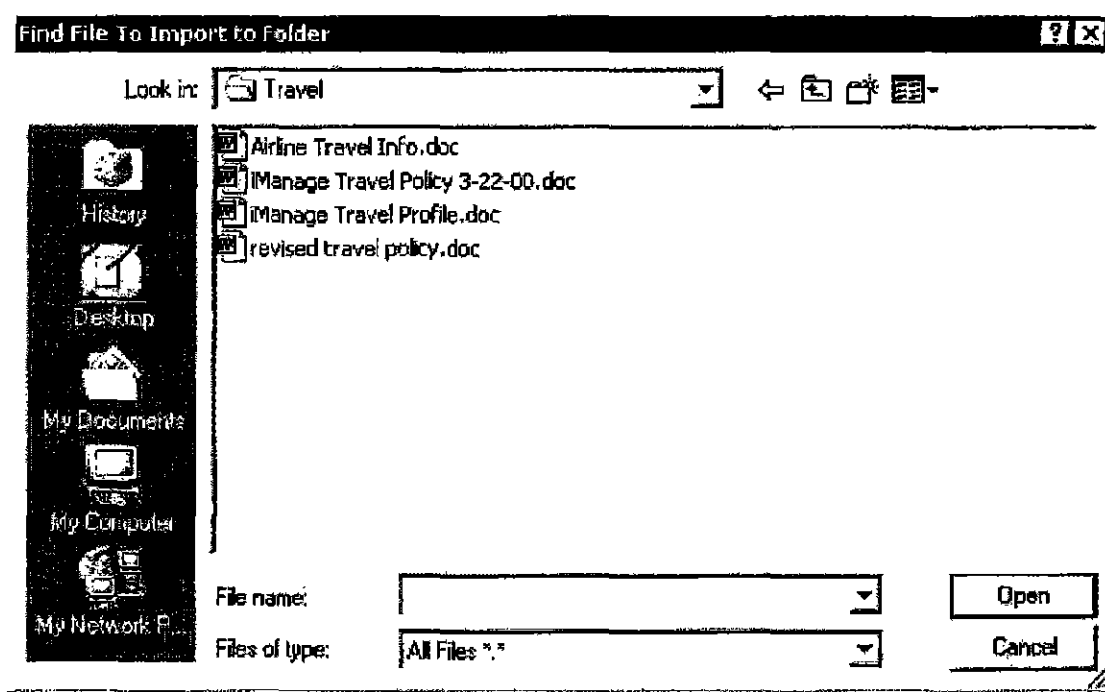


Figure 3.20: *Find File to Import to Folder* dialog box

5. The new document profile dialog box opens.

New Document Profile-Default File imported into: \\PARIS\HR\Travel

Database: HR

Apply Template: None

Document Profile Fields

Description	revised travel policy	
Author	<input type="text"/> ...	Author
Class	<input type="text"/> ...	Class
Subclass	<input type="text"/> ...	
Custom3	<input type="text"/> ...	Custom3
Custom4	<input type="text"/> ...	Custom4
Operator	<input type="text"/> BOWEN	Bette Owen-Kelley
Type	<input type="text"/> WORD97	MS Word 97

Comments...

Security: Private

Access Rights

Buttons: Ok, Cancel, Help

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Figure 3.21: Select the database from the drop-down list; then click the lookup button next to it to select the destination folder.

6. You can select a destination folder for the imported document by selecting the database from the drop-down menu and clicking the lookup button. The *Select the destination for the document* dialog box opens.
7. Navigate to the folder where you want to place the document.

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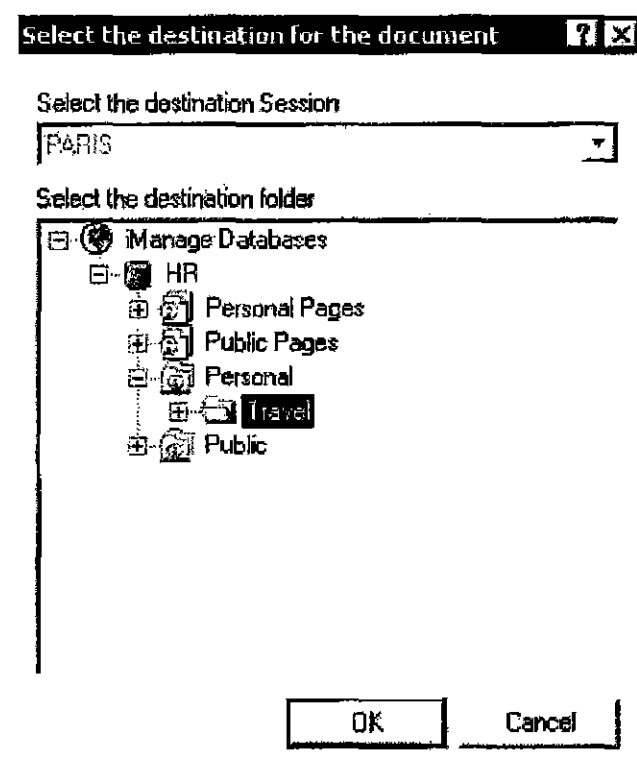


Figure 3.22: *Select the destination for the document* dialog box

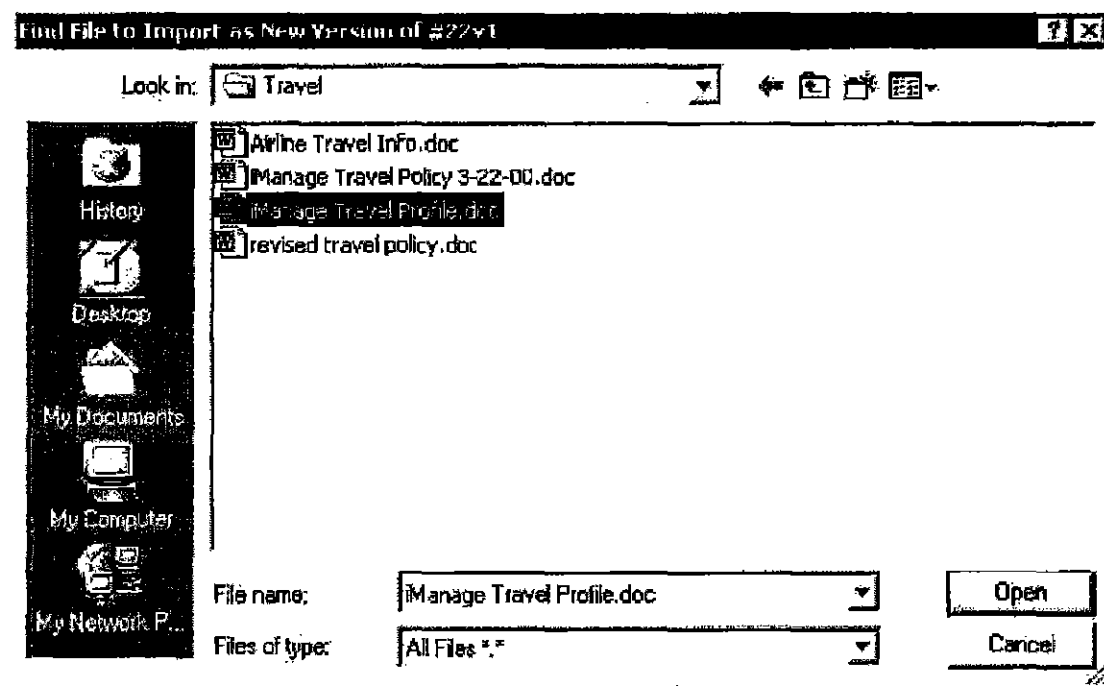
8. Complete the document profile dialog box.

Importing New Versions of Documents

You can import a new version of an existing document by using the Import as New Version feature.

To import a new version of a document:

1. Highlight the document in the Document Grid.
2. Select **Import as New Version** from the **File** menu. A *Windows Find File* dialog opens.
3. Navigate on your computer or network to the file that you want to import as a new version of the existing document.



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Figure 3.23: Find File to Import as New Version dialog

4. Click **Open**. The *New Version Profile* dialog opens.
5. Complete the *New Version Profile* dialog and click **OK**.

Exporting Documents

The document export function is essentially the reverse of document importation: it copies a document from the library to your local hard drive. If you are planning to edit a document and then return it to the database later, it is advisable to use iManage DeskSite's checkout function. Unlike with checkout, you can only return an exported document to the database as a new document. Also, when you export a document, it is not marked in the database as IN USE, so other users may access the document and possibly update it while you are editing it.

The document export function provides an option to export documents as echo documents. If you export documents as echo documents, you can edit them and then synchronize the edited echo documents back to the database. When you work on the echo copies of database documents, however, the original documents in the database will not be locked or marked as IN USE. If other users edit the database document while you are editing the echo copy of the document, you will not be able to synchronize the document back to the database. Instead, in such a

case, you can only import it as a new document. See [Chapter 9](#) for more detailed information on Echo Documents.

Note: If you attempt to export a document that is currently in your Echo directory because you worked on it previously and made changes to it that are not reflected in the copy on the file server, iManage DeskSite warns you that you are about to overwrite the document in the Echo directory. Since iManage DeskSite copies a document to your Echo directory, by default, when you export it, this feature prevents you from overwriting changes that you made to the document in the Echo directory. You can, however, export the document to another directory.

3

To export a document from an iManage database:

1. Locate the document(s) in the database and highlight them in the document grid.
2. Select **Export** from the **Document** menu. The *Export* dialog box appears.

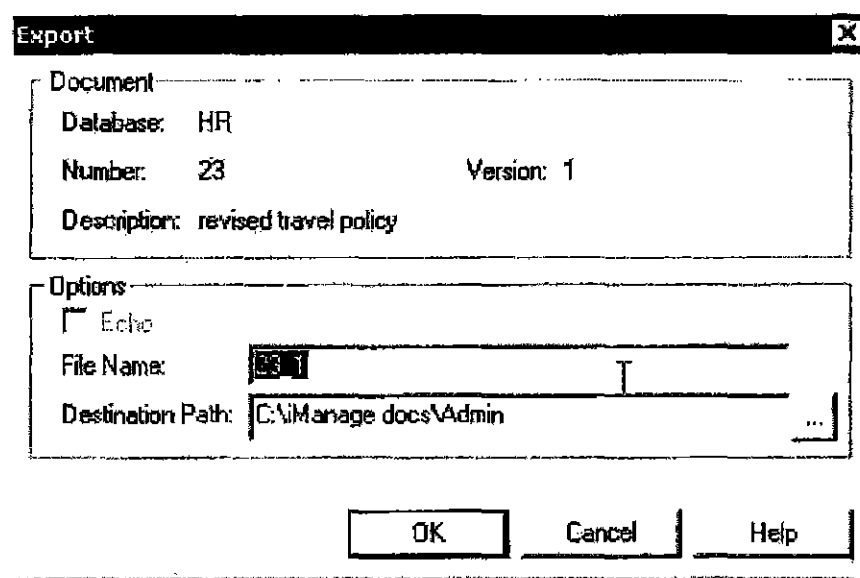


Figure 3.24: *Export* dialog box

3. The default filename is the iManage number and version. You can enter a new filename in the **File Name** field if you wish. You might want to use the document description as the filename.
4. Enter a destination directory to store the exported documents in the **Destination Path** entry field. You can browse for a local or network directory by

clicking the browse button.

5. If your system is set up to enable Echoing, you can export documents as echo documents. To export these documents as echo documents, check the **Echo** checkbox. The Destination Path entry field will be locked when the **Echo** checkbox is checked. When you export documents as echo documents, the destination directory is always **NRTECHO**, although you can select the drive on which this directory is stored.
6. Click **OK** to export the documents.

3

Displaying Checked Out Information

If a document is checked out, you can display information about the checked out document by highlighting the document in the Document Grid and selecting **Checkedout Info** from the **Document** menu.

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Document Checked Out

Document

Database: HR
 Number: 23 Version: 1
 Description: revised travel policy
 Date-Time: 6/14/2001 2:03:06 PM
 Checkout Path: [BOWEN]C:\NtPortb\HR\BOWEN\23_1.DOC

User

User ID: BOWEN
 Full Name: Bette Owen-Kelley
 Location:
 Phone: Extension:
 Fax:
 E-Mail:
 PC Location:

Details

Due Date: 6/14/2001
 Comments:


OK Help

Figure 3.25: *Document Checked Out* dialog box

You cannot edit any information in this dialog box.

Displaying History of Document Activity

You can display the history of a document's activity by highlighting a document in the Document Grid, then clicking the History tab or the History toolbar icon

 or selecting **History** from the **Document** menu. The document history record displays all activities of the types selected for recording by your system administrator. The types of activities typically recorded in the document activity record are:

- Opening and closing the document in an integrated application

- How long the document was open
- Editing the document's profile
- Changing the access rights of the document
- Printing a document and how many pages were printed
- Checking out, copying, and/or checking in the document
- Viewing the document
- Mailing the document through e-mail
- Creating a new version of the document
- The computer (location) where the activity took place
- Comments about the activity

3

History - Document 2_2.DOC (iManage Travel Policy)							
User	Applicati...	Activity	Date - Time	Duration	Pages Prin...	Location	Comments
BOWEN	WINWORD	Checkin	6/14/2001 2:20:48 PM	26	0	BOWEN	
BOWEN	WINWORD	Modify	6/14/2001 2:20:47 PM	0	0	BOWEN	
BOWEN	MANAGE32	Checkout	6/14/2001 2:20:22 PM	0	0	BOWEN	
BOWEN	MANAGE32	Create Versi	6/14/2001 2:14:39 PM	0	0	BOWEN	Created from version 1

Document Profile Quick View Related Documents Document Versions History

Figure 3.26: The *Document History* tab displays the activity record for a document.

You can also print a hard copy of the document activity record. To print a hard copy, right-click on any activity and select Print from the menu. You can also select Print Preview.


Unlocking Documents

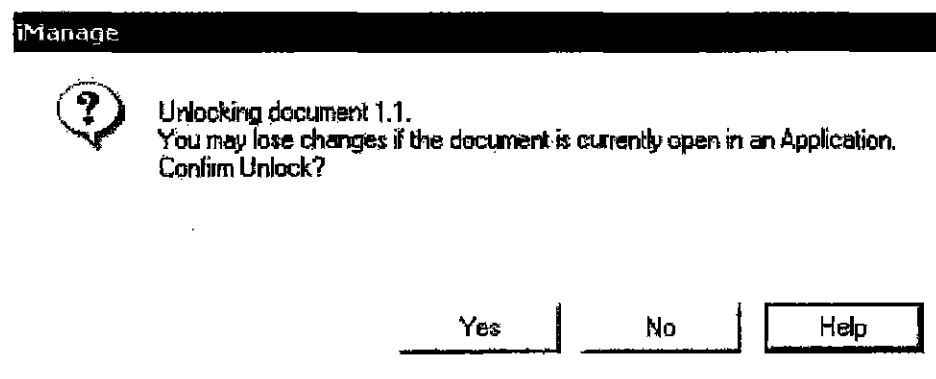
In some instances, when network connectivity fails or your computer shuts down unexpectedly, you may find that a document that you were working on when disaster struck is marked as IN USE in the iManage database, even when you know very well that it is no longer in use. In such a case, you can unlock the document in the library and tell iManage DeskSite to release it, even though you have not returned the document or checked it in using normal methods.

Only the user who most recently opened or checked out a document can unlock the document in the library. If you try to open or unlock a document that someone else is using, you will receive an error message.

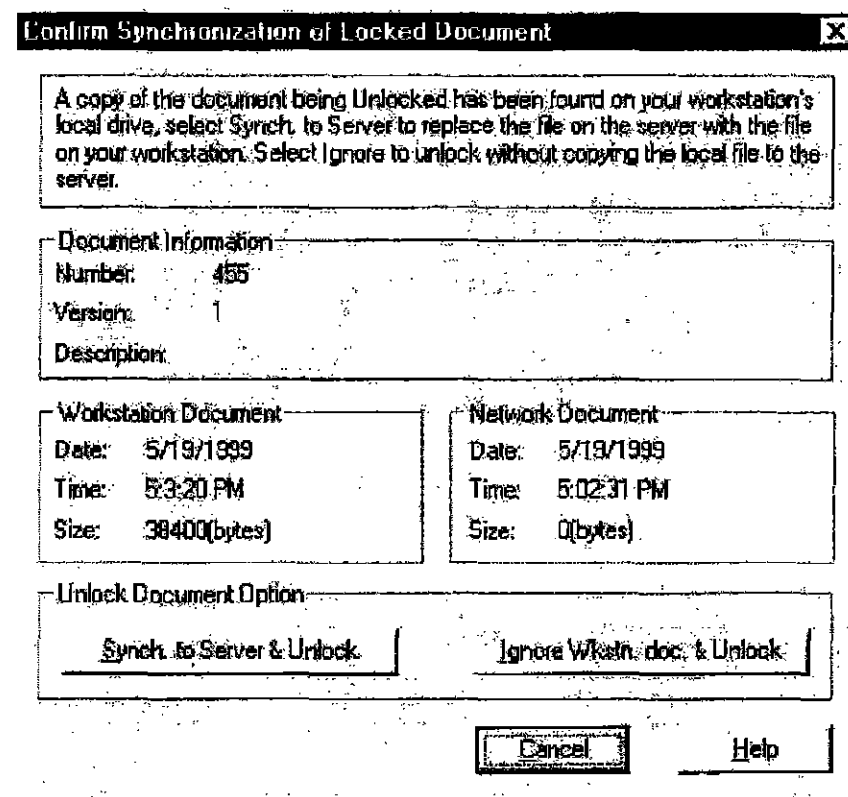
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To unlock a document that is marked as IN USE:

1. Highlight the document in the Document Grid.
2. Click the Unlock icon  or select **Unlock** from the **Document** pulldown menu.
3. A message asking you to confirm the Unlock appears. Click **Yes** to unlock the document.

3**Figure 3.27: Unlocking document confirmation message**

4. If the system detects that the document in question resides on your local drive, the *Confirm Synchronization of Locked out Documents* dialog launches (see [Figure 3.28](#)).



3

Figure 3.28: *Confirm Synchronization of Locked Document Dialog*

This dialog gives you two choices:

- **Synch to Server & Unlock** checks in the local copy of the document and overwrites the network copy. Use this option if you are sure the local copy is the more appropriate copy to survive.
- **Ignore Workstation doc. & Unlock** unlocks the network copy of the document without consideration to the local copy.

Note: The Unlock option may be disabled for some users of iManage DeskSite.

Purging a Document

To *purge* a document is to remove it entirely from the database. To remove a document from a folder, see the next section of this chapter.

You purge a document from the database by highlighting the desired document in


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the Document Grid and selecting **Purge** from the **Document** pulldown menu or right-click pop-up menu. Only the author or operator of a document are allowed to delete a document. This option may also be disabled for some users of iManage DeskSite.

3

Removing a Document

To *remove* a document is to remove it only from a folder. It does not remove the document from the database itself. To remove a document from the database entirely, see the previous section *Purging a Document*.

To remove a document from a folder, highlight the desired document in the Document Grid and click the Remove icon  or select **Remove from folder** from the **Document** menu or right-click pop-up menu. This option may also be disabled for some users of iManage DeskSite.

Restoring Archived Documents

You can restore archived documents directly from the iManage desktop, if the proper archive files are available to the server. When you try to open or checkout a document that is marked as archived, iManage displays an alert message that indicates that the document is archived and ask you if you want to restore it. If you click **Restore**, iManage retrieves the archived document from the archive location. If the archive file is not available to the server, iManage will mark the file for restoration by your administrator.

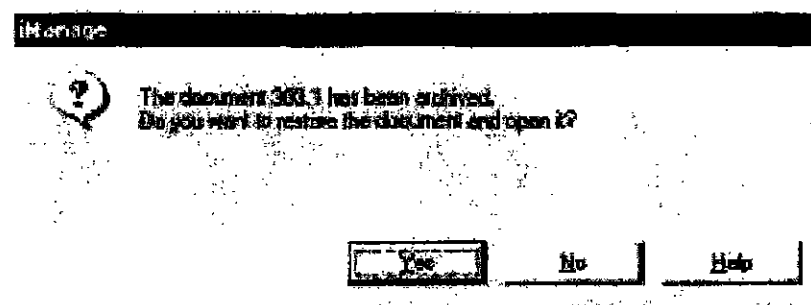


Figure 3.29: The *Document Archived* dialog box presents you with the option of restoring archived documents immediately.

Changing Your Password

Your password will expire after a length of time determined by your iManage administrator. You will receive a warning message before your password expires.

You can change your password by selecting **Change Password** from the **Options** menu. This launches a *Change Password* dialog box for the server currently highlighted in the tree frame. Enter your old password, enter your new password twice, then click **OK**. If you use Trusted Login, this iManage password is not used.

3

Note: Passwords are database specific. To avoid a conflict, it is important that you have all databases available when you change your password. If one of the databases is down and not available when you change your passwords, the new password will not be updated for that database. Then, the next time you log in with your new password it will be unable to log you into the database that was not updated.

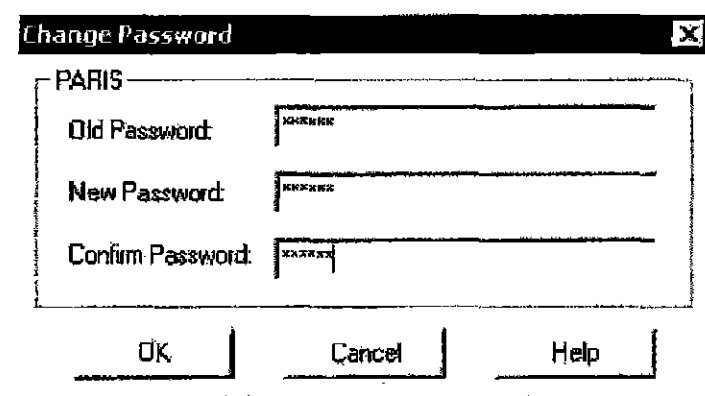


Figure 3.30: *Change Password* dialog box

Setting Default Profile Information for New Documents

You can create a virtual template of default document profile information that appears in the new document profile dialog box. This option enables you to set certain fields of profile information to standard values that typically do not change so you do not have to enter the same information each time you create a document. For instance, if you frequently create documents that have a certain field of profile information set to a constant value, you can enter that value as the

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default value for that field, and it will appear automatically each time you create a new document.

To create default values for certain fields of document profile information, select **New Document Defaults** from the **Options** menu. The information that you enter in this dialog box will appear automatically in the dialog box used to enter profile information for new documents.

3

Note: Although the values that you enter in the *New Document Defaults* dialog box appear automatically in the document profile information dialog box for each new document you create, you can still edit these values whenever you create a new document. You do not have to use any of the default values set in the *New Document Defaults* dialog box. Each time you create a new document these default values appear automatically for your convenience – to eliminate the need for entering the same values repeatedly.

Special Strings

You can specify special strings for the current date, time, date and time, and user name in the *New Document Defaults* dialog box. If the following strings are entered in fields in the *New Document Defaults* dialog box, the following information is entered in the profile information dialog box when you create a new profile for a document:

Table 3.3: Special Strings

String	What it does
%DATE	Inserts current date
%TIME	Inserts current time
%DATETIME	Inserts current date and time
%USER	Inserts name of user currently logged in to database

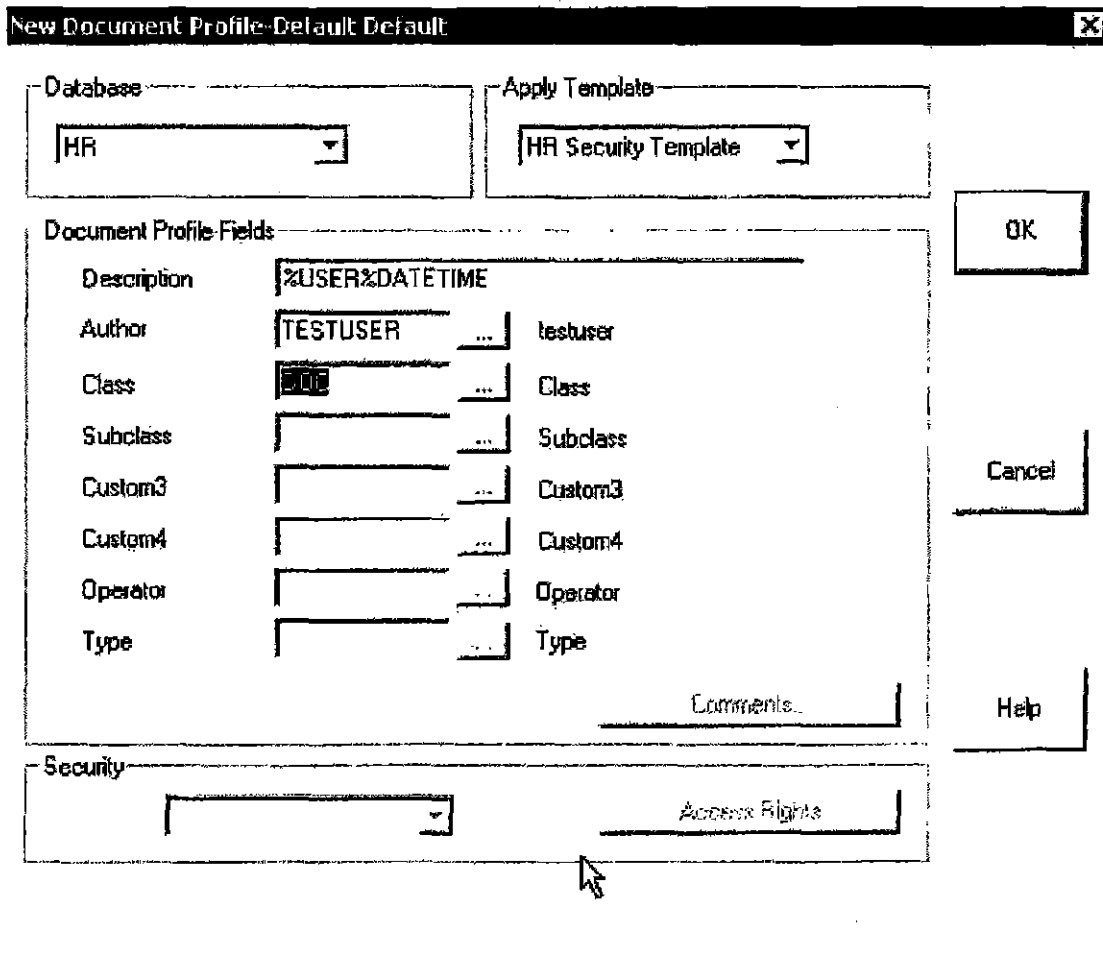
Figure 3.31 shows an example of a *New Document Defaults* dialog box where the default document description will be the name of the current database user followed by the date and time. The author is also set to the current database user. The class defaults to DOC.

When you select a security policy in the *New Document Defaults* dialog box,

Chapter 3: iManage DeskSite: Basic Functions

then that security policy is selected automatically in the *New Profile* dialog box each time you add a new document to the database. You can always select a different security profile or enter custom security settings for a document, if desired.

New document default settings remain in effect until you explicitly reset them.



3

Figure 3.31: *New Document Defaults* dialog box with strings inserted to display username, date and time

3

CHAPTER 4

Searching for Documents

4

Overview

iManage DeskSite can perform fast and powerful searches for documents based on document profile and/or full text information. You can save searches and redisplay them by clicking an icon. You can share saved searches with other users. You can also display a worklist search for the forty documents that you most recently edited or accessed by clicking the worklist icon.

This chapter explains how to use iManage DeskSite's vast searching capabilities, how to perform searches of the full text index, and how to save, share, and retrieve saved searches.

Types of Searches

There are two types of searches that you can perform using iManage DeskSite: *profile* searches and *full text* searches. You can perform both searches simultaneously. The complete text of documents and the comments profile field are both indexed.

Profile Searches

Profile Searches are searches of the database based on a document's profile information. You can enter search criteria for certain fields of profile information and iManage returns as hits documents whose profile information matches that criteria. Search criteria can include wildcard characters. You can select profile field entries from table lookup windows. You can specify date ranges through graphic date-selection pop-up windows.

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Full Text Searches

Full Text Searches are searches of the full text index based on the occurrence of words or phrases contained in the actual documents. Full text searches do not actually search through the full text of documents but search in an index of all of the words that appear in documents in the database. The criteria for full text searches can include wildcard characters and/or limitations on the positional relationship between words. Full text searches can also find documents based on the occurrence of individual words, partial words, phrases, and words in a particular sequence. A simplified, intuitive full text search dialog box is available for users who do not want to learn verity searching commands and techniques.

4

Searching in Multiple Databases

Searches can be performed on single or multiple databases. iManage DeskSite can search one or all of the document databases that you are currently logged into. Search results appear in the iManage Desktop window's Document Grid area.

Note: Only documents that you have read/write or read-only access rights to are listed after a search. Documents that you have no access rights to are never listed when you perform a search.


Storing Search Criteria

If you perform searches repeatedly you do not have to re-enter them from scratch; you can save the search criteria and retrieve it for later use. Stored search criteria can be either public or available only to the user who saved it. Saved searches also appear as icons in the iManage DeskSite Tree Frame.

Procedures

Searching for a Document

The general procedure used to search for a document in an iManage database is described here simply. Scan ahead in this chapter for more detailed explanations of searching techniques.

1. Launch iManage DeskSite and log into a WorkSite Middle Tier Server. (See [Chapter 3](#) for more information on logging into a server.)
2. Click the toolbar's Search icon  to display the *Search Dialog* window or select **Search** from the **Search** menu. On the Search menu you can select a specific database to search.

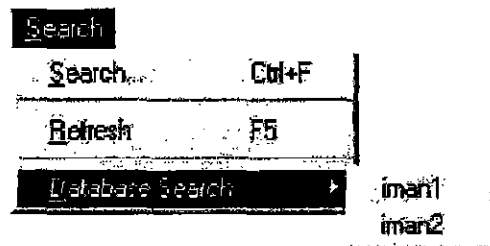


Figure 4.1: Search menu


Note: The above command will generate the Search dialog assigned to the preferred database of the user. It is possible for an iManage installation to have more than one Search dialog template. Search dialog templates are assigned by Database. To access the dialog templates of non-preferred but accessible databases select **Additional Searches** from the **Search** menu.

3. Specify profile information, full text criteria, or both, then click **Find**. The results of your search will be displayed in the iManage Desktop window's Document Grid.

Saving a Search Profile

1. Launch iManage DeskSite and Login to a WorkSite Middle Tier Server. For

instructions on logging in, see [Chapter 3](#).

2. From iManage DeskSite, click the Search icon  to display the *Search Dialog* window or select **Search** from the **Search** menu.
3. Enter search criteria in profile fields. Use the browse buttons to select entries from lookup tables.
4. Save the profile by clicking on the **Save Search** button. The *Create New Saved Search* dialog box appears.
5. Select the database in which the search profile is to be saved.
6. Enter a unique ID code for the search profile in the **Profile Name** field.
7. Enter a description of the search profile in the **Description** field.
8. Mark the profile as either **public** or **private** by clicking on the corresponding radio button. Private saved searches are only available to the user who created them.
9. Click the **Save** button to save the search.

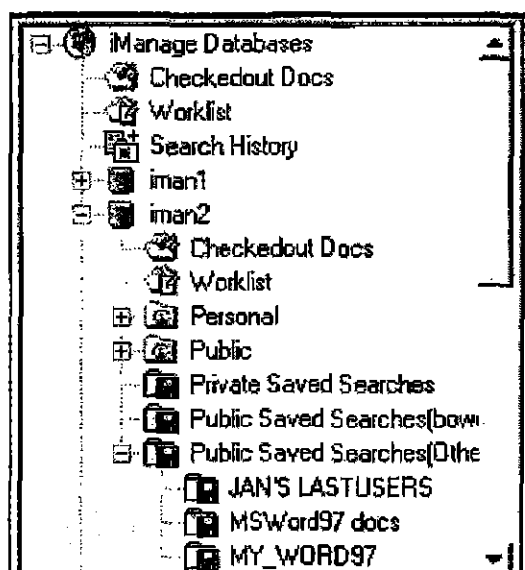
4

Retrieving a Saved Search

When you retrieve a saved search, iManage DeskSite re-performs the search based on the saved search criteria. Saved searches are dynamic and will reflect any changes in the database each time you click on the saved search.

To display the results of a saved search:

1. Locate the saved search in the Tree Frame (see [Figure 4.2](#)).




4

Figure 4.2: Tree Frame with Saved Searches highlighted

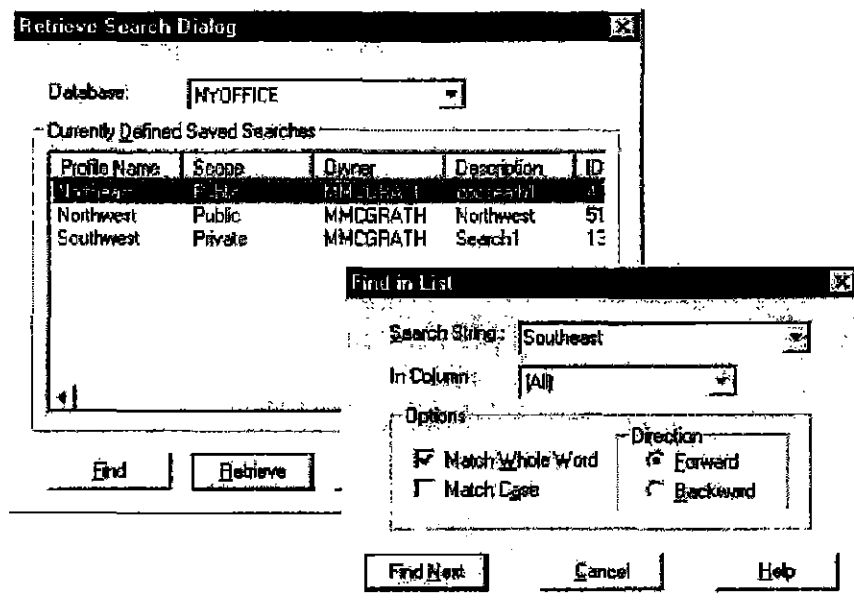
2. Click the icon for that saved search to display the search results in the document grid.

If you can't locate the icon for the saved search in the Tree Frame, or if there are too many saved searches listed, then follow the procedure on the next page for searching for a saved search profile.

To search for a saved search:

1. Click the toolbar's Search icon  to display the *Search* dialog box.
2. Click the **Retrieve Search** button. The *Retrieve Saved Search* dialog box appears. This dialog box lists all saved searches that are available to you in the database.
3. Specify the database where the search profile was saved using the Database drop-down list box.
4. Click the **Find** button to display the *Find* dialog box.
5. Enter search criteria in the *Find* dialog box. Click on the **Find Next** button until you locate the Saved Search in the list.

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Figure 4.3: Searching through available Saved Searches in the *Retrieve Saved Search* dialog box using the **Find** option.

6. Click on the **Cancel** button in the *Find* dialog box to close the *Find* dialog box.
7. Highlight the saved search in the list and click on the **Retrieve** button. The *Search* dialog box will reappear with the saved search criteria automatically entered into the appropriate fields.
8. Click on the **Find** button in the *Search Dialog* window to display the search results.


Deleting a Saved Search

You can only delete saved search profiles that you created.

1. Click on the flashlight icon for the search in the Tree Frame to highlight it.
2. Hit the **Delete** key.
3. You will be asked to confirm the delete. Click on the **OK** button to delete the saved search.

Printing Search Results

To print a hard copy of your search results:

1. Redisplay your search results in the document grid, if they are not already displayed.
2. Click **Print Document List** .
3. A standard Windows *Print* dialog box will be displayed, such as the one shown in [Figure 4.4](#).
4. Set any print options that you want to change in this dialog box, then click **OK**.

4

For information on setting other options for printing search results, read ahead in this chapter.

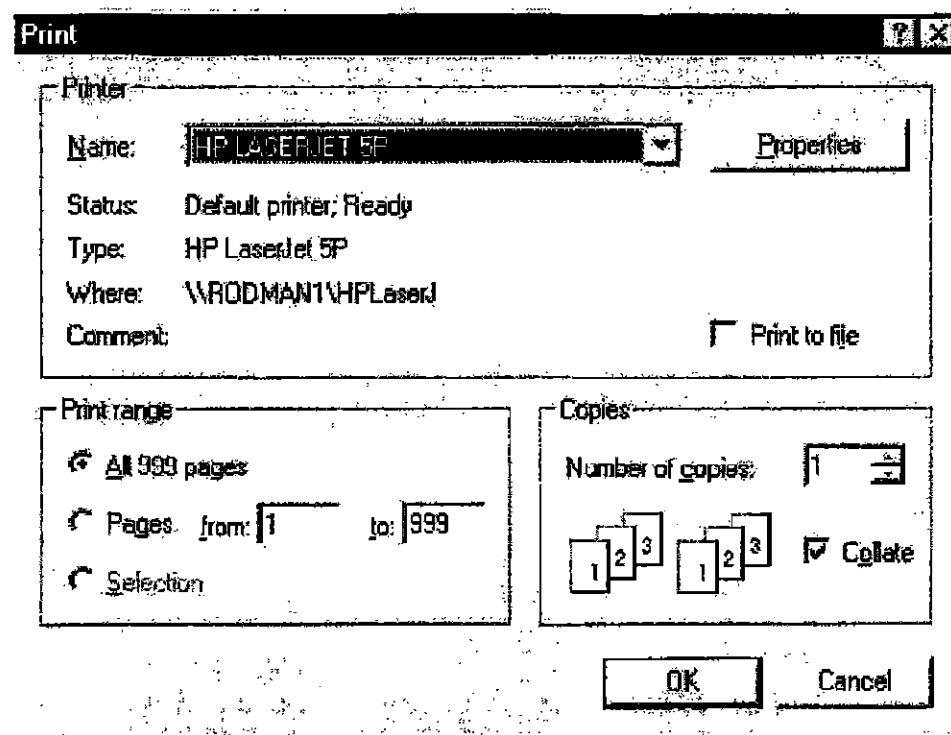


Figure 4.4: Example of a standard Windows *Print* dialog box

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The Search Dialog Window

The *Search Dialog* window is used to enter search criteria for any type of search – whether you are searching the full text index or document profile information. The components, functions and features available in the *Search Dialog* window are defined below.

4

Note: The *Search Dialog* window can be customized and may appear differently in your version of iManage DeskSite. The dialog box may contain different fields of information and fewer or lesser options. The figure below shows the default appearance of the *Search Dialog* window as it is shipped with iManage DeskSite.

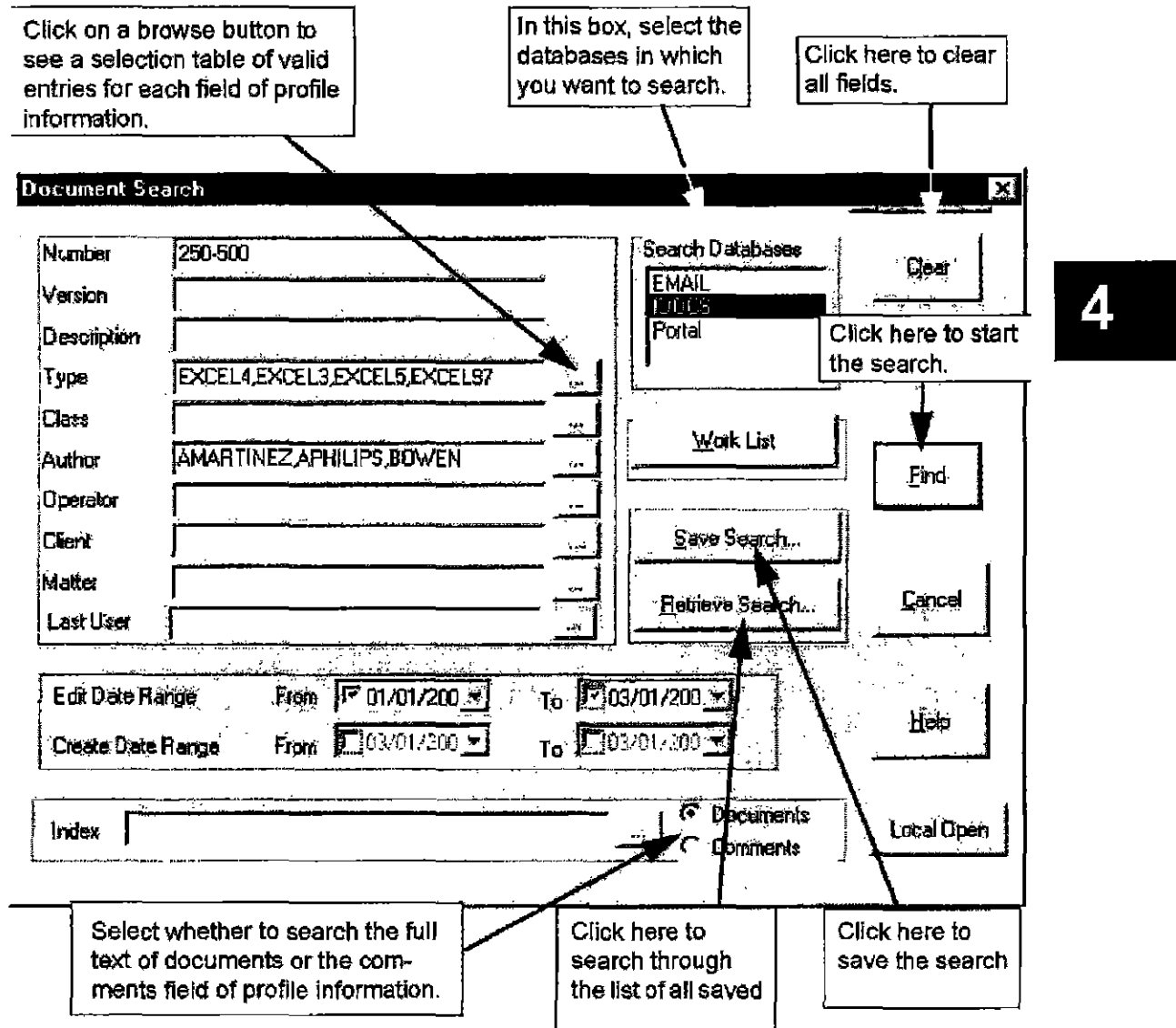


Figure 4.5: Search dialog


Searching According to Profile Information

You can search for documents in iManage databases using two types of criteria: profile information and full text information. You enter both types of information in the same dialog box and you can search for documents that meet both kinds of criteria simultaneously.

The actual fields of profile information that appear in the *Search Dialog* window

vary, because this dialog can be customized by your system administrator. [Table 4.1](#) provides a list of the many possible fields that may be used to search for documents in your database.

To search for documents according to profile information:

1. If iManage DeskSite is not running, launch iManage DeskSite and log into the WorkSite Middle Tier Server. If you are working from within an application that is integrated with iManage DeskSite, select **Open** from the **File** pulldown menu in your application to display the *iManage Integrated Desktop*.
2. Display the *Search Dialog* window by clicking on the **Search** icon  or by selecting **Search** from the **Search** pulldown menu in iManage DeskSite.
3. Enter search criteria in the fields of profile information displayed in the *Search Dialog* window. When you click on the **Find** button, iManage DeskSite will locate documents whose profile records match the information entered in the *Search Dialog* window.

Note: If Lookup buttons are available in your *Search Dialog* window, these are an easy and quick way to enter search criteria into search fields. Click on the Lookup buttons to select valid entries from a lookup table.

Click on **Find** to display the search results in the Document Grid. iManage DeskSite will display up to the maximum number of documents. You can change the maximum number of documents that will be displayed in the Document Grid as the result of a search by selecting **Setup Display Options** from the **Options** menu.

Table 4.1: Fields of Profile Information that may be searchable in your database

Profile Field	Description
Number	The document number is a unique number automatically assigned by iManage DeskSite
Version	Version number of the document (1-999)
Description	Long name of document, up to 254 characters
Name	Short name of document, up to 16 characters

EXHIBIT 27 PART 1



iManage DeskSite 6.0

User Reference Manual

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**DEFENDANT'S EXHIBIT
DTX 1010
CASE NO. 1:08-CV-00862-LPS**

iManage DeskSite 6.0 User Reference Manual

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CHAPTER 1

Introduction

1

Overview

This manual describes how to use the client software that is part of the iManage DeskSite product. For information on the administrative utilities provided with iManage DeskSite, please see the *iManage Server Administrative Manual*. For installation guidelines and instructions, see the *iManage Implementation Guide*.

The *iManage DeskSite User Reference Manual* is intended for end users of iManage DeskSite. It covers the functions and operation of the iManage DeskSite program and the operation of Windows applications that are integrated with iManage DeskSite. The manual also describes in detail the operation of the iManage View and Portable programs.

How to Use this Manual

Users new to iManage DeskSite should read Chapters 1-5 to gain an understanding of iManage DeskSite and how to use it. Users familiar with an earlier version of iManage DeskSite can skim Chapters 1 and 2, then review the sections of Chapters 3, 4 and 5 that describe new features or changes to the iManage DeskSite program.

Chapters 6, 7, 8, and 9 describe special topics relevant to users of iManage DeskSite. You should consult these chapters as their content becomes relevant to your work.

Summary of Chapters

Chapter 1 provides an introduction to document management systems and iMan-

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age DeskSite.

Chapter 2 describes iManage DeskSite's main program interface.

Chapter 3 describes iManage DeskSite's basic document management functions.

Chapter 4 describes how to perform searches in iManage DeskSite.

Chapter 5 describes how to use iManage DeskSite from within other Windows applications.

Chapter 6 describes the advanced features of iManage DeskSite.

Chapter 7 describes how to use the iManage View program.

Chapter 8 explains how to use the iManage Portable program.

Chapter 9 explains how to use the document echoing option in iManage DeskSite.

What is a DMS?

A document-management system (DMS) is software and/or hardware that manages repositories of millions of documents for hundreds or thousands of users. Document-management systems can provide the following benefits to your organization:

- Easily manage online repositories that store millions of documents
- Sophisticated tools for quickly finding documents without manually searching file servers
- Consistent, system-wide document security
- Ability to share documents with other users securely and easily
- Creation and tracking of multiple versions of a document
- Extensive document history and audit trails
- Automatic archiving and restoration

Who Needs a DMS?

At organizations that do not use a document management system, file storage and retrieval looks something like this:

- The most common way to identify a document is through document names. Despite efforts to enforce file naming conventions, document names still tend to be arbitrary and often do not reflect the contents of documents.

Hence, it is often difficult to find necessary documents, once the file name and directory have been forgotten.

- Documents are scattered on the file server. A single file server may contain thousands of directories and tens of thousands of documents. For this same reason, it is difficult to find and to share documents among users.
- To create new versions of documents, users must rely on providing a different name for the existing document. It is not possible to generate a report describing when and which users revised a particular document. Applications do not keep track of document versions or who made changes to a particular document.
- The ever increasing number of documents prevents users from locating required documents. Staff members spend increasing amounts of time locating information, and documents have to be repeatedly generated because the original versions cannot be located.
- Document security is left to individual users. Unauthorized access is a common problem.
- It is difficult to determine which documents are ready for archiving or which ones are in use. Users do not delete old documents and thus end up wasting network resources.
- Users cannot locate needed documents once they are archived to secondary storage.

What Is iManage DeskSite?

iManage DeskSite is an enterprise-wide, mission-critical DMS. With iManage DeskSite, you can greatly simplify the task of managing repositories of millions of documents and making them available to thousands of users. iManage DeskSite provides users with the following kinds of functions:

1. Search repositories of millions of documents
2. Search for documents based on document content
3. Share documents with other users
4. Search for and open documents from within major windows applications
5. Checkin and checkout documents
6. Create new versions of documents
7. Track document usage and history

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Product Features

Document Profile Information

Each document in an iManage library has its own document profile record. The information included in a document's profile record can include:

- the author
- the operator who entered it into the library
- the date of creation
- the version number
- the user who last edited it
- a lengthy description of the document
- a short description of the document
- comments
- custom classifications used to identify, differentiate and group documents in the library.

The information contained in a document's profile record enables you to search quickly for documents that you need without having to remember obscure file names or where the documents are stored on the file server.

Table 1.1 lists the kinds of information that can be contained in the profile record for a document.

Table 1.1: Document Profile Information Fields and Descriptions

Profile Field	Description
Number	Unique number automatically assigned by iManage DeskSite
Version	Version number of the document (1—999)
Description	Textual description of document, up to 254 characters
Name	Short name of document, up to 16 characters
Type	Document Type is usually based on the application that was used to create it

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Table 1.1: Document Profile Information Fields and Descriptions

Profile Field	Description
Author	Author of the document has maximum security rights, and is Novell Owner of the document
Operator	Operator of the document has read/write access, and can set document access rights
Class	General class of the document, defines default settings, user defined
Client	Client is a custom classification used to identify the document.
Matter	Matter is a custom subclassification used to identify documents. It is dependent on the entry for Client
Custom Fields	Captions of custom fields can be customized
Creation Date	Date document was created or installed
Last Edit Date	Most recent date when document was edited
Last Edit Time	Most recent time when document was edited
Last User	Name of the user who most recently edited the document
Size	Size of the document in number of bytes
Retain Days	Number of days before inactive document is archived
Index Flag	Marks whether the document should be full text indexed
Comment	Comment associated with the document, up to 8,000 characters, fully searchable

Note: The fields included in a document's profile record can be customized extensively, so some of the items listed here may not be included in your documents' profile records, or different fields may be included that do not appear here.

Document Security

Sharing your documents with other users becomes a secure and easy task with iManage DeskSite. Each document in an iManage library has a custom set of security settings that determine who can access the document and to what degree

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they can access it.

To share your documents using iManage DeskSite, you select which users should have access to them and select to what degree they should have access to them. Users can be granted **read-only** access, which allows them only to view the document, or **read-write** access, which allows them to view and edit the document. They can also be granted **no** access to the document, in which case they cannot even locate the document in the library. You also specify a **default security setting** for the document, which determines the level of access available to users not specifically granted or denied access.

Pages

If Pages have been created using the iManage WorkSite application, you can see the Page hierarchy in the folder tree, the integration dialog, and the browse for folders dialog. You cannot create Pages in iManage DeskSite.

Folders

With iManage DeskSite, you can create groups of documents that are related together and named as Folders. Folders can be made **PRIVATE** or **PUBLIC**, depending on who needs to access them. When you create a folder, you can set folder security to inherit security settings from the parent folder.

By grouping documents into folders, you can easily organize documents without having to physically move them around or store them in the same place. The list of documents included in the folder can be displayed at once by clicking on the folder icon for the folder.

Worklists

Each iManage server that you are logged into has a worklist icon associated with it. By clicking on the Worklist icon, you can redisplay the forty documents that you used most recently in the library. By clicking on your Worklist, you can quickly access the documents you need and use the most. By default, documents in the Worklist are sorted by the most recent date you accessed them.

Related Documents

In addition to grouping documents in Folders, you can create relations between

documents to keep related materials together, such as a contract and an addenda. For example, a contract could be related with the addenda to the contract or to other documents used to create it.



You can create relationships between documents through an intuitive drag-and-drop user interface. An icon in the iManage DeskSite desktop indicates documents that are related to other documents.

Saved Searches

iManage DeskSite provides powerful searching capabilities to help you find your documents. You can search for documents according to document profile information, the full text of document comments, or the full text of documents themselves. After you perform a search, you can save your search results for later immediate reference by clicking on the icon for the saved search. You can also share your saved searches with other users by marking them PUBLIC.

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iManage WorkSite's Middle Tier Server

Clients and Servers

With iManage DeskSite, users access documents by logging into a machine called a **WorkSite Middle Tier Server**, which in turn provides them with access to documents stored in iManage libraries. The **WorkSite Middle Tier Server** machine is called a "server" because it performs operations for other PCs. In this case, the **WorkSite Middle Tier Server** delivers documents to users' PCs and performs searches for documents across the network. PCs that are the recipients of services from the server machine are referred to as **Client PCs**. Client PCs have iManage DeskSite's user software installed on them, which enables them to connect to the **WorkSite Middle Tier Server**.

By connecting to remote libraries through the **WorkSite Middle Tier Server**, many users can access these libraries while minimizing the number of long-distance connections that need to be maintained between locations.

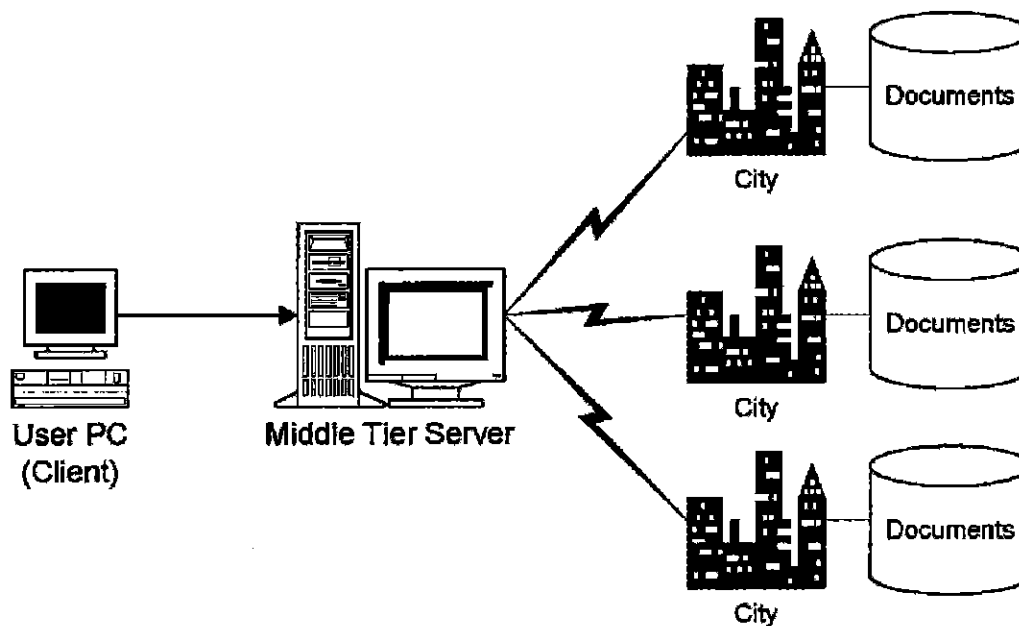


Figure 1.1: How a user accesses documents through iManage DeskSite.

What is an iManage Library?

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When we refer to an iManage Database, or Library, we are actually talking about a library that includes three distinct entities. Each iManage library is actually composed of these three parts:

- a **fileserver**, which stores the actual documents
- a set of **information tables**, or **database**, that stores information about the documents
- a set of **index collections** of the full text of documents in the library, which is used for searching

These three components – the fileserver, the information tables, and the full text index – work together to organize and index your documents. From a user's standpoint, though, they operate as a single entity, or library, with a single name.

iManage DeskSite User Programs

There are three user programs provided with iManage DeskSite:

- **iManage DeskSite**, which is the main interface between users and iManage Libraries
- **iManage View**, which allows you to view multiple documents at once
- **iManage Portable**, which enables you to access documents while not connected to the library

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CHAPTER 2

Using the DeskSite Desktop Window

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Overview

The iManage DeskSite Desktop window is modeled on the Windows Explorer and Outlook user interfaces and contains several display frames, menus and toolbars:

- **Shortcut frame:** contains icons for shortcuts to important folders
- **Tree frame:** organizes and displays information about servers, libraries, folders and searches
- **Document grid:** displays a document list that is either the result of search or the contents of folders
- **Document Results frame:** displays various information in tabular display areas about a particular document
- **Menu Options and Toolbars:** provide the functionality to perform everyday tasks in iManage
- **Web Browser:** provides access to the web directly from the iManage DeskSite Desktop

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iManage DeskSite User Reference Manual

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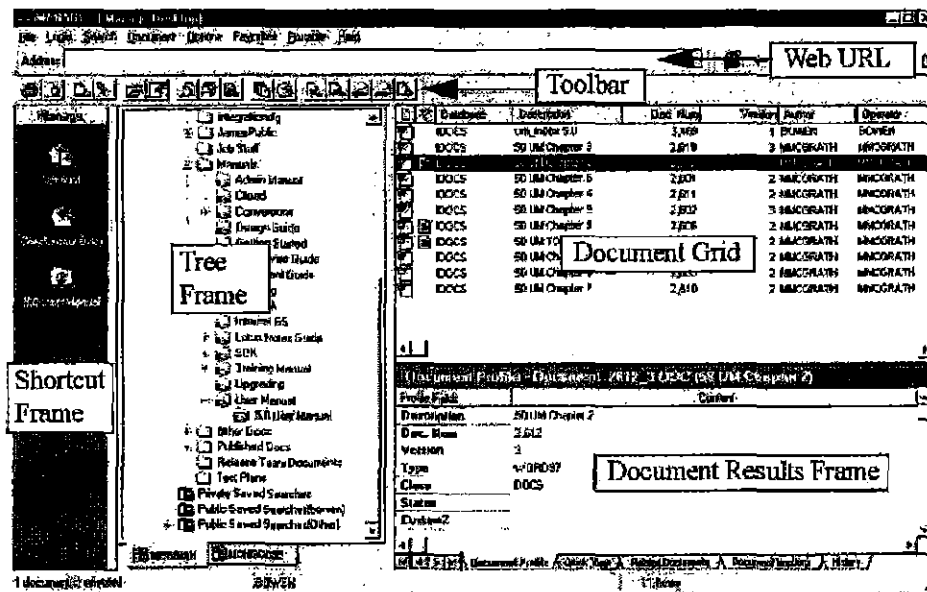


Figure 2.1: iManage DeskSite 5.0 Desktop Window

Shortcut Frame

The Shortcut frame contains shortcuts to frequently used folders. This provides fast navigation to your most frequently used folders and searches.

Two default shortcuts exist when you install the system:

- **Worklist shortcut:** Performs a search for the last forty documents that you used or edited.
- **Checkedout Documents shortcut:** A list of the documents you currently have checked out

To add a shortcut to the Shortcut frame:

Click the desired folder or saved search in the Tree frame and drag it to the Shortcut frame. Then you only need to double-click the shortcut icon to display the contents of the folder or search. This can eliminate significant folder navigation time.

To add a document to your shortcuts:

Click the desired document in the Document Grid and drag it to the desired folder in the Tree frame. The document appears in the Document Grid list when

you click the icon in the Shortcut frame.

Shortcut Groups

You can organize the shortcuts you setup into Shortcut Groups. Clicking on the Shortcut bar opens these groups. The top shortcut bar, named iManage, is a default group and cannot be removed.

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To create a new Shortcut Group:

1. Right-mouse click the *iManage* shortcut bar
2. Select **Add Group** from the pop-up menu.
3. Type the name of the new group in the space provided. Press **Enter** when you are finished.

To remove a Shortcut Group:

Right-mouse click anywhere in the desired shortcut group and choose **Remove Group** from the pop-up menu.

Tree Frame

The Tree frame contains the organizational structure of all servers, libraries, iManage WorkSite pages if any, folders, worklists and saved searches.

The iManage Desktop window's Tree frame contains the following components:

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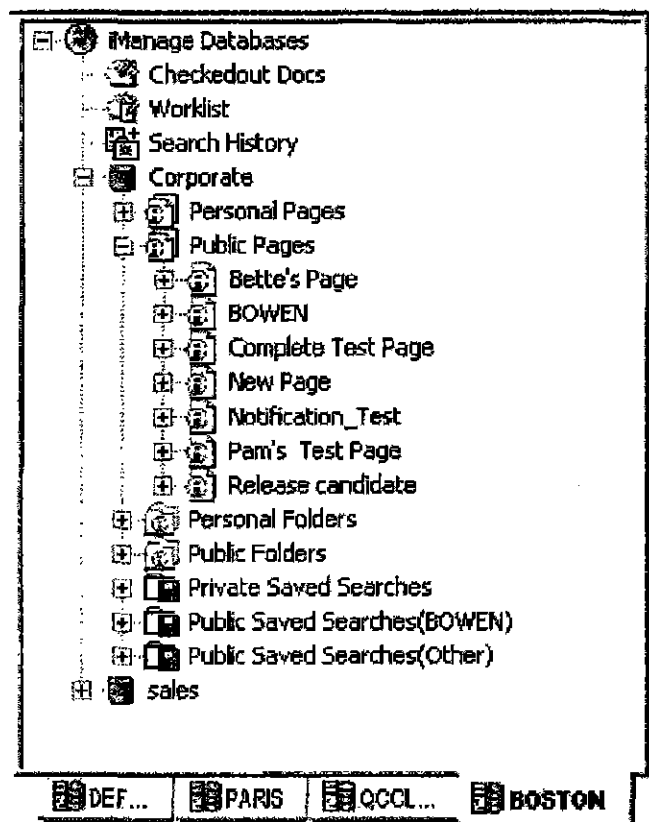


Figure 2.2: Tree Frame

Servers

In iManage DeskSite 6.0 and later you can log into more than one server at a time. Each connected server has its own Tree Frame of libraries, folders, search histories and worklists. Click the *server tabs* at the bottom of the Tree Frame to access each server.

Within the tree frame of each server are the following four components:



Checkedout Documents

Click on the Checkedout Documents icon to display a list of all documents currently checked out by the user. The documents appear in the Document Grid.




Worklist

The second icon in the tree frame is the Worklist. This is a shorthand way of performing a search for the forty documents you have most recently used or edited on a particular server. The documents appear in the Document Grid.



Search History

The third icon in the Tree frame is the Search History. You can quickly re-run searches recently performed in iManage DeskSite by clicking on the appropriate flashlight icon  displayed under the Search History branch of the tree frame. The Search History icon only retains searches performed during the current session. Clicking on a flashlight icon performs the search again using the same search criteria originally entered.

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Library

One library icon appears for each library available to you in a particular Server tab. They may not all be visible at once in the Tree frame, so a vertical scroll bar along the border of the frame on the right lets you bring additional libraries and associated file folders into view.

Pages

If Pages were created in the iManage WorkSite application, you can see the page structure in iManage DeskSite. You can access documents from folders on these pages and perform all activities on them that you can perform to documents in other folders. The activities you can perform depend on your Role and the access rights you have to the Pages and Folders. You cannot create Pages in the iManage DeskSite application.

Folders and Sub-folders

Libraries contain folders, which are static groups of documents you can create or share with other users. Folders provide a method for organizing and sharing documents easily. To display the contents of a folder, click the icon for that folder and the documents within it appear in the Document Grid.

Creating a folder

To create a new folder, right click the icon for the library in which you want to create a folder. To create a sub-folder, right click the folder icon. You must have authority to create a sub-folder within that folder. The owner of the folder sets the security upon creation and can grant security options to other users. See ["Folder security" on page 26](#). You can create sub-folders under other users' folders if you are given authority to do so. Your iManage administrator can disable the ability to create sub-folders under other users' folders. The *Create New Folder* dialog box appears requesting a folder name and folder description and naming the user of the folder owner.

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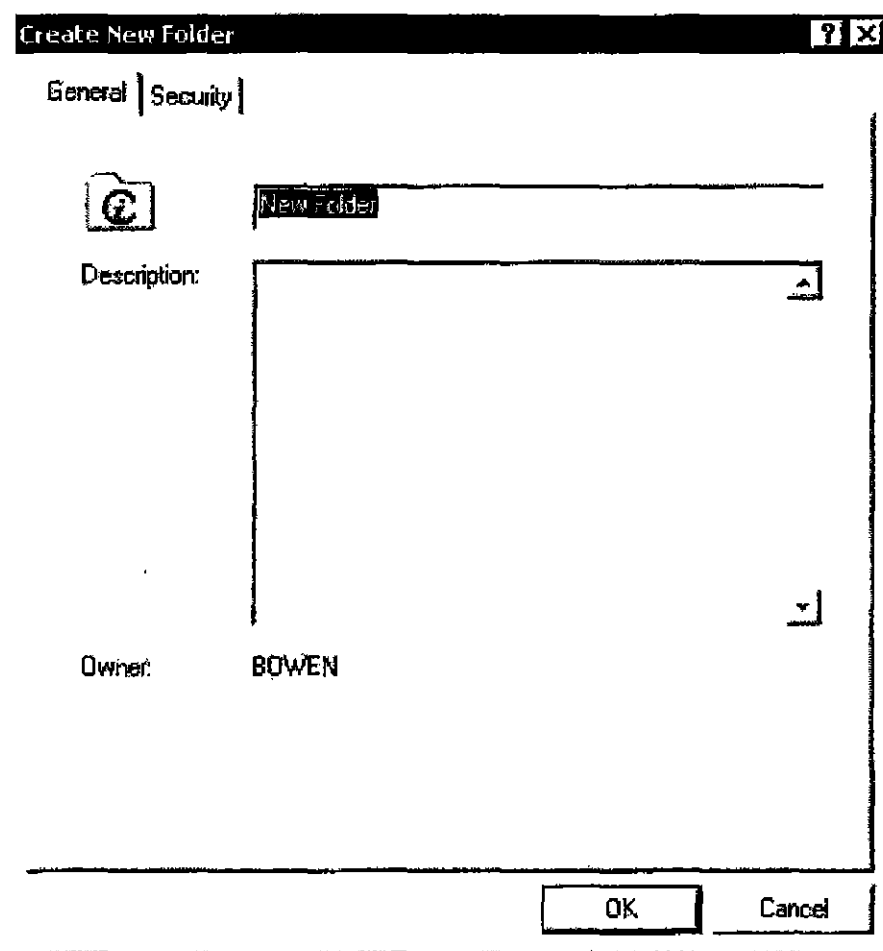
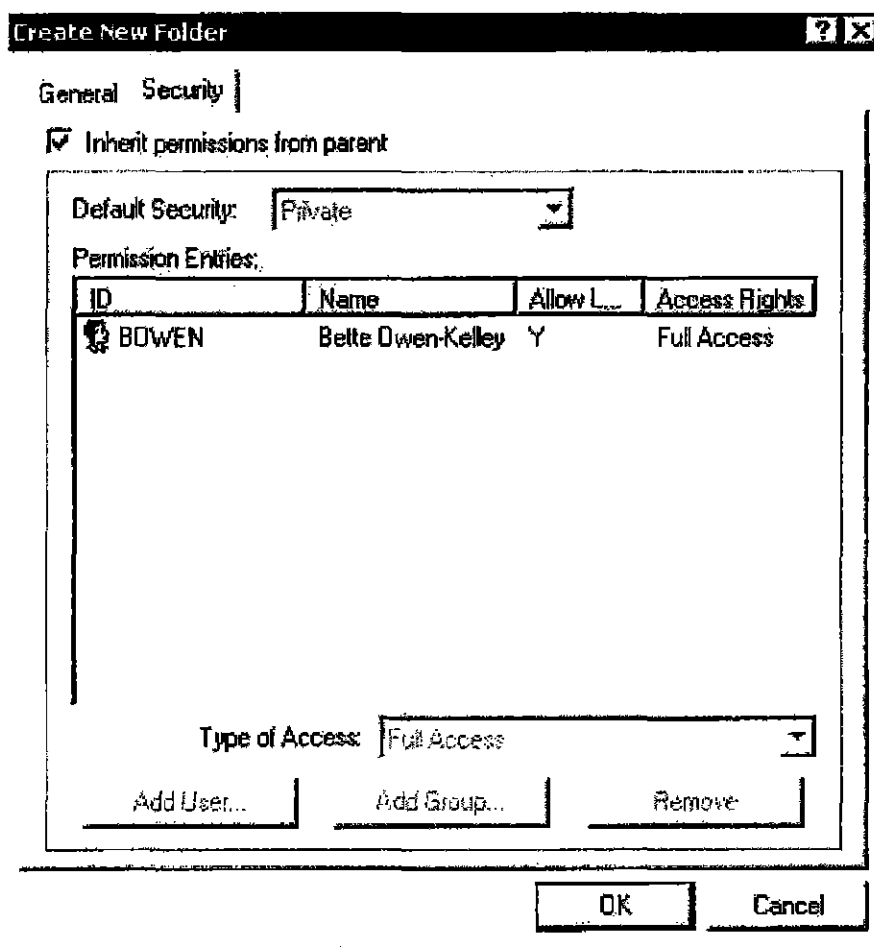
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Figure 2.3: Create New Folder dialog – General tab

Folder security

When you create a sub-folder, it has the same security settings as the parent folder by default. You can change these settings if you wish by deselecting the **Inherit permissions from parent** checkbox. If your role does not allow you to create public folders, you cannot access the security tab.

Chapter 2: Using the DeskSite Desktop Window



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Figure 2.4: Create New Folder dialog -- Security tab

- If you select **Private** as your default security setting on the folder, then only you and other users or groups to whom you specifically grant access to the folder can see it.
- If you select **Public**, then all users, except those specifically denied access, can add documents to the folder or remove documents from the list of those contained in the Folder.
- If you select **View**, then all users, except those to whom you specifically grant **Modify** or **No Access**, can view the folders contents, but cannot add or remove documents from the folder, (i.e., view access restricts users from changing the list of documents that constitute the contents of the folder).

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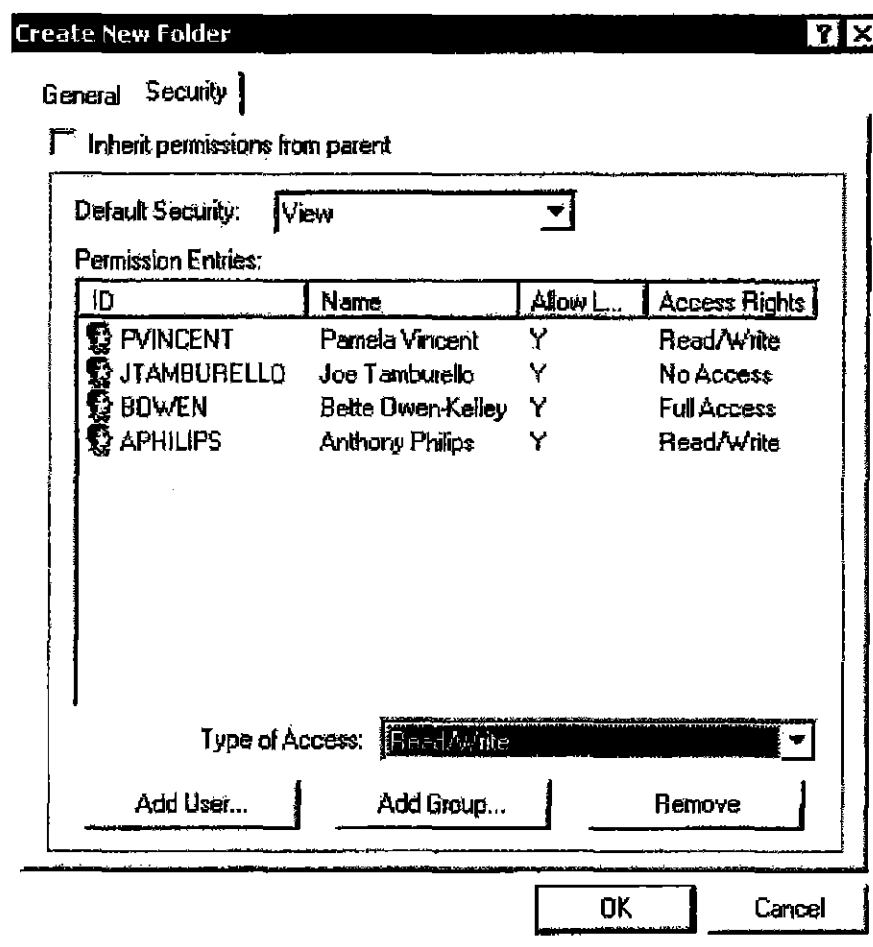


Figure 2.5: Create New Folder dialog -- Security tab -- Permissions not inherited from parent folder

You can also specify greater or lesser access privileges for specific users and groups by making a selection from the **Type of Access** drop down list. The access privileges that you grant to specific users and groups using the **Type of Access** drop down list are **EXCEPTIONS** to the general security settings you selected for this folder.

- **No Access**--Cannot see the folder.
- **Full Access**--Can set security on the folder, add or remove items from the folder, create subfolders, and delete the folder.
- **Read**--Can view documents in folder, but cannot add or remove them.
- **Read/Write**--Can add or remove documents from the folder and create subfolders, but cannot change folder security.

Note: The security settings on a folder only determine two things: (1) whether or not a user can see the folder, and (2) whether or not the user can add or remove documents from the folder. Whether or not a user can EDIT a document or only view it is determined by the security settings for the document, not those set on the folder. Depending on the access privileges set on the documents contained in a folder, a particular user may or may not see any documents contained in the folder, may have read-only access to the documents, yet be able to add documents to the folder, or may be able to edit documents contained in the Folder, but cannot add documents to the folder. For more information on document-level security, see "Setting Access Privileges" on page 55.

Deleting a folder

To delete a folder that you created or have Full Access to, click the folder so that the folder name is highlighted, then press the **Delete** key. A *Confirm Delete* dialog box appears, asking you to confirm that you wish to delete the folder. Click on **OK** to delete the folder.

Note: Deleting a folder **does not** delete its contents, only the folder.

Adding Documents to a Folder

You can add documents to a folder that you created, or have Full Access or Read/Write access to. Use drag-and-drop technique to add documents already in the library:

1. In the Document Grid, highlight the document you want to add.
2. Click again on the document row, keeping the left mouse button depressed. The pointer becomes a document icon.
3. With the left mouse button depressed, move the pointer to the right of the appropriate folder icon in the Tree frame.
4. Release the mouse button. The document is added to the folder that you selected.

Importing Documents to a Folder

1. Highlight the folder where you want to import a document.
2. Select **Import** from the **File** menu.

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3. Navigate to the document you want to import and highlight it.
4. Click **Open**.
5. Complete the *New Document Profile* dialog.
6. Click **OK**.

Editing the Properties of a Folder

Once you create a folder, you can edit its properties — name, description, and security (i.e., whether it should be public or private). You can also edit folders created by others if you have been granted Full Access to those folders. To edit the attributes of the folder, right-click on the folder icon and select **Properties** from the popup menu. Only the owner of a folder or a user to whom the owner has granted Full Access can edit properties.

To change only the name of the folder, highlight the folder and press **F2**. Enter the new folder name and press **Enter**.

Saved Searches

A library may have saved search icons  that contain search criteria that have been saved for later use. Saving searches allows you to perform routine searches of the library without having to reenter common search criteria. Clicking on a search icon causes the search to be performed again. The documents found during the search are displayed in the Document Grid. See [Chapter 4](#) for specific instruction on creating a Saved Search.

Deleting a Saved Search

You can delete a Saved Search that you created in much the same way as you delete a folder that you created. Click on the icon for the Saved Search, then press the **Delete** key. Deleting the Saved Search does not delete the documents displayed in the search; it only deletes the search profile from the tree frame.

Opening and Closing Nodes in the Tree Frame

Nodes are the plus and minus symbols appearing throughout the tree structure wherever there is a branch. Clicking the minus symbol changes it to a plus and vice versa. When a minus sign appears in the node, you can see the tree structure beneath the icon to the right of the node; when a plus sign appears in the node, the tree structure is collapsed and you cannot see it. You can see the entire tree structure when all nodes are minuses.

Note: The security settings on a folder only determine two things: (1) whether or not a user can see the folder, and (2) whether or not the user can add or remove documents from the folder. Whether or not a user can EDIT a document or only view it is determined by the security settings for the document, not those set on the folder. Depending on the access privileges set on the documents contained in a folder, any given user may or may not see any documents contained in the folder, may have read-only access to the documents, yet be able to add documents to the folder, or may be able to edit documents contained in the Folder, but cannot add documents to the folder. For more information on document-level security, see [“Setting Access Privileges” on page 55.](#)

Navigating in the Tree Frame without a Mouse

- Up and Down arrow keys move cursor in up and down in tree
- Left and Right arrow keys function to open and close nodes in the tree
- Enter selects a Worklist, Folder, or Saved Search, as if you clicked on it.

Note: When you select a Worklist, Folder or Saved Search, focus automatically shifts to the Document Grid, enabling you to use keyboard shortcuts to navigate in that frame as well.

Document Grid

The Document Grid displays the results of an iManage DeskSite search, worklist or the contents of a folder.

	Database	Description	Doc. Num	Ver...	Author	Class	Edit Date
	iman1	test	1,013,054	1	J.WOOD	DOC	10/25/2000 11:06:06 AM
	iman1	Telephone List	1,012,858	1	BOWEN	DOC	02/24/2000 12:15:50 PM
	iman1	Document2	1,000,247	3	BARBARA	DOC	01/27/2000 6:27:42 PM
	iman1	Document	51,265	2	DIPALI	PUBLIC	12/09/1999 4:03:01 PM
	iman1	ACCA004J	1,013,536	1	WLI	DOC	12/08/1999 6:15:20 PM
	iman1	Document2	60,072	1	DCHAN	PUBLIC	10/11/1999 11:57:20 AM
	iman1	document1	52,098	1	DCHAN	PUBLIC	09/01/1999 5:12:32 PM
	iman1	1054 4 1...	51,072	1	DCHAN	DOC	07/07/1999 10:07:00 PM

Figure 2.6: The Document Grid

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Sorting Documents in the Grid

To sort the contents of the Document Grid by any column, just click the desired column heading. To sort in reverse order—that is, from ascending order to descending or vice versa—click the heading again.







Document column

The left most column in the Document Grid is the document icon column which displays an icon representing the document type. You cannot remove this column from the document grid.



Status column

This column displays icons to indicate the current status of the document. You cannot remove the status column from the document grid. The icons that may appear in this column are:

-  The document is archived.
-  The document is checked out.
-  The document is locked.
-  The document has other documents related to it.

Selecting Documents

Clicking on a document in the Document Grid highlights the document in blue. You can select multiple documents by keeping the **Ctrl** key depressed and left-clicking the desired documents. You can select a range by depressing the **Shift** key and then left click on two documents in the grid; those two documents and all those in between are selected. If you are unable to use the keyboard and mouse simultaneously, we recommend enabling **Sticky Keys**, which is available in Windows 98 and 2000 and Windows NT. Enable Sticky Keys from the *Accessibility Options Control Panel* which comes installed with your Windows 98 and 2000 and Windows NT operating system.

Performing Actions on Documents

With iManage DeskSite you can perform a variety of actions on the documents listed in the document grid. Execute these actions by:

Chapter 2: Using the DeskSite Desktop Window

- Highlighting the desired document(s) and clicking an icon in the toolbar icons at the top of the Desktop Window. (See "Menu Options and Toolbars" on page 38 for more information on the toolbar)
- Highlighting the desired document(s) and selecting an option from the Document menu (see Figure 2.6).
- Accessing the document menu with a right-mouse click on the desired document.

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Customizing the Document Grid and Profile

You can configure the Document Grid in several ways so that it displays the information you want in the format you want. You can customize the Display Columns and the Profile Fields that appear in the Document Grid.

To Customize what columns appear:

1. To do this select **Options** from the **Options** menu. This launches the *Configure* dialog box (see Figure 2.7).

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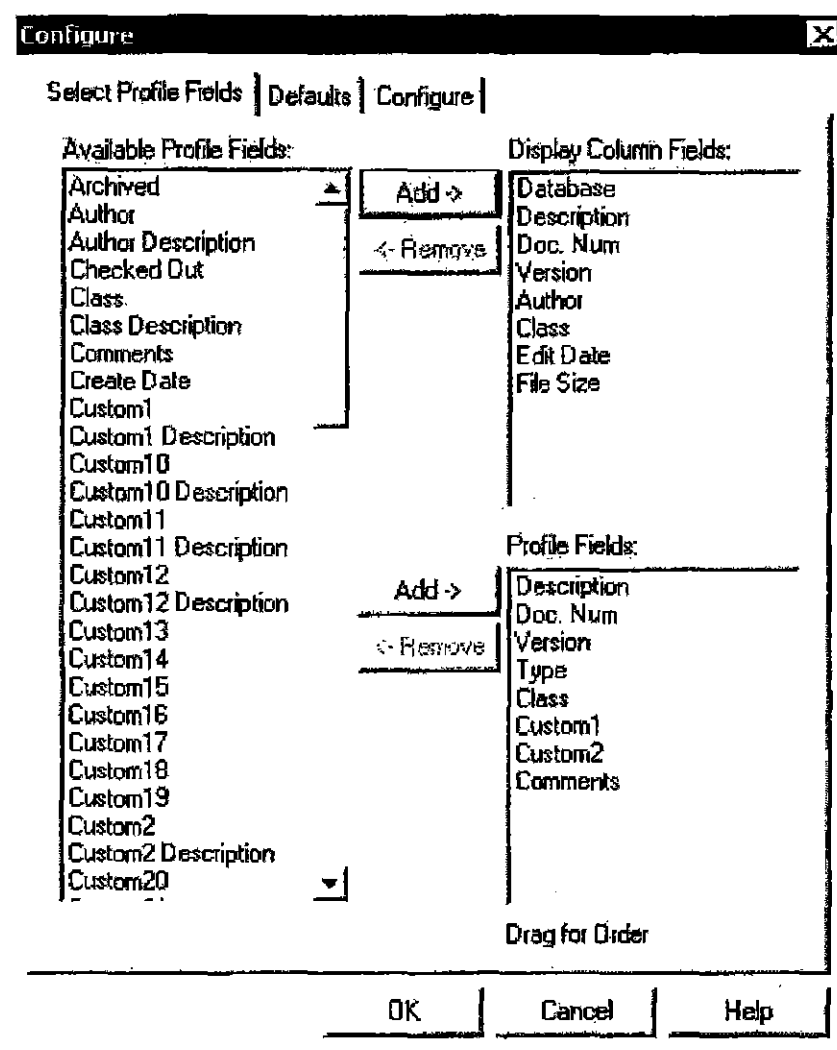


Figure 2.7: Configure dialog, Select Profile Fields tab

2. Choose the **Select Profile Fields** tab.
3. Add fields you want to see as column headers in the Document Grid from the Available Fields list to the Display Column Fields or the Profile Fields list.
4. Remove fields you do not want to see as column headers in the document grid from the Display Column Fields or the Profile Fields list to the Available Fields list.

Note: The **Profile Fields** list in the lower right corner of this dialog determines which profile fields display in the Document Profile tab of the Document Results Frame in the lower-right portion of the main desktop window.

5. Click **OK** when finished.

Customize Display Options Defaults:

Select **Options** from the **Options** menu. This launches the *Display Options* dialog (see [Figure 2.8](#)). Then choose the **Defaults** tab. There are two features to customize in the Document Grid:

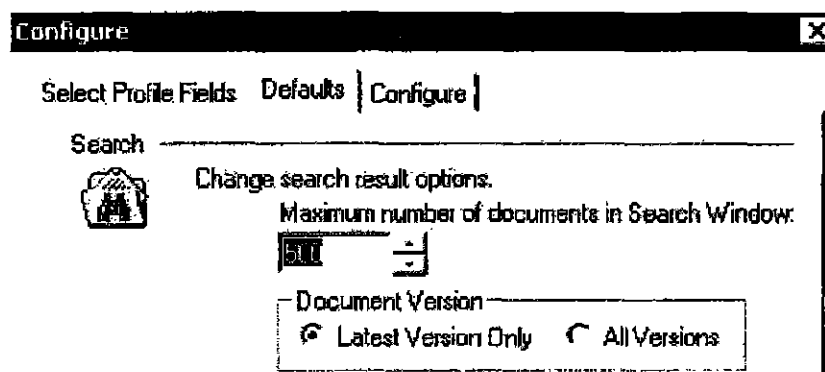


Figure 2.8: The top portion of the *Display Options* dialog, Defaults tab.

- Select the maximum number of searches to appear in the Document Grid. This will prevent an overwhelmingly large search return impacting the performance of your system.
- Select whether you want the Document Grid to contain only the latest version of each document or show all versions.

Navigating in the Document Grid without a Mouse

Up and Down arrow keys move the cursor up and down in the grid. The **Page Up** and **Page Down** keys also move the grid up or down.

Document Results Frame

The Document Results frame provides information about a particular document. There are five tabs:



Figure 2.9: The Document Results Frame tabs

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Switching Tabs in the Bottom Pane of the Document Grid


Ctrl+Tab switches from tab to tab in the bottom pane of the Document Grid.

Document Profile Tab


You can view a document's profile by highlighting a document in the Document Grid and then clicking the Document Profile tab. You may not edit any of the fields appearing in this tab. To edit profile fields you must launch the *Edit Profile* dialog.

Which profile fields appear in this tab is determined by the settings of the Profile Fields list on the *Select Profile Fields* tab in the *Configure* dialog, launched from the **Options** menu.


Quickview Tab

To view a document without leaving the iManage Desktop, highlight the document and click the Quickview tab. You can also right-click the desired document and select **Quickview** from the pop-up menu or click the Quickview icon  from the toolbar. A read only image of the document appears in the Quickview tab.


Related Documents Tab

To see a list of a document's relations, highlight the document and click the Related Documents tab. You can also right-click the desired document and select **Related Documents** from the pop-up menu or click the Related icon  from the toolbar. A list of the document's relations appears in the Related Documents tab.

Document Versions Tab




To see a list of a document's versions, highlight the document and click the Document Versions tab. You can also right-click the desired document and select **Versions** from the pop-up menu or click the Version icon  from the toolbar. A list of document's versions appears in the Document Versions tab.

History Tab

To see a list showing events in the document's history, highlight the document and click the History tab. You can also right-click the desired document and select **History** from the pop-up menu or click the Version icon  from the toolbar. A list of activities performed on the document appears in the Document History tab. The history tab shows such activities as Create, Checkout, Open, Checkin, Print, Modify, Location of the activity and comments about certain activities.

2**Document Results Frame PushPin**

The PushPin allows you to control the relationship between the Document Grid Frame and the Document Results Frame. Depending on the PushPin state, the Document Results Frame behaves differently when you click on an item in the Document Grid Frame. You can set the PushPin separately for each tab in the Document Results Frame. Your iManage Administrator can set the default state and disable certain states.

PushPin	State	Tab Name	Tab Behavior
	Up	All tabs	Goes blank
	Down	All tabs	Automatically refreshes
	Locked	Related Documents	Stays the same as before you clicked on another item















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Menu Options and Toolbars

2


















The following table shows the keyboard shortcuts and toolbar buttons for frequently used functions in iManage DeskSite. Menus are customizable by your system administrator, so some options may not appear or may have different names.

Table 2.1: iManage Toolbar

Menu Option	Keyboard Shortcut	Toolbar Icon
Search	Ctrl+F	
Refresh	F5	
Print Document List	--	
Print Preview	--	
Open	Ctrl+O	
Edit Profile	Ctrl+E	
Versions	Ctrl+S	
Quickview	Ctrl+Q	
View	--	
History	Ctrl+H	
Related Docs	Ctrl+R	
Checkout	--	
Checkin	--	
Send Document URL	--	
Unlock	--	

Chapter 2: Using the DeskSite Desktop Window


Table 2.1: iManage Toolbar

Menu Option	Keyboard Shortcut	Toolbar Icon
Remove from Folder	---	
Import	---	
Export	---	
Purge	---	
Synchronize Echoed Documents	---	
Set New Document Default	---	
Setup Local Applications Table	---	
Security Template	---	
Set Security on Multiple Documents	---	
Change Password	---	
Send Document	---	
Send Link	---	
Copy Document	---	
Copy and Open Document	---	
Create New Version	---	
Create New Version and Open	---	
Print Selected Document	---	

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Table 2.1: iManage Toolbar

Menu Option	Keyboard Shortcut	Toolbar Icon
Checked Out Information	---	

2

Customizing Toolbars

iManage DeskSite allows users to both edit the default toolbar and customize new toolbars.

Select **Customize Toolbar** from the **Options** menu or right-mouse click on the toolbar you wish to customize and select **Customize...** from the pop-up menu. The *Customize* dialog will launch displaying a **Toolbars** tab and a **Commands** tab.

In the Toolbars tab of the *Customize* dialog you can:

- Activate or deactivate the toolbar on your desktop by highlighting the toolbar in the list and checking or unchecking the checkbox.
- Create a new toolbar by clicking on the **New** button. You are asked to give the toolbar a name.
- Delete a customized toolbar by highlighting the desired toolbar and clicking the **Delete** button. (You cannot delete the iManage toolbar)
- Reset the iManage toolbar back to its original state by highlighting it and clicking the **Reset** button.
- Activate the tool tips checkbox which will popup the button name when the mouse pointer hovers over a button.
- Activate the 'cool look' checkbox to display buttons in a different way.

In the Commands tab of the *Customize* dialog you can:

Select from various toolbar categories. iManage DeskSite has one default category called **iManage**. Your system may have others. When a category is highlighted, the available buttons appear to the right of the **Categories** list.

Build a toolbar by dragging and dropping button commands from this **Commands** tab to the desired toolbar on your desktop. Remove a button from the toolbar by dragging and dropping the button from the toolbar back to the **Commands** tab.

Web Browser

iManage DeskSite has a web browser utility to allow you to quickly access the web directly from the iManage Desktop. When launched, the browser takes over the space occupied by the Document Grid and Document Results Frame. To provide more web-browsing space, de-select **Shortcut Bar** option in the **Options** menu. You can also use standard mouse-based Windows re-sizing techniques to create a larger browsing space.

2

Web Browser Toolbar

Address Field:  Address  http://www.imanage.com/ 

Type in a standard web address, or select from a previously selected address by using the drop-down arrow, and the site launches.

Arrow Commands: 

These commands help you navigate backwards and forwards. The forward button will only be available if you have navigated backward at some point during the current browsing session.

Reload Command: 

This will refresh the currently loaded page and include any changes since the last time you loaded the page.

Stop Command: 

If a page you are trying to load is taking too long to display, you can cancel it by clicking the **Stop** icon on the toolbar.

Home Command: 

Your browser's home page is the page that first appears when you launch the web browser. You can return to this page at any time by clicking on this Home icon.

To change your home page in Microsoft Explorer launch the MS-Explorer application and select **Internet Options** from the **View** menu. Type in your home

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page address in the space provided in the General tab.

Search Command: 

This command will launch the Microsoft search engine at Microsoft's main web site.

Favorites Menu: 

The favorites menu contains standard Explorer functionality to add and organize favorite web sites that you visit repeatedly.

2

CHAPTER 3

iManage DeskSite: Basic Functions

3

Overview

This chapter describes the basic document management functions available in iManage DeskSite. These include:

- Connecting to WorkSite Middle Tier Servers
- Opening documents
- Viewing documents
- Searching for documents
- Checking out documents
- Checking in documents
- Relating documents to one another
- Working with multiple versions of documents
- Copying documents
- Sending documents and document attachments
- Importing documents
- Exporting documents
- Entering and Editing Profile Information
- Setting Access Privileges on a document
- Viewing document history
- Unlocking documents
- Deleting documents
- Restoring Archived Documents
- Changing passwords

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Note: For information on more advanced functions, see Chapter 6, 7 and 8 in this manual. For information on using iManage DeskSite from within an integrated application, see Chapter 5. The *iManage Integrated Desktop* window, which is available by selecting **Open** from the **File** menu in integrated applications, is described in detail in Chapter 5.

3

Connecting to WorkSite Middle Tier Servers

Your first step in using iManage DeskSite is to register any WorkSite Middle Tier Servers you wish to connect to. The WorkSite Middle Tier Server is how you gain access to your documents and databases. To register and log into a WorkSite Middle Tier Server, you need a valid Login, Password and Server name:

1. Select **Register/UnRegister** from the **Login** menu. This launches the *Register Servers* dialog.

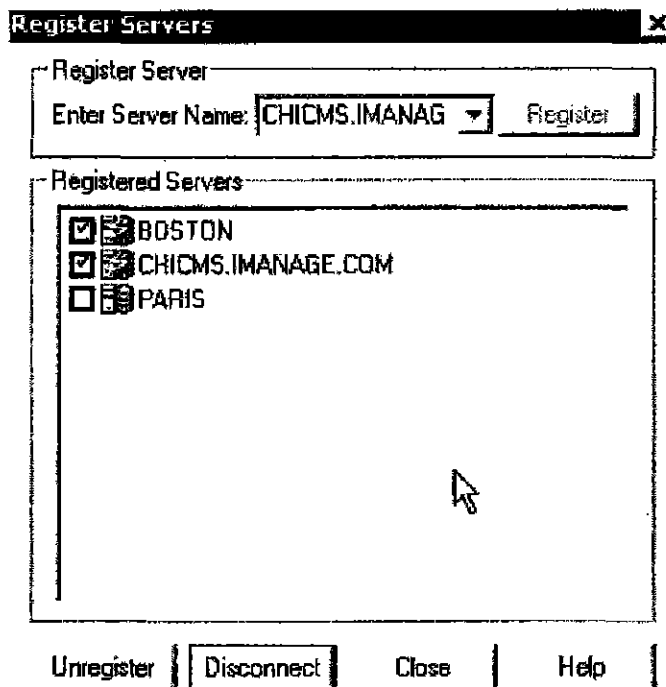


Figure 3.1: *Register Servers* dialog. The icons show which servers are connected. In this illustration, BOSTON and CHICMS.IMANAGE.COM are connected and PARIS is not.

The dialog shows a list of all the servers that are registered. A check in the

checkbox indicates that the server is set to log on automatically when you open iManage DeskSite. You can select which registered servers to log into by checking or unchecking them.

To disconnect from a server to which you are currently connected, highlight it and click **Disconnect**. You will not lose the login information you have already entered for that server.

To reconnect to a server to which you are not currently connected, highlight it and click **Reconnect**.

To change login information for a server, highlight it and click **Unregister**. Then register the server again.

2. Enter the name for the WorkSite Middle Tier Server or the Server Cluster in the **Enter Server Name:** field and click **Register**. This launches the server *Login* dialog.

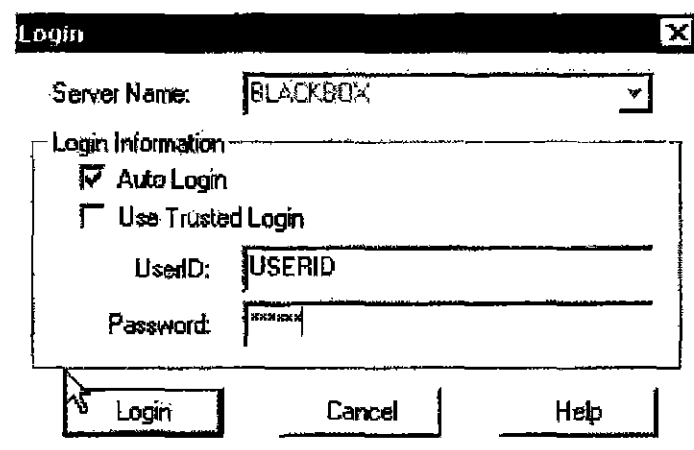


Figure 3.2: *Login* dialog

Note: Your servers may be set up in a server cluster arrangement that includes multiple servers serving the same iManage libraries. The multiple servers provide additional fault tolerance in the event of a server failure and enhanced performance. You log into a cluster the same way you log into an individual server.

3. Enter your userID and password in the **UserID** and **Password** fields.

Note: For security reasons, you must enter your UserID and Password correctly in a limited number of attempts. Your iManage administrator sets the number of attempts you can make before the system locks you out. If this happens, contact your iManage administrator to reset your password.

4. If you want to log into this server automatically when you open iManage DeskSite, check **Auto Login**.
 5. If **Trusted Login** is enabled by your Administrator and you want to use this feature, check **Use Trusted Login**. When you check this box **UserID** and **Password** are blanked out.
 6. Then click **Login**. If you have entered authentic login information the Server appears in the list box of the *Register Servers* dialog.
-

Note: You can repeat these steps for as many Servers as you would like to Register for current or future use. From the *Register Servers* dialog you can connect to or disconnect from any of the registered servers. At the startup of the iManage application, only connected servers are automatically logged on.

Trusted Login Option

The *Login* dialog box also presents you with the option of using your network login ID to log into the WorkSite Middle Tier Server. To use this option, check the **Use Trusted Login** checkbox. The **User** and **Password** entry boxes are locked out if you check this box.

Note: Your administrator must specifically enable this option. If you try to use this option and receive an error message, try logging in without using the **Trusted Login** option.

Connecting to an Additional WorkSite Middle Tier Server

To connect to a different WorkSite Middle Tier Server, open the *Register/UnRegister Servers* dialog and select from the available registered servers (or register a new one) and click **Connect**. Click **OK** to complete the login. You can connect to several WorkSite Middle Tier servers at once.

Auto Login on One or More WorkSite Middle Tier Servers

Once you have registered the WorkSite Middle Tier servers you need, you can select which ones you want to log into automatically when you launch iManage DeskSite. To select Auto Login servers, check the box next to the server name. To deselect a server uncheck the box. Deselecting a server does not unregister that server. See [Figure 3.1](#).

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Unregistering a Server

To unregister a WorkSite Middle Tier Server without exiting iManage DeskSite manually, open the *Register/UnRegister* dialog, highlight the desired server and click the **Unregister** button. Click **Yes** to confirm the unregister request.

Logging Out

You are automatically logged out of the WorkSite Middle Tier Server when you exit or close iManage DeskSite.

Autosynchronize/Checkin Alert

If you have edited any portable or echo documents since the last time you ran iManage DeskSite, the following alert message appears immediately when you open iManage DeskSite. This message indicates that there are portable or echo documents stored on your local drive that have been changed. To synchronize these documents back to the database or check them in, click the **Yes** button in the message box shown below. You have the option of copying them back as the original document, importing them as new versions of the original document, or importing them as new documents. If you click **No** and do not synchronize or check in the documents in question, this message box appears again the next time you launch iManage.

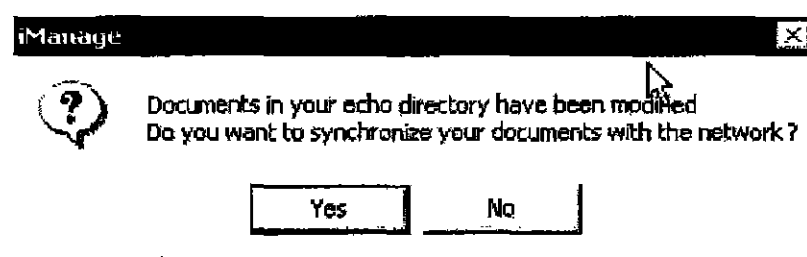


Figure 3.3: The Autosynchronize or checkin alert box appears to inform you that you have portable or echo documents stored locally that need to be synchronized back to the library.

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If you select **Yes** in the autosynchronize/checkin message box, then a dialog box appears that allows you to check in any portable documents that you have checked out or synchronize any echo documents that you edited. This dialog box is shown in [Figure 3.4](#).

If you want to show only documents that have changed, check the **Show only echo modified** checkbox.

3

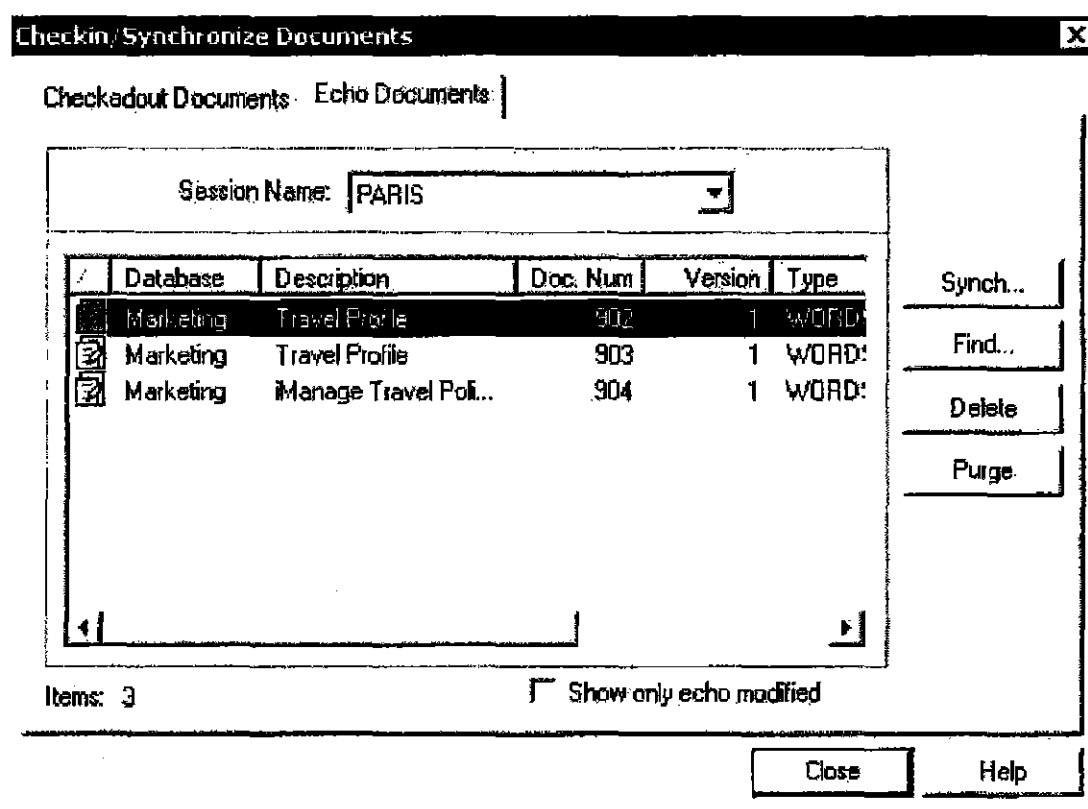


Figure 3.4: Checkin/Synchronize Documents dialog box

You can also access the *Checkin/Synchronize Documents* dialog box from the **Options** menu. From the *Checkin/Synchronize Documents* dialog box, you can check in documents that you currently have checked out for portable mode or synchronize echo documents that you edited off line.

To synchronize echo documents:

1. Click the **Echo Documents** tab.
2. Highlight the documents that you want to synchronize and click the **Synch** button.

To check in checked out documents:

1. Click the **Checkedout Documents** tab.
2. Highlight the portable documents that you want to checkin and click the **Checkin** button.

The **Confirm Synchronize** dialog opens.

3

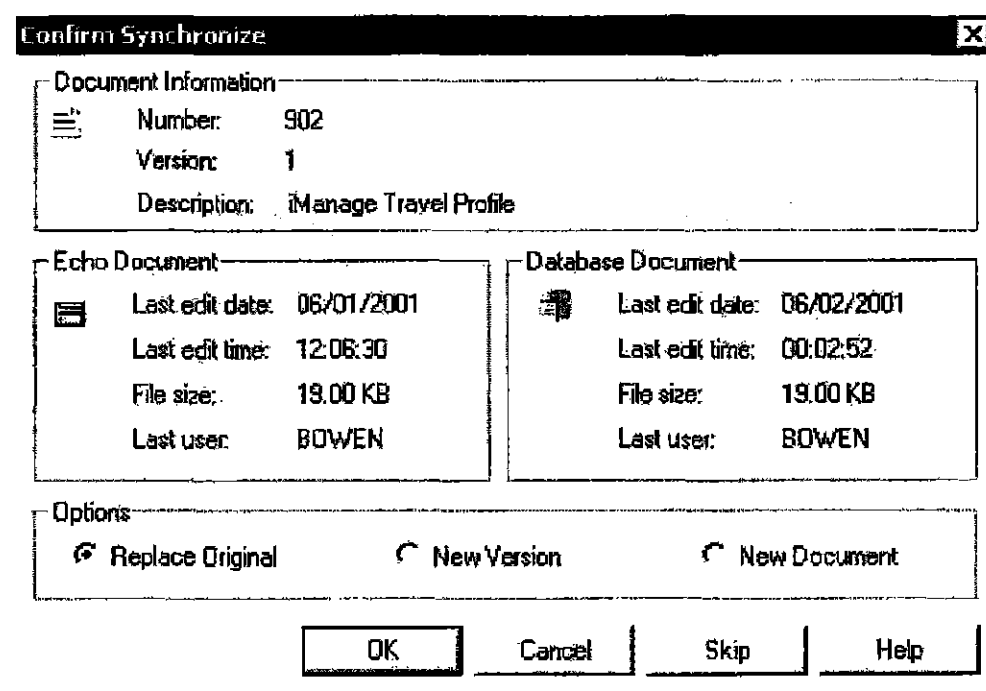


Figure 3.5: *Confirm Synchronize* dialog




Choose the appropriate option: **Replace Original**, **New Version**, or **New Document** and click **OK** to synchronize the portable or echo document with the document in the iManage library.

Searching for Documents


One of your first tasks in using iManage DeskSite will be to locate documents that you want to work on. You can locate documents by:

- Clicking the icon for a saved search . This will perform the search again on the database and return documents that meet the search criteria.

3

- Click the Worklist icon . This will display the last 40 documents that you have worked on.
- Click a Folder icon . This will display the documents contained in the folder.
- Click the Search icon  and entering new search criteria.

To perform a search:

Select **Search** from the **Search** pulldown menu or click the Search icon  and enter search criteria in the fields provided. Complete information on using iManage DeskSite's extensive searching capabilities is available in [Chapter 4](#).

Opening Documents

Once you locate documents that you want to work on in your Document Grid, you can open these documents by highlighting the documents and selecting **Open** from the **Document** pulldown or right-click popup menu. The keyboard shortcut for Open is **Ctrl-O**. iManage automatically opens the document in the primary application that was defined for this document type.

Note: If you set your left mouse button double click parameter to the Open command, you only have to highlight the document and double-click to open the document. To set this parameter, select **Options** from the **Options** menu and click the **Configure** tab. Select **Open** from the **Default Command** drop down menu.

Note: If you attempt to open a document that is currently in your Echo directory because you worked on it previously and made changes to it that are not reflected in the copy on the file server, iManage DeskSite will not let you open the document. Since iManage DeskSite copies a document to your Echo directory when you open it, this feature prevents you from overwriting changes that you made to the document. You must synchronize the document before you can open it. See ["Synchronizing Echo Documents into the Network"](#) on page 192 for more information.

Opening from an Integrated Application


If an application is integrated with iManage DeskSite, you can also open docu-

EXHIBIT 26

EXHIBIT B-7

EXHIBIT NO. 19
PAUL GREENBERG, PH.D.
APRIL 30, 2010
J.W. HARBIDGE, CSR

DEFENDANT'S EXHIBIT
DTX 0922
CASE NO. 1:08-CV-00862-LPS

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(54) **Meta-documents and method of managing them**

(57) A meta-document (10) includes an object conveying document information (12), processing information (14) pertaining to processing of the meta-document and metadata (16) for indexing and retrieving the processing information. The processing information (14) is recorded on the meta-document (10) each time the meta-document (10) is processed in some manner. Each time processing information is recorded on the document, appropriate metadata for indexing and retrieving the processing information is also stored on the meta-document. Processing may include any transformation of the document information or the meta-document itself. Creation and recording of the processing information (14) and associated metadata (16) on the meta-document may be accomplished externally by the particular source or environment to which the meta-document may be residing. Alternatively, each meta-document may include a tool (18) (e.g., a software program or macro) embedded on the object. Whenever the meta-document is accessed or processed, the embedded tool creates the appropriate processing information and associated metadata. Whenever the meta-document is sent/distributed by any means, its document processing information part is parsed and used to populate the local environment.

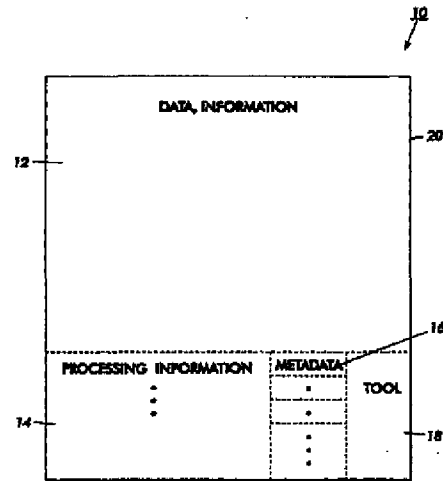


FIG. 1

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Description

[0001] This invention relates generally to the management and use of documents, and in particular, to the management and use of information pertaining to the various manipulations that may be performed on documents.

5 **[0002]** The management and use of documents has changed drastically with the evolution of electronic communications, and in particular, with the Internet and intranets. In the past, a document was simply a tangible media, such as a piece of paper, conveying information or data. Today, a document is an object conveying information that is created at a given time; it may be manipulated by various people and tools; it may be duplicated and transported from place to place; and finally it may be deleted or simply forgotten on a storage media at some location.

10 **[0003]** Only a few of all the manipulations that may be performed on a document are traceable. If a document is created by a word processing program, for example, the program may track certain types of manipulations about the document, such as editing, printing and accessing and this information may be stored with the document. However, if the document is copied, a record of the copying is usually not stored on the original document or the copy or elsewhere. If the document is translated, say from English to French via an automatic translator, the fact of the translation (even given the low quality of the translation) is not recorded on the original document. Nor is the translation itself recorded or accessible with the original document should someone desire the translation at a later date.

15 **[0004]** In addition to the information pertaining to word processing-type document manipulations, many documents are moved from site to site or from user to user. The path of distribution and the fact that a document undergoes changes through its travels add to the knowledge or information about the document. This kind of knowledge is generally not available to users, particularly users in an organization or users on an intranet or the Internet. In fact, most of the information about what happened to the document during its whole life (e.g., who read it, reviewed it, where it was sent as an email attachment, who liked it, etc.) is lost.

20 **[0005]** Generally when a document is considered important, it is simply duplicated in a large number of copies that are widely distributed. Users in an organization tend to share the feeling that the more copies are made, the more confident they are that the important knowledge contained in the document will be spread throughout the organization. In some organizations the document will be indexed and described in terms of important keywords and stored in a document management repository, where it may be accessed via an intranet or over the internet. Then its URL will be forwarded to a certain number of users with a note to read the important information or knowledge contained in the document.

30 **[0006]** In order to store documents in a document management repository, certain additional data called metadata is stored with the document. Metadata is simply data about data. However, increasingly, the term has come to refer to data used to aid the identification, description and location of networked electronic resources, including documents. A variety of metadata formats currently exist from the basic proprietary records used in global Internet search services through a continuum encompassing simple attribute/value records.

35 **[0007]** Metadata has been used to encode information about a document, such as historical data and activity-centered information. The use of metadata has also been recognized as having a role in the ongoing management and preservation of digital resources. For example, it has been suggested that metadata could be used for recording the technological context of a resource's origins, for managing and recording rights management information, for preserving the authenticity and reliability of resources as well as for resource discovery. Preservation metadata could be used for checking the integrity of document files.

40 **[0008]** Even if important documents are placed on a document management repository and broadcast messages are sent to interested parties, current document properties and repository management features do not ensure that the right knowledge or information will be made available to the right people exactly when they need it. The importance of information/knowledge to users is not the same for all users and it depends heavily on the context. The importance of information also evolves over time; a piece of knowledge that was of not much interest to a user and deleted two months ago may suddenly become key to the user or to other users in the organization.

45 **[0009]** There is a need for a system and method of managing documents containing metadata which extracts as much metadata and information as possible from the documents. There is also a need for a system and method of managing documents which tracks all of the information about what happened to a document during its whole life (e.g., who read it, reviewed it, where it was sent as a email attachment, who liked it, etc.). There is also a need for a system and method of managing documents which stores as additional information the result of what happened to the document (for example, the comment associated with a review, the translation obtained from an automatic translator, the definitions of the terms recognized by a terminology checker tool etc.). There is also a need for a system and method of managing documents that can track document distribution data. There is a further need for a system and method of managing documents that can track a document's path of distribution and a document's changes. There is also a need for a method and a system of managing documents that can transfer information about or contained in the document to other sources and environments.

55 **[0010]** In accordance with the system of the invention, documents when processed, for example, when they are

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transformed from one format into another, or copied, or distributed or commented upon, do not lose any of the information they had in their previous form. Each step in the document cycle process, i.e., during the entire life-time of the document (including reading and usage), going from authoring to modification to publishing and printing to reading and using, is considered a different view of the same data or modifies a different aspect of the document. Information pertaining to each processing step is stored with the document along with metadata for indexing and retrieving the processing information. By storing a record of all the various processing and the results of the processing performed on a particular document, and making that information retrievable, users in an organization have the opportunity to come back to some piece of information about a document that later turned out to be of great importance.

[0011] The system according to the invention employs a new form of document called a meta-document. A meta-document, according to the invention, includes an object conveying document information, processing information pertaining to processing of the meta-document and metadata for indexing and retrieving the processing information. Processing information includes information pertaining to the fact that the meta-document (or the document information) was processed, by whom, any relevant tool used and the result of the processing. The processing information is recorded on the meta-document each time the meta-document is processed in some manner. Each time processing information is recorded on the document, appropriate metadata for indexing and retrieving the processing information is also stored on the meta-document.

[0012] Processing may include transformation of the document information or the meta-document itself, evaluation or analysis of the document information using a linguistic tool or a knowledge management tool, adding a user comment (such as for later transmittal to a relevance system), or distribution of the meta-document. Metadata is provided to index and retrieve each type of processing information. In this way, the processing information may be accessed by other environments, such as when the meta-document is emailed across an intranet to a relevance database. A tool at the relevance database may copy the user comment (or other processing information) stored on the meta-document.

[0013] Creation and recording of the processing information and associated metadata on the meta-document may be accomplished externally by the particular source or environment to which the meta-document may be residing. Alternatively, each meta-document may include a tool (e.g., a software program or macro) embedded on the object. Whenever the meta-document is accessed or processed, the embedded tool creates the appropriate processing information and associated metadata.

[0014] The meta-document can be thought of as an "absorber" of the processing information which was generated by manipulations or references (e.g., recommendations) made to it, including, in particular, the fact that these actions occurred. All of the processing information in the meta-document is explicit, accessible and reusable so that other tools or other people in different contexts can benefit from it. The meta-document can also be thought of as a "distributor" of processing information stored on it. Each time a meta-document is accessed by a new source or environment, the meta-document can download or leave some or all of its stored processing information.

[0015] The invention changes the current vision of the management and use of documents. Instead of managing knowledge or information extracted or created from documents outside of the documents themselves, such information can be managed with the document itself. Meta-documents (for example, encoded in XML) when processed by tools, such as knowledge management tools, are enriched by the processing information or pollen. The metadata stored in the meta-document enables similar or compatible tools to understand, find and extract the processing information.

[0016] Many documents are moved from site to site, from user to user. The path of distribution and the fact that a document undergoes changes through its travels as noted above add to the knowledge or information about the document. This processing information may also be thought of as "pollen" since it is knowledge that sticks to the document's trajectory.

[0017] The meta-document may also be used as a vehicle for spreading or distributing the knowledge or information contained within it around, even outside the originating organization. When the meta-document travels from source to source or environment, it can be considered as "pollenizing" the source. For example, when the meta-document is mailed (transmitted) to people or moved to repositories, it may be used to selectively pollenize the appropriate local knowledge tools or databases with the processing information or pollen added along the series of processing steps it went through since its creation. The meta-document or the "pollenizing document" may be used as a vector of propagation of knowledge to other knowledge management tools in different knowledge spaces.

[0018] The results of the processing of a document by any tool may be used to enrich the document with more and more knowledge. Each tool manipulating a document at any stage of its existence, in any circumstance adds to the document a piece of knowledge (pollen) about this document. The meta-document enhanced by such pollen should be able in turn to feed local tools and environments with the knowledge it has gathered along its whole chain of processing within or outside the organization.

[0019] An embodiment of the present invention will now be described, by way of example, with reference to the accompanying drawings, in which:

Figure 1 is a schematic of a meta-document according to the invention; and

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Figure 2 is a schematic showing movement and processing of a meta-document from source to source.

[0020] Referring to the drawings, and now in particular with reference to Figure 1, a meta-document according to the invention is shown therein and referred to by reference numeral 10. Meta-document 10 includes an object 20, which may be a file structure if the meta-document is stored electronically, or a type of media, such as a floppy disk, piece of paper, magnetic tape, etc. Meta-document 10 also includes document information or data 12. Information or data 12 may be the substance of a letter or a spreadsheet of user input information or any other typical data or information that a user might want to record. Processing information 14 is stored for each processing of the information 12 or meta-document 10. Metadata 16 is used to index and retrieve its associated processing information.

[0021] Optional tool 18 is shown in meta-document 10. In this embodiment, tool 18 is an embedded software program, interface or macro which generates and stores processing information 14 and associated metadata 16 for indexing and retrieving the processing information 14. Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. Alternatively, meta-document 10 may include no tool 18. In that embodiment, the tool for generating and storing processing information and metadata will be located at each source or environment that interacts with meta-document 10.

[0022] A schematic representation of how a meta-document is transformed during part of its life and is used to pollenate an environment is shown in Figure 2. Meta-document 20, which includes document information 25, is created or presently associated with source or environment 30. Processing information 21 is created (in this embodiment by source 30) and stored on meta-document 20. Metadata 24 is also created and is used to index and retrieve the stored processing information 21. If for example meta-document 20 is a key strategic document, the document information 25 is the text of the strategic document. Processing information 21 may be the time stamp and record of the place of creation of the document. Another example of processing information (not shown) may also include strategic recommendations for all "managers" added by various readers in the environment 30.

[0023] Meta-document 20 is then transmitted over the Internet 36 to source (or environment) 32. Source 32 includes a processing program 40 which processes the document information 25 by copying the document text and storing it in a new document. A record of this copying is stored as processing information 26 (with its associated metadata - not shown). A record of the fact that the meta-document 20 was received at source 32 is stored as processing information 22 (with associated metadata not shown). Additional processing information, such as recommendations from reviewers at source 30, may also be stored as processing information with associated metadata on meta-document 20.

[0024] When meta-document 20 arrives at source 32, source 32 needs some means of determining what processing information is available on meta-document 20. In one embodiment, meta-document 20 embeds a processing software program 41 called knowledge pollenizer which may be programmed to extract relevant processing information, such as any strategic recommendations contained in processing information 21, and to send them automatically to all the local managers at source 32. Alternatively, source 32 can provide a knowledge pollenizer program 40 for reading all received meta-documents and extracting such defined processing information. This is an example of meta-document 20 pollinating the environment 32.

[0025] Meta-document 20 is then forwarded via the Internet 36 to source (environment) 34. A record of this processing is stored as processing information 23 (with associated metadata not shown). Again the embedded processing program 41 extracts the processing information 21 and other relevant processing information 22 and sends recommendations, if applicable, to all local managers of source 34. In each processing or transformation of meta-document 20 a record of the activity is stored on the meta-document 20. So, if some user wishes, at a later date, to learn if any party copied the text from the meta-document 20, that information is available as processing information 26.

[0026] When meta-document is transmitted from source to source and processing information is created (stored in the meta-document) this is similar to a bee travelling to a flower and picking up pollen. Similarly, if a source finds certain processing information on a meta-document of interest, it can copy or use the processing information and of course, trigger actions based upon it. This is similar to pollen carried on a bee's body being left on another flower.

[0027] Current technology is mature enough to allow various different implementations of meta-documents. For example, XML metadata (RDF) is a technology which allows the encoding of metadata within documents. Outside classical performance problems that may arise, there is almost no limit in the quality and quantity of metadata or meta-information that can be encoded in a meta-document. Each source having a tool (program) which processes a meta-document for one purpose or another can store processing information and metadata about its processing, including the result of the processing itself.

[0028] For example, if at a given time the meta-document is passed through a terminology extraction tool, if terms are detected and defined by a user, the terminology management tool can in turn encode the defined terminology as pollen or processing information and associated metadata within the meta-document. In future use, when the meta-document is sent to a source where a terminology management tool is also available and can read the metadata, the meta-document will be used to pollenate the local terminology database with its pollen or processing information storing

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the embedded terminology.

[0029] Metadata allows encoding of information that is not strictly part of the text of a document. Many applications for meta-documents could benefit of this possibility. Meta-documents may be used, for example, in recommender systems. The Knowledge Pump tool developed at the Xerox Research Center Europe (XRCE) allows users to make recommendations on documents in the form of a rating (e.g., 1 to 5 stars) plus a comment section (text field) explaining why a document is interesting or not. This rating information is valuable knowledge that is currently stored "outside" the document in a dedicated database. In the Knowledge Pump database, the recommended document is just referenced as a URL. If the recommendation is stored as processing information (pollen) and metadata with the document as part of a meta-document according to the invention, these stored recommendations may also be provided when the document is sent around through email or through imports in document management systems. The use of meta-documents is a simple way to provide recommendations (and identified experts and communities) beyond the scope of one organization and could be used as an exchange mechanism between non-connected Knowledge-Pump servers. Therefore, a tool for extracting the processing information or pollen would be associated with each Knowledge Pump database.

[0030] Issues about security, access-rights, intellectual property etc. can be addressed by the meta-document creators as part of each meta-document's creation. One factor that must be taken into account when creating meta-documents is their size and complexity. However, emerging technologies such as RDF metadata and DOM (Document Object Model) will readily enable implementation of meta-documents.

[0031] As noted above, metadata is commonly defined as data about data. In the context of meta-documents, metadata is defined as data about or related to the "textual part" of a document, but not part of the text itself, including the textual information which describes the processing of the document (processing information or pollen). The Resource Description Framework (RDF) is an abstract model for defining metadata. The basic data model consists of three object types: Resources, Properties and Statements which correspond to a resource associated with a property. Concretely, resources will be elements of the text, and the metadata will associate some properties (knowledge) to these elements.

[0032] An important aspect of the metadata model consists of defining the set of properties that can be attached to the resources. This is the role of namespaces. A namespace is a set of names in which all the names are unique. Clearly, part of the value of the metadata model depends on these namespaces. Several important namespaces already exists, and each of them is more or less dedicated to an application or a domain.

[0033] In order to create a meta-document, (assuming the basic document information exists) the first step is to define the processing data or information to be encoded in the document, along with the tags to be used to encode this information. Suppose we want to encode the identity of the reader, the rating she/he gives and the associated comments. Using XML/RDF, the following fragment illustrates how such information could be encoded, assuming "Peter" wants to give a recommendation about a technical article:

```

35  <rdf:RDF
      xmlns:kp="http://www.xrce.xerox.com/knowledge_pump">
      <rdf:Description about="Establishing Namespaces for a Recommender System">
      <kp:Reader>Peter Dowson</kp:Reader>
      <kp:Rating>3 Stars</kp s:Rating>
40  <kp:Comment>Well written article with good background on recommender systems.
      </kp:Comment>
      </rdf:Description>
      </rdf:RDF>

```

45 For this example, it is assumed that the knowledge pump has its own namespace, noted kp, associated with an imaginary URL.

[0034] Once the recommendation is written and stored as "pollen" or processing information, the next step is when the meta-document reaches a source that may be interested in recording this comment. A tool at the source includes a tool that extracts and uses this knowledge. An advantage of storing comments with the document in question is that specific recommendation databases are no longer needed; all recommendations are stored with the document in question. When a user receives a particular document, all relevant comments are stored with it, ready for the user to read at his/her leisure.

[0035] Meta-document-based pollenization as described above includes several steps. The first step is to add pollen. Each tool which processes the document for any purpose encodes the result of the processing (pollen) and associated metadata using a namespace, i.e., a set of well-defined properties associated with resources. The tool can use its own namespace or use a shared namespace with other tools or a standard namespace or a combination of those. The more the tool will share metadata with other tools, the more the document can distribute information to various knowledge tools in the "pollenization" phase. Using a dedicated namespace to encode its data is a way for a knowledge

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tool to keep control of its data. Basically, this would prevent other tools even of the same family, to exploit the information.

[0036] In the second step, the meta-document enters a new pollenization space. The meta-document when moved to a different pollenization space triggers a knowledge pollenizer daemon (a specific tool used to enable selective extraction of pollen). A meta-document is sent to a different pollenization space typically when it is sent through email as an attachment or downloaded through a Web Server. The meta-document is then placed in a different software environment and a different knowledge environment of a different organization or of a different department of the same organization.

[0037] Any attempt to save the meta-document locally on a source or environment such as a file system or in a Document Repository will trigger a knowledge pollenizer tool, similar to the way a virus scanning software program is triggered to check files for viruses. This ensures that all processing will be recorded with the meta-document.

[0038] In the third step, the knowledge pollenizer tool parses the meta-document looking for all encoded pollen, identifies the pollen and its source and finds a compatible knowledge tool to receive this piece of pollen. The tool presents a list of all pollen items it found and asks the user who originally tried to open or save the meta-document whether or not the user wants any of the pollen to be inserted in the local knowledge environment. The following screen example gives an idea of the kind of interface that could be available for the knowledge pollenizer. In this example, the Knowledge Pump found three recommendations about the document that can be used to pollenize a Knowledge Pump tool or compatible equivalent. The pollenization can also be performed automatically following a simple user-defined profile.

	KNOWLEDGE POLLENIZER
	Knowledge pollenizer has found relevant knowledge within your document for all these tools. Please select the one you want to pollenize locally.
X	Knowledge Pump - Recommendations (3)
X	MKMS Term Manager - Terms definition (4)
X	MKMS - Translation Memory - Aligned Segments (4)
	Knowledge Profiler - User Profiling Information (2)
X	Knowledge Community - Community Definition (1)
X	DocuShare Metadata (title, abstract, author, etc.) (5)
	_____OK _____Cancel

Claims

1. A meta-document (10) comprising an object conveying document information (12), processing information (14), wherein the processing information comprises information pertaining to processing of the meta-document, and metadata (16) for indexing and retrieving the processing information (14), wherein each time the meta-document is processed, processing information (14) pertaining thereto and associated metadata (16) is stored on the meta-document.
2. A meta-document according to claim 1, wherein processing information comprises each and any of the following:
 - information pertaining to transformation of the document information;
 - a user comment to the document information; and
 - information pertaining to distribution of the meta-document.
3. A meta document according to claim 1 or 2, further comprising a tool, responsive to a processing of the meta-document, for generating and storing processing information and associated metadata on the meta-document.
4. A method of managing a meta-document comprising:
 - creating a meta-document, wherein the meta-document comprises a object conveying document information,

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processing information pertaining to processing of the meta-document, and metadata for indexing and retrieving the processing information;

processing the meta-document comprising generating and storing on the meta-document processing information pertaining thereto and associated metadata;

5 transmitting the meta-document to a source;

parsing the meta-document for extracting stored processing information and metadata; and

wherein each time the meta-document is processed, processing information pertaining thereto and associated metadata is stored on the meta-document.

10 5. The method of claim 4, wherein the meta-document and/or the source each further comprises a tool, responsive to a processing of the meta-document, for generating and storing processing information and associated metadata on the meta-document, wherein the parsing step is performed by the tool.

15 6. The method of claim 5, wherein the meta document and/or the source each further comprises a second tool for parsing and extracting selected processing information stored on the meta document, and further comprising the step of:

parsing the meta document for extracting the selected processing information and associated metadata; and distributing the extracted selected processing information to the source.

20 7. A system for managing document information comprising a meta-document (20) and a plurality of sources (30, 32, 34), each source located at a different location,

25 wherein the meta-document (20) comprises an object conveying document information (25), processing information (21), comprising information pertaining to processing of the meta-document (20), and metadata (24) for indexing and retrieving the processing information (21), wherein each time the meta-document (20) is processed, processing information (21) pertaining thereto and associated metadata (24) is stored on the meta-document (20); and

30 wherein each time the meta-document (20) is received by a source (30, 32, 34), processing information (21) and its associated metadata (24) is parsed and extracted from the meta-document (20) at the source.

8. The system of claim 7, wherein processing information comprises each and any of the following:

information pertaining to transformation of the document information;

35 user comment to the document information; and

information pertaining to distribution of the meta document.

40 9. The system of claim 7 or 8, wherein the meta-document and/or the source each further comprises a tool, responsive to a processing of the meta document, for generating and storing processing information and associated metadata on the meta-document.

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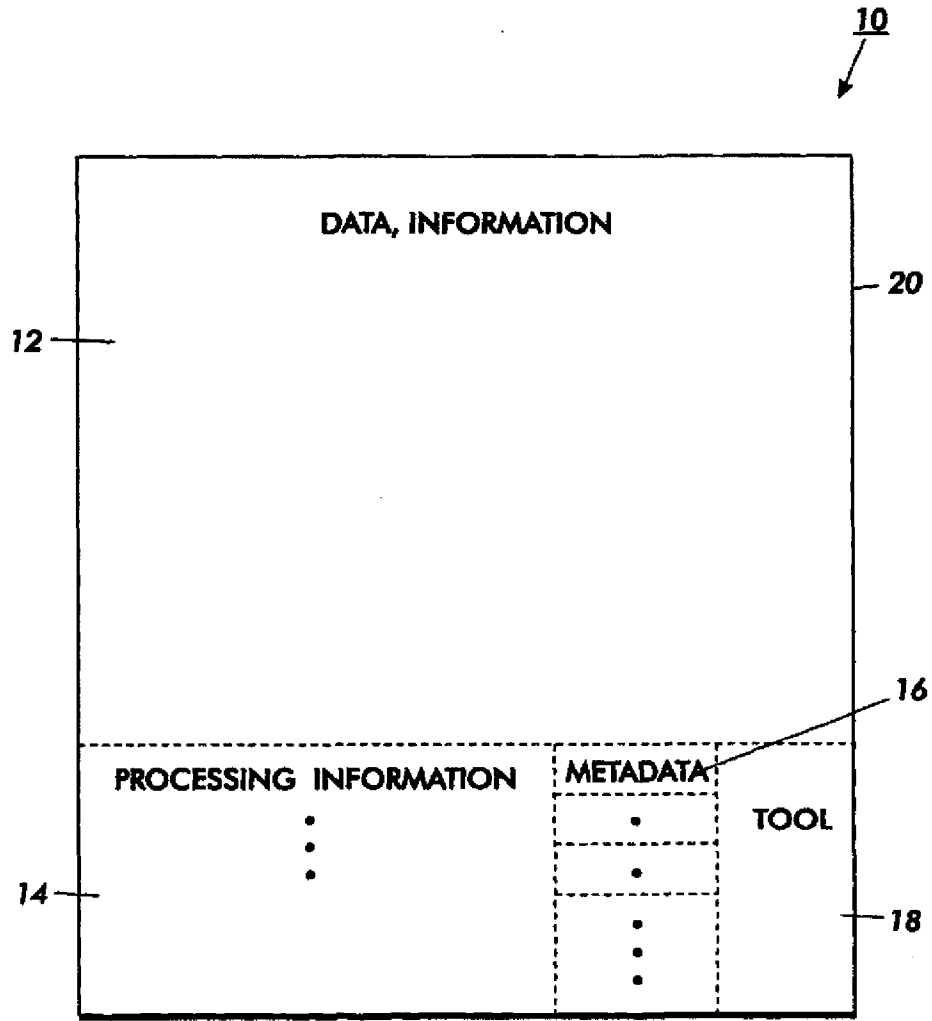


FIG. 1

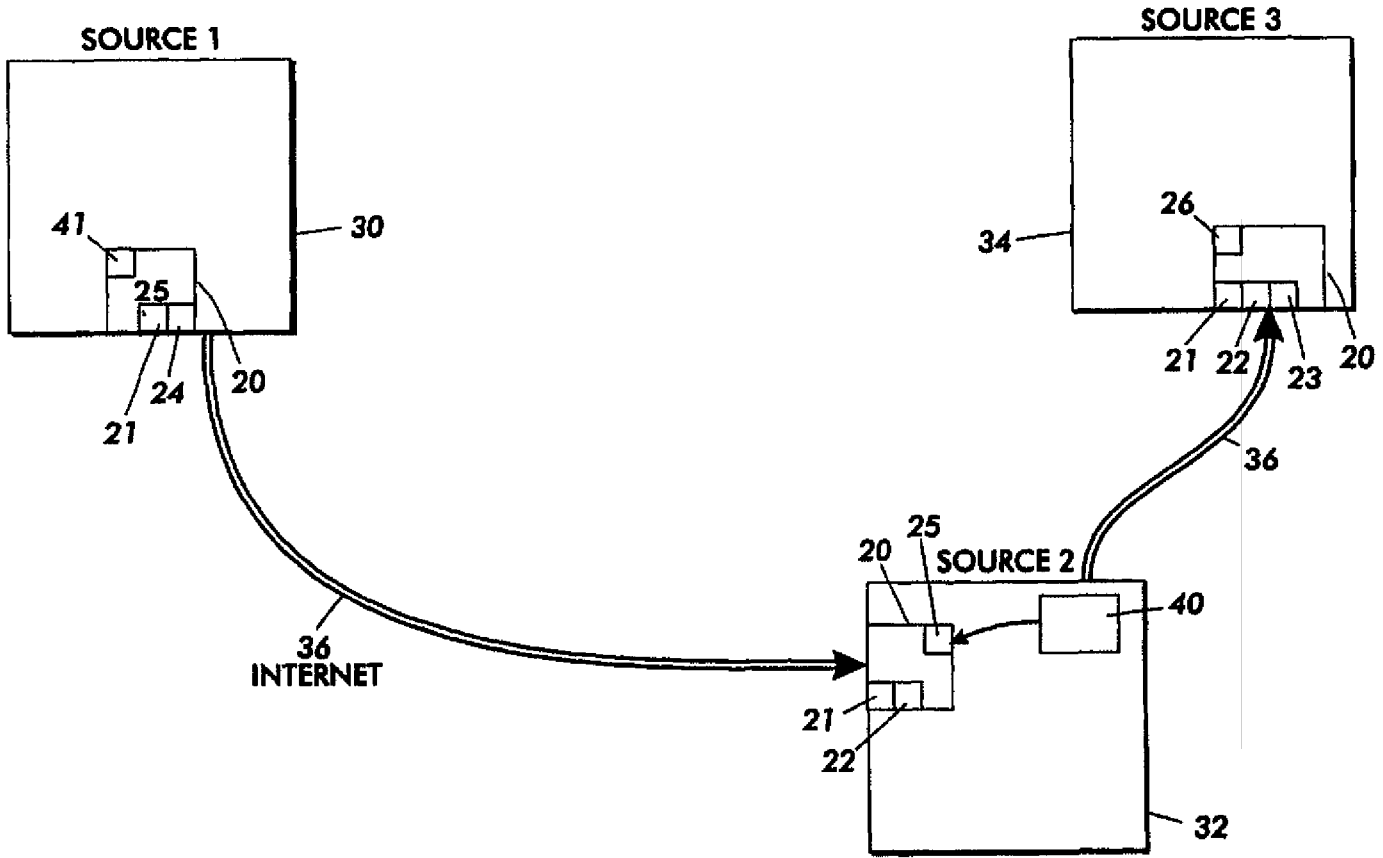


FIG. 2

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<p>1 A. Well, in order to constitute prior 2 art, it must be something that is publicly 3 available. It must be something that was 4 publicly available before the December 11th date 5 of the filing of the provisional patent 6 application.</p> <p>7 And it must be something that is 8 enabling, that would allow a person of ordinary 9 skill in the art to actually make and use the 10 invention without too much problem.</p> <p>11 Q. What is your opinion regarding the 12 references that Dr. Greenberg has cited against 13 the asserted claims of the '761 patent?</p> <p>14 A. So the -- none of those references 15 disclose the elements of the claims of the '761 16 patent.</p> <p>17 Q. Okay. Do you understand there are 18 two different theories out there? One is called 19 anticipation and the other is obviousness?</p> <p>20 A. Mm-hmm.</p> <p>21 Q. Could you just briefly explain 22 what is your understanding of anticipation?</p> <p>23 A. Well, my understanding of 24 anticipation is that means that one reference</p>	<p>1 that the '761 technology was assigned to solve 2 and to make it much easier and more natural to 3 share documents and keep track of users by, you 4 know, using a technique to automatically update 5 metadata.</p> <p>6 Q. Do the references that Dr. 7 Greenberg, that he cited, do they have anything 8 in common?</p> <p>9 A. They have something in common. 10 That is that they are all basically document 11 management systems.</p> <p>12 They have nothing to do really 13 with the users. They're all about documents and 14 they all use this sort of hierarchical storage 15 system.</p> <p>16 So they disclose basically the 17 same problem that the '761 technology was 18 designed to solve. All these document 19 management systems are centered around 20 documents. They keep track of documents. They 21 keep the histories for documents.</p> <p>22 The '761 technology is all about 23 users. It's all centered around users. It 24 creates workspaces for users.</p>
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<p>1 has to disclose each and every element of the 2 patent of the invention in order to invalidate 3 it.</p> <p>4 And obviousness means that -- that 5 several different things can be combined if 6 there's some reason to think that they would be 7 used together. They could be combined to render 8 the invention just something that would be 9 obvious.</p> <p>10 Q. Well, why don't we turn to the 11 tutorial slide that you had earlier in the case.</p> <p>12 A. Okay.</p> <p>13 Q. And looking at that, can you 14 explain what problems the '761 patent sought to 15 solve?</p> <p>16 A. Right. Well, I think you recall 17 maybe from the tutorial that we were talking 18 about this kind of hierarchical arrangement where 19 the user has to, you know, name a folder, you 20 know, create a folder, decide how to name it and 21 then to store data. The user has to then sort 22 of figure out, you know, why each individual 23 item should go in this hierarchy, 24 So that is one of the problems</p>	<p>1 And it tracks users and what users 2 do. So it's just a some completely different 3 basis on which to build a system.</p> <p>4 Q. Why don't we take a look at the 5 abstract of the patent.</p> <p>6 A. Yes.</p> <p>7 Q. Is there something in the abstract 8 information one of ordinary skill in the art, 9 that that's what the invention of the '761 10 patent is?</p> <p>11 A. Right. Absolutely.</p> <p>12 If we start certain notes here, 13 the highest contextual assumption is that there 14 exists an entity that consists of one or more 15 users. What that basically means is that there 16 are -- everything is centered around users. 17 Right.</p> <p>18 There are -- there always has to 19 be a user, an entity that represents one or more 20 users as part of the system. Everything else is 21 built around that.</p> <p>22 And that's what makes this really 23 very different from the document management, 24 basically document management systems that are</p>

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<p>1 cited as prior art. 2 Q. Let's turn to the prior art. 3 Let's go to the iManage User Reference Manual, 4 which is DTX 1010. Now, what is your 5 understanding of what this user reference manual 6 is? 7 A. Well, it's a manual intended for 8 end users to -- you know, people who want to use 9 the iManage DeskSite system would refer to this 10 to figure out, you know, how to use it. 11 Q. And does it actually tell you how 12 to build the iManage software? 13 A. Well, no, not at all. Actually 14 it's as if, you know, we all have owners manuals 15 for our cars that tell you, Here's how you 16 operate the automatic transmission. For 17 example, that tells me absolutely nothing about 18 how to build an automatic transmission. 19 It's just -- it just doesn't 20 disclose anything about that. So in the same 21 way a user manual might tell me how to engage 22 the functionality of the software, but it 23 doesn't tell me anything about how to build it. 24 Q. All right. And within the four</p>	<p>1 A. Well, so the -- you mean the 2 difference in nature of the technology that's 3 described? 4 Q. Correct. 5 A. So the iManage DeskSite describes 6 basically a document management system as we've 7 been discussing. So it provides a way for an 8 organization using a local network to kind of 9 store documents in a central place and access 10 those documents, have secure access. Probably 11 has -- you know, has passwords and so on. 12 But it's basically just a way of 13 creating, as you see on the left here, one big 14 document repository system that people can put 15 their documents into. And other people, if they 16 have the right provisions, can pull them out. 17 So that's the basic technology that's disclosed 18 there. 19 Q. When you refer to one big document 20 system and you're pointing with your pointer, 21 just for the record, are you referring to the 22 traditional hierarchical system? 23 A. Yes, I am. I'm referring to the 24 traditional hierarchical system from the slide,</p>
<p>Page 1793</p> <p>1 corners of this document we've marked as DTX 2 1010, does it give you any information for one 3 of ordinary skill in the art to be able to build 4 the software in all the components that it might 5 reference? 6 A. No, it doesn't. It doesn't say 7 anything about how it's designed, what the 8 structure looks like. It simply tells us how to 9 use it once it's there. 10 Q. Do you know whether this iManage 11 manual, which is marked as DTX 1010 whether that 12 was publicly available in 2001 or 2002? 13 A. I have no idea. 14 Q. Now, do you have an opinion as to 15 whether the iManage User Reference Manual is 16 prior art to the '761 patent? 17 A. Yeah. Because it doesn't 18 disclose, you know, how to make and use this 19 invention, I would say it's not prior art. It 20 doesn't qualify as prior art. 21 Q. What is the difference between the 22 iManage User Manual and the information 23 disclosed within the four corners of that 24 document and the invention of the '761 patent?</p>	<p>Page 1795</p> <p>1 from the tutorial. 2 Q. Why don't we take a look at 3 iManage Manual and go to Page 4. So could you 4 explain to us, Dr. Herbsleb, what are we looking 5 at here? 6 A. This is an example. Exactly an 7 example of what I was talking about is that this 8 is how iManage, you know, according to its own 9 documentation, stores documents. 10 We see them put into hierarchy. 11 Someone had to decide that this folder called 12 corporate folder, called personal pages, public 13 pages and then people name their pages and put 14 them into folders. So this is very much the 15 hierarchical storage system that is, you know, 16 part of the problem that the '761 was trying to 17 overcome. 18 Q. Is this just one example of the 19 iManage Manual that provides you with this 20 example? 21 A. Yes. If you look through it, you 22 find many examples that are similar showing the 23 hierarchical storage system. 24 Q. Why don't we take a look at</p>

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<p>1 another portion on Page 83. 2 I believe it's Figure 3.26. 3 A. Mm-hmm. 4 Q. Can you explain: What are we 5 looking at here? 6 A. Well, I mean, the caption makes 7 pretty clear what we're looking at is a document 8 history. So this is showing that for some 9 particular document, these are the things that 10 happen to that document. 11 All right. So this system is very 12 document central. So you can see here somebody 13 checks in the documents. They modified the 14 documents. 15 Someone checked it out. Somebody 16 created a different version of the document. 17 It just keeps track of everything 18 that happens to that document. 19 Q. Well, does this figure show that 20 the iManage manage system or the iManage -- 21 strike that. Does this figure show that in the 22 iManage User Manual, there is tracking of 23 documents? 24 A. Yes. This sort of tracks</p>	<p>1 part of the technology. It doesn't provide, you 2 know, environments places for people to do work 3 with their tools and allow people to move from 4 one workspace to another. There is none of that 5 in the technology. 6 Q. Okay. Well, let's turn to Claim 1 7 of the '761 patent. 8 A. Okay. 9 Q. And take a look at that. 10 Unfortunately, since we 11 shorthanded, actually could we turn to the other 12 slide that we were referring to? 13 Since we shorthanded the elements 14 here, I think I can refer to them as the context 15 component of Claim 1. We know what we're 16 talking about. 17 So in your opinion, does the 18 iManage User Reference Manual disclose the 19 context component element of Claim 1? 20 A. No, not at all. We -- again, we 21 have to be very careful what we mean by context 22 here because that's a word that gets used in 23 many different ways. And what we have to use 24 here is we have to use the construction that's</p>
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<p>1 documents and it tracks what happens to 2 documents. Sure. 3 Q. Does this figure show in the 4 iManage User Manual that there's tracking of 5 users? 6 A. No, absolutely not. There's no 7 view that you can go to. 8 There's no view slots anywhere in 9 the manual where you can sort of pull up some 10 user and see what a user has done. That's not 11 part of this technology. 12 It's all completely document 13 central. And as you can see here, these are all 14 entries of here of documents. 15 So it doesn't track users at all. 16 Q. Is there anything in the entirety 17 of the iManage User Reference Manual that 18 discloses tracking of users? 19 A. No, not that I could identify. I 20 see nothing in there that tracks users. 21 Q. Is there anything in the iManage 22 User Reference Manual that talks about 23 workspace? 24 A. No, it does not have workspaces as</p>	<p>1 in the claim construction order, which says that 2 context means environment. 3 Okay. So the software to provide 4 a context and have a context component has to 5 provide an environment for a workspace for the 6 user. 7 And the technology described, 8 iManage Manual just does not do that. So it 9 does not have a context component, period. 10 Q. It doesn't have the entirety of 11 the first element? 12 A. No. It just -- that's not there. 13 There is no context component. 14 Q. Let's turn to the tracking 15 component. Does the iManage User Reference 16 Manual use -- disclose that tracking component 17 of Claim 1? 18 A. No. Again, so if you see -- if 19 you look at the tracking component, this is 20 tracking a user changing a user from one context 21 or environment or workspace to another context, 22 which has to mean an environment or workspace 23 All right. And then updating the 24 stored metadata based on that tracking</p>

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<p>1 information. Well, this doesn't have any part 2 of this.</p>	<p>1 is, you know, the predominant mode of operation 2 appears to be over a local network.</p>
<p>3 This doesn't have workspaces. It 4 doesn't track users. It doesn't update metadata 5 based on a change from one workspace to another. 6 It just doesn't have any of that.</p>	<p>3 There is one small reference. I 4 think we may have it here to something web 5 based.</p>
<p>7 Q. Okay. Well, let's take a look at 8 the dependent claims, which are 4 and 7. Does 9 the iManage User Reference Manual disclose the 10 other elements of Claim 4 and 7?</p>	<p>6 Q. Right. If we could turn to the 7 iManage User Manual and I believe it was AUTO 8 275.</p>
<p>11 A. Right. So this is a dependent 12 claim. So if Claim 1 is valid, I understand 13 that these are also valid.</p>	<p>9 A. Yes, if we focus in on the top 10 here. This is about the only reference that I 11 can recall in this manual to anything that's web 12 like.</p>
<p>14 But it does not disclose anything 15 about relationship of a user to context 16 information of a relationship between a user and 17 at least one of an application, application 18 data, and user environment. It does not 19 disclose data created in the first context 20 associated with data created in the second 21 context.</p>	<p>13 So it's saying up here that you 14 can -- if you're set up correctly, send a 15 document by email or you can send a link by 16 email, and then someone can access your document 17 through a URL, which would be a web-based access 18 but. What this is saying is your system must 19 include an iManage worksite web component 20 server.</p>
<p>22 Well, as I mentioned, it doesn't 23 have, you know, context in the software. So 24 this can't satisfy Claim 7.</p>	<p>21 Well, that's not described 22 anywhere in this manual. This is some other 23 product apparently that has some kind of web 24 functionality. We don't really know, you know,</p>
Page 1801	Page 1803
<p>1 Q. Is it your opinion that the 2 iManage User Reference Manual does not 3 anticipate Claims 1, 4 and 7 of the '761 patent?</p>	<p>1 what. 2 We just have this kind of very 3 oblique sort of reference. So there's some 4 mention of web, but it's for a different 5 product. It's not even disclosed in this 6 manual.</p>
<p>4 A. It's my opinion it does not 5 anticipate any of those claims.</p>	<p>7 Q. Does the iManage User Reference 8 teach a user environment?</p>
<p>6 Q. Okay. Let's take a look now at 7 Claim 9. 8 I believe we had already discussed 9 the difference with Claim 1 and Claim 9 as it 10 related to the web-based computing platform; 11 right.</p>	<p>9 A. No. There is just nothing like 10 the user environment in this system. It's just 11 all about documents.</p>
<p>12 A. Right. 13 Q. Okay. Is there anything -- I'm 14 sorry.</p>	<p>12 Q. And does it disclose anything 13 about metadata about the user environment? 14 A. Well, no. No.</p>
<p>15 Were you going to -- 16 A. Elements one and two are basically 17 the context component. Three and four are 18 basically the tracking component. And what's 19 new here is web-based computing platform.</p>	<p>15 Having no user environment, it 16 also has no metadata about user environments. 17 Q. Okay. Why don't we take a look at 18 Claims 11 and 16, which are the dependent claims 19 to Claim 9.</p>
<p>20 And it's a method of managing, 21 right, method of managing data using a web-based 22 computing platform.</p>	<p>20 A. Right. So Claim 11, as you see 21 it, it talks about plurality of users accessing 22 a content from an associated plurality of user 23 environments. And again, having no user 24 environments, you don't -- you can't have a</p>
<p>23 Well, there's no indication in 24 this manual that product is web based. There</p>	<p>21 environments, you don't -- you can't have a</p>

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1 plurality of user environments.	1 User Reference Manual, just in case I didn't ask
2 So I don't think it discloses	2 earlier?
3 Claim 11.	3 A. Claim 21 you mean?
4 Q. And how about Claim 16?	4 Q. Did I say -- sorry, 11. Yes.
5 A. Well, no. There's really nothing	5 A. So that the iManage manual does
6 at all in there about portable wireless devices	6 not disclose any of the elements, I believe, of
7 or even about having kinds of data like	7 Claim 11.
8 voicemail that one typically accesses over a	8 Q. Let's turn to Claim 13.
9 portable wireless device. There's no mention of	9 Does the iManage User Reference
10 it there.	10 Manual disclose any of the elements in Claim 13?
11 Q. What is your opinion as to whether	11 A. No, it does not. Again, we have a
12 or not the iManage User Reference Manual	12 context component and we have a tracking
13 anticipates Claim 9, 11 and 16?	13 component. And for all of the reasons I've
14 A. It's my opinion it does not	14 mentioned before, it has neither of those.
15 anticipate Claims 9, 11 and 16.	15 And so it does not disclose any of
16 Q. Okay. Claim 21.	16 the elements of Claim 13.
17 Is Claim 21 valid or what is your	17 Q. And if we look at the dependent
18 opinion with respect to whether or not Claim 21	18 claims on Claim 13, which are Claim 25, 31 and
19 is anticipated by the iManage User Reference	19 32, are those claims -- strike that.
20 Manual?	20 Are Claims 25, 31 and 32
21 A. It's my opinion it's not	21 anticipated by the iManage User Reference
22 anticipated by the iManage -- I'm forgetting the	22 Manual?
23 name of this thing -- iManage Reference User	23 A. No, they're not, because these are
24 Manual. Sorry.	24 claims dependent on Claim 23. And so Claim 13
Page 1805	Page 1807
1 I think it's not anticipated by	1 is not anticipated.
2 that.	2 None of these can be anticipated.
3 Again, so I think each one of	3 They're simply making that claim more specific
4 these elements mentions user workspace. They're	4 So, no, none of these is disclosed by the
5 first element user workspace in the second	5 iManage User Reference Manual.
6 element. User workspace in the third element.	6 Q. We're almost done talking about
7 User workspace in the fourth	7 this one, so we'll -- if you look at Claim 25,
8 element. User workspace in the fifth element.	8 there's a reference to the first user workspace.
9 There's no user workspace here.	9 Do you see that?
10 Also, it talks about, you know,	10 A. Mm-hmm.
11 web-based computing platform. There's nothing	11 Q. Is that disclosed anywhere in the
12 in there to indicate this particular product	12 iManage User Manual?
13 whose manual we have in front of us is web	13 A. No. There are no user workspaces
14 based. So it doesn't disclose any of these	14 in that technology.
15 elements.	15 Q. Okay. So is it your opinion that
16 Q. And for the reasons that you've	16 the asserted claims is valid over the iManage
17 already testified previously with respect to the	17 User Reference Manual?
18 other claims and that also apply with respect to	18 A. My opinion is that all these
19 Claim 1 --	19 references are valid as against the iManage User
20 A. Correct.	20 Reference Manual.
21 Q. -- those apply here?	21 Q. Let's turn now to the Hubert
22 A. Right.	22 reference --
23 Q. So what is your opinion with	23 A. Okay.
24 respect to Claim 13 as it relates to the iManage	24 Q. -- which is DTX 922. Can you

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<p>1 explain to us what does Hubert disclose?</p> <p>2 A. Hubert discloses something that</p> <p>3 they call a meta-document. Okay. So now a</p> <p>4 meta-document is like kind of like a regular</p> <p>5 document with some extra stuff.</p> <p>6 And the extra stuff that goes</p> <p>7 along with it is kind of history of everything</p> <p>8 that's happened to that document. So if the</p> <p>9 document is a report, if that report gets</p> <p>10 translated from English to Spanish.</p> <p>11 That would be recorded in the</p> <p>12 meta-document. If it gets sent from one person</p> <p>13 to another, that would be reported in the</p> <p>14 meta-document of the document.</p> <p>15 All right. So it's basically you</p> <p>16 can think of what you would usually think about,</p> <p>17 a document plus some more information about, you</p> <p>18 know, what's happened to that document as it's</p> <p>19 moved from one place to another, been edited,</p> <p>20 been shipped around, so on. That's what it is.</p> <p>21 Q. If you look at the title, which I</p> <p>22 believe is Line 54, enlarge that. It says</p> <p>23 meta-documents and method of managing them.</p> <p>24 A. Mm-hmm.</p>	<p>1 application, if you can see it?</p> <p>2 A. Right. So it's talking about what</p> <p>3 is included in the meta-document. So we have</p> <p>4 what it calls the object-conveying document</p> <p>5 information. So that's just like a regular</p> <p>6 document.</p> <p>7 All right. That's sort of a</p> <p>8 document part of the meta-document. It includes</p> <p>9 processing information pertaining to processing</p> <p>10 of the meta-document and metadata for indexing</p> <p>11 and retrieving the processing information.</p> <p>12 It includes the fact that</p> <p>13 meta-document was processed by whom and any</p> <p>14 relevant tool used in the result of the</p> <p>15 processing. So, in other words, if the document</p> <p>16 gets sent from one person to another, that gets</p> <p>17 recorded in the processing information.</p> <p>18 If you do something to it like I</p> <p>19 suppose even spell check it, or translate it or</p> <p>20 do anything like that, that gets recorded in the</p> <p>21 processing information, and so on. So that's</p> <p>22 the processing part.</p> <p>23 Each time processing information</p> <p>24 is recorded on the document, appropriate</p>
<p>Page 1809</p> <p>1 Q. Is that a good description of</p> <p>2 what's in the Hubert reference here?</p> <p>3 A. It is. It's -- again, it's very</p> <p>4 document central meaning that's what it's about.</p> <p>5 It's documents. It actually adds to the notion,</p> <p>6 it's sort of a fancy document. A document plus</p> <p>7 a little bit more information.</p> <p>8 Q. How's that different from the</p> <p>9 invention of the '761 patent?</p> <p>10 A. Well, the '761 patent is based</p> <p>11 around users and users' workspaces, you know,</p> <p>12 having environments for users and tracking users</p> <p>13 when I go from one environment to another</p> <p>14 environment and so on.</p> <p>15 This is just about these</p> <p>16 meta-documents. It doesn't have any sense of</p> <p>17 users doing anything except it's recorded in</p> <p>18 history of a document. So again it's just sort</p> <p>19 of keeping a document history.</p> <p>20 Q. Okay. Maybe we can take a look at</p> <p>21 Paragraph 11 of this reference.</p> <p>22 A. Mm-hmm.</p> <p>23 Q. Can you just explain what this</p> <p>24 describes here in Paragraph 11 of the Hubert</p>	<p>Page 1811</p> <p>1 metadata index and retrieving the processing</p> <p>2 information is also stored on the meta-document.</p> <p>3 So it keeps its own history in the metadata.</p> <p>4 That's basically what this is saying.</p> <p>5 Q. Is there anything about the users</p> <p>6 here?</p> <p>7 A. There's absolutely nothing about a</p> <p>8 context, or environment or moving from one</p> <p>9 context to another, tracking users. I mean,</p> <p>10 it's just not centered around users. It's</p> <p>11 centered around these meta-documents.</p> <p>12 Q. So, in your opinion, is it totally</p> <p>13 different than the '761 patent?</p> <p>14 A. It's completely different.</p> <p>15 Q. Okay. Are there figures in this</p> <p>16 application, this Hubert reference that explain</p> <p>17 what the Hubert reference is about?</p> <p>18 A. Yeah. I think there are two</p> <p>19 figures as I recall.</p> <p>20 Yeah. This is the first one.</p> <p>21 This is just sort of showing what</p> <p>22 we just explained a second ago that, you know,</p> <p>23 there's data information. This is basically the</p> <p>24 document, a regular document.</p>

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<p>1 And down here, this sort of tells 2 you what processing has happened in the 3 document. And that's stored index to the 4 metadata, so that you can, you know, find that 5 if you want to.</p>	<p>1 Q. Is there anything in the Hubert 2 reference at all that talks about a user moving 3 from one environment to another? 4 A. No. No, there's nothing at all 5 about that.</p>
<p>6 So that's just, you know, storing 7 the history. The tool part is actually it's an 8 optional part. It's a little bit of code that 9 you can include if you want so the document 10 updates its own history.</p>	<p>6 Q. Is it all about meta-documents? 7 A. It's completely about 8 meta-documents. It is where the documents 9 entered.</p>
<p>11 Basically that's what that tool 12 is. It's just something that -- oh, I just -- 13 it just notices that there was a translation 14 that happened, so it updates the metadata to 15 record that.</p>	<p>10 Q. In your opinion, is emailing a 11 document from, let's say, source one to source 12 two, the same thing as the on-line collaboration 13 tool of the '761 patent? 14 A. No. This is not sort of an 15 on-line system.</p>
<p>16 Q. Why don't we take a look at Figure 17 2, and if we can explain what that shows?</p>	<p>16 It's just a document that could be 17 sent over the internet. But just as a textual 18 document is not an on-line document, it's just a 19 document that you can send through email.</p>
<p>18 A. Yeah. Well, this is how a 19 meta-document would go from one person to 20 another.</p>	<p>20 Again, this is just sort of a 21 fancier document that you could send through 22 email. It's not an on-line collaboration tool.</p>
<p>21 So source one, that's a person 22 whose -- here's a person that has this 23 meta-document.</p>	<p>21 Q. Let's take a look now at the 22 claims and walk through these elements. So in</p>
<p>24 And it shows this link which says</p>	<p>24</p>
Page 1813	Page 1815
<p>1 internet. The description in the patent itself 2 says the usual way of transmitting these would 3 be as an email attachment. Okay.</p>	<p>1 Claim 1, does the Hubert reference disclose the 2 context component element of Claim 1? 3 A. No, not at all, for all the 4 reasons I've already mentioned. There just is 5 no context.</p>
<p>6 So you would take this 7 meta-document. You would attach it to an email 8 and you would send it via an email to some other 9 person who might then do something. And if they 10 do something, that would be recorded as part of 11 this document history as well.</p>	<p>6 In the sense of an environment or 7 user environment, there's nothing like that in 8 the system. It's also not a network-based 9 system.</p>
<p>10 Q. And that source two that you just 11 pointed to?</p>	<p>10 It's just a document. There's no 11 sense of being in a network.</p>
<p>12 A. Mm-hmm. So source two -- sorry. 13 And they might do something to it and then 14 extend along to source three.</p>	<p>12 As far as the tracking component, 13 element two is concerned, again, it doesn't 14 track users doing anything. It can't track 15 users from first context to the second context 16 because the technology doesn't provide user 17 environments, or contexts or people.</p>
<p>15 That person might also do 16 something to it. And as it goes through this 17 chain being sent along through email, it just 18 keeps track of what's happened to it.</p>	<p>15 So it doesn't disclose any of 16 those things.</p>
<p>19 Q. Is there anything in this figure 20 that shows a user moving from one environment to 21 another?</p>	<p>19 Q. For all the reasons we have 20 already talked about, is it your opinion that 21 the Hubert reference does not anticipate Claim 1 22 of the '761 patent?</p>
<p>22 A. No. No, not at all.</p>	<p>22 A. The Hubert reference does not</p>
<p>23 I mean, it's just a document being 24 sent from one user to the next.</p>	<p>23</p>

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1 anticipate Claim I of the '761 patent.	1 whether or not the Hubert reference anticipates
2 Q. Let's take a look at Claims 4 and	2 Claim 11 and 16?
3 7. How about these claims, what is your opinion	3 A. Right. So once again, it talks
4 with respect to these claims?	4 about associated plurality of user environments.
5 A. Well, these claims are, you know,	5 Well, there are no user environments in a
6 dependent on Claim I. So since I believe Claim	6 meta-document.
7 one is valid, those claims are also valid.	7 And this talks about -- Claim 16
8 But, again, there's no user	8 talks about further comprising accessing the
9 environment. Again, there's no context, you	9 user environment via a portable wireless device.
10 know.	10 There's no mention of anything like that.
11 So you can't have data created in	11 Q. So is it your opinion that Claims
12 one context associated with data in the second	12 9, 11 and 16 are valid over the Hubert
13 context. So because there is no context in the	13 reference?
14 second context.	14 A. Yes. It's my opinion that 9, 11
15 Q. When you say because Claim I is	15 and 16 are valid as against the Hubert
16 valid, it's also your opinion that these	16 reference.
17 dependent claims are valid, is that because they	17 Q. Let's take a look at Claim 21.
18 don't have the elements of the system of Claim I	18 A. Mm-hmm.
19 that starts out on these dependent claims here?	19 Q. Is Claim 21 valid over the Hubert
20 A. Yes. They don't have the elements	20 reference?
21 of the system under Claim I.	21 A. Yes, in my opinion, Claim 21 is
22 Q. Let's turn to Claim 9.	22 valid over the Hubert reference. Once again,
23 Do you have an opinion as to	23 this is the one that it pointed out, let's say,
24 whether or not the Hubert reference anticipates	24 user workspace is mentioned in each element of
Page 1817	Page 1819
1 Claim 9?	1 this claim. And the meta-document does not have
2 A. Right. Well, yes, I do. I am	2 any user workspaces in it.
3 starting to feel like a broken record up here,	3 It does not disclose any user
4 but for the same reasons that you've been	4 workspaces; therefore, it doesn't really
5 describing, there really is no context	5 anticipate any of the elements of Claim 21.
6 component. There really is no tracking	6 Q. Let's turn to Claim 23?
7 component for exactly the reasons mentioned	7 A. Okay.
8 before.	8 Q. Do you have an opinion with
9 It does not anticipate Claim 9 or	9 respect to Claim 23 as to whether or not it's
10 even any of the elements of Claim I.	10 anticipated by the Hubert reference?
11 Q. What about the web-based computing	11 A. Well, again, you know, this is
12 platform, which I believe is one of the	12 basically -- the first element is the context
13 differences we've identified?	13 component. The second element is the tracking
14 A. Yeah. There's nothing like a	14 component.
15 web-based computing platform. A meta-document	15 And for all the same reasons that
16 as I said, is just a document. It's independent	16 I mentioned repeatedly, there is no context
17 of a network.	17 component. There is no tracking component.
18 It certainly doesn't necessarily	18 There is no web-based server
19 live on the web. It's not a platform. It	19 involved in this technology. For all of these
20 doesn't fit that at all.	20 reasons, it does not anticipate either of the
21 Q. So let's turn to the dependent	21 elements of Claim 23.
22 Claims 11 and 16.	22 Q. Are any of the elements of Claim
23 A. Mm-hmm.	23 23 present in the Hubert reference?
24 Q. And do you have an opinion as to	24 A. No. None of the elements of Claim

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<p>1 23 are present in the Hubert reference?</p> <p>2 Q. Would that be true of the other</p> <p>3 independent claims of the '761 patent?</p> <p>4 A. That is true of all of the</p> <p>5 independent claims of the '761 patent.</p> <p>6 Q. Can we take a look at the</p> <p>7 dependent claims, which are 25, 31, 32. Do you</p> <p>8 have an opinion with respect to whether the</p> <p>9 Hubert reference anticipates these claims?</p> <p>10 A. Well, since it does not anticipate</p> <p>11 Claim 23, these claims are all dependent on</p> <p>12 Claim 23. To simply make it more specific, the</p> <p>13 Hubert reference does not anticipate any of</p> <p>14 these claims.</p> <p>15 Q. Now, in the Hubert reference,</p> <p>16 there's the word -- the use of the word context.</p> <p>17 Is it used in the same way as the '761 patent?</p> <p>18 A. No. It's not used in the same way</p> <p>19 at all. If we follow the claim construction</p> <p>20 order, then context means environment.</p> <p>21 And in the Judge's description or</p> <p>22 discussion of how that terminology was settled,</p> <p>23 there's some mention of the user environment is</p> <p>24 part of an environment.</p>	<p>1 know, do those tests. So what this Swartz</p> <p>2 invention does, the idea is that you first start</p> <p>3 out by creating a very detailed kind of work</p> <p>4 flow of all the steps that you need to</p> <p>5 undertake, so that you will be sure that you</p> <p>6 comply with regulations. Okay.</p> <p>7 And then it sort of keeps track of</p> <p>8 everything that gets done. So if I do a</p> <p>9 statistical analysis, it sort of grabs the data</p> <p>10 and the analysis and plugs it into this audit</p> <p>11 trail. Right.</p> <p>12 If someone writes a document, or</p> <p>13 does a sign off, or does a review or whatever it</p> <p>14 is that the regulations require, this second</p> <p>15 technology sort of takes the results of all</p> <p>16 those things, integrates them into an audit</p> <p>17 trail.</p> <p>18 So when it gets to the end, you</p> <p>19 not only had to report, but you can establish</p> <p>20 exactly where everything came from. And so you</p> <p>21 can prove through that audit trail that you've</p> <p>22 complied with the regulations.</p> <p>23 Q. Are there some figures that show</p> <p>24 what's disclosed here in this source reference?</p>
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<p>1 User environment is very much what</p> <p>2 we would call a workspace. It's where the user</p> <p>3 lives, does things, has tools for the user,</p> <p>4 keeps the user's stuff.</p> <p>5 And the term context is not used</p> <p>6 at all in that way in the Hubert reference.</p> <p>7 Q. I think we covered this. Is it</p> <p>8 your opinion that Hubert doesn't anticipate any</p> <p>9 of the asserted claims of the '761 patent?</p> <p>10 A. Yes. It's my opinion that Hubert</p> <p>11 does not anticipate any of the claims in the</p> <p>12 '761 patent.</p> <p>13 Q. Let's move to Swartz, which is PTX</p> <p>14 919. What does the Swartz reference cover?</p> <p>15 A. The Swartz reference, it discloses</p> <p>16 a system that creates audit trail or regulatory</p> <p>17 compliance purposes. So to give a little bit</p> <p>18 more description, the idea is that if you want</p> <p>19 to show that your work complies with regulatory</p> <p>20 requirements, let's say, for example, you're</p> <p>21 doing pharmaceutical tests. You're testing a</p> <p>22 drug or something.</p> <p>23 There are very detailed</p> <p>24 regulations that dictate how you have to, you</p>	<p>1 A. Yeah. I think we can move forward</p> <p>2 and --</p> <p>3 Q. Can we take a look at Figure 7?</p> <p>4 A. Yeah. This is one of the figures.</p> <p>5 So, again, here we're dealing with</p> <p>6 documents and we're also dealing with data. And</p> <p>7 what this system is doing is kind of integrating</p> <p>8 them and weaving them together into an audit</p> <p>9 trail.</p> <p>10 As you can see, the way the data's</p> <p>11 stored here is just, you know, just like the</p> <p>12 other diagrams that we've seen. Again, folders</p> <p>13 have to be named. Individual items have to be</p> <p>14 placed into folders and that's how the data is</p> <p>15 organized.</p> <p>16 All right. So you have clinical</p> <p>17 reports. Then you have to decide, okay, here</p> <p>18 are the reports that I want to put into that</p> <p>19 folder. And, you know, again, we have sort of</p> <p>20 storage in the way that creates all the problems</p> <p>21 that we talked about for people trying to share</p> <p>22 documents.</p> <p>23 All right. And this is a problem</p> <p>24 that the '761 is trying to overcome.</p>

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<p>1 Q. Su when you referred to the other 2 diagrams just earlier in your testimony, were 3 you referring to the hierarchical structure?</p>	<p>1 sits in the middle as middleware and collects 2 all these different operations that happen as 3 this process moves forward to create the audit</p>
<p>4 A. Yes. Sorry. 5 I was. I was referring to the 6 hierarchical structure of files and folders.</p>	<p>4 trail. Su here this is just showing sitting in 5 the middle. It's a piece of middleware that 6 kind of gathers up all the stuff that is 7 stepping in the application and creates the 8 audit trail.</p>
<p>7 Q. Okay. Why don't we turn to Figure 8 11 of the Swartz patent, which that's DTX 109.</p>	<p>9 Q. Why don't we take a look -- I 10 think there's a description in the patent in 11 Figure 2A. Take a look at Column 9, Lines 5 12 through 8.</p>
<p>9 A. Yes. 10 Q. So now what does this show us?</p>	<p>13 Yes? 14 A. Mm-hmm.</p>
<p>11 A. This is, again, very much the same 12 kind of thing showing how data gets stored in 13 the system, showing files and folders that have 14 to be named. And then you sort of choose where 15 the different -- different files go in this 16 hierarchical system.</p>	<p>15 Q. So can you explain what we are 16 looking at here in Lines 5 through 8? 17 A. Right. So the way this works 18 actually is this middleware sits above the 19 operating system. Right.</p>
<p>17 Q. Does what's disclosed in Swartz 18 care about the users?</p>	<p>20 And the application is run sort 21 of, if you will, on top of the middleware, so 22 the DataDocket kind of can intercept the data 23 that's exchanged and facilitate the exchange of 24 data between the applications so that you can</p>
<p>19 A. Nu, not at all. It doesn't care 20 about users. It's centered about all the 21 operations necessary to get, you know, improved 22 regulatory compliance. So that's what keeps 23 track of -- it keeps track of all those steps 24 that go into the creation of this report</p>	
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<p>1 documenting exactly how they were taken, so that 2 you can prove at the end that you track them the 3 right way.</p>	<p>1 capture them and integrate them. 2 It has an integration component. 3 It kind of weaves them together to create this 4 trail of what happened.</p>
<p>4 It doesn't care about users. 5 There's no workspace.</p>	<p>5 Q. Is the primary idea behind the 6 Swartz reference to manage the flow of raw 7 source data to a final report?</p>
<p>6 There's no moving of a user from 7 one workspace to another workspace. It doesn't 8 care about users.</p>	<p>8 A. Exactly. It's not at all about 9 collaboration or sharing.</p>
<p>9 Q. Why don't we take a look at Figure 10 2A?</p>	<p>10 It's all about sort of pulling 11 things together into an audit trail of documents 12 and final report.</p>
<p>11 A. Mm-hmm.</p>	<p>13 Q. I think there's some places that 14 it's described here in the patent. If we could 15 turn to Column 8, --</p>
<p>12 Q. What does this show us? 13 A. Well, this is again showing that 14 the DataDocket Software, this is the Swartz 15 technology, is sitting in the middle and it's 16 interacting with some number of applications you 17 might have. You know, some of these -- 18 according to the wording in the patent, some of 19 these regulatory compliance cases have thousands 20 of documents and thousands of statistical 21 analyses. And you might have any number of 22 applications that you have to use to sort of 23 create that document.</p>	<p>16 A. Mm-hmm. 17 Q. -- lines 49 through 56. So could 18 you explain, you know, what is being described 19 here? 20 A. I think we're starting at the line 21 at a first or basic level, it automates the 22 process of transferring data analysis reports to 23 a document management system for document 24 production.</p>
<p>24 So DataDocket Software kind of</p>	

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<p>1 So the idea is that it takes data 2 from the application where the work is being 3 done and kind of funnels into a document 4 management system creating this history that 5 so that this whole package can then be used for 6 regulatory approval submission.</p>	<p>1 this Swartz reference that also demonstrates 2 this point that you're making? 3 A. Sure.</p>
<p>7 So, you know, it synchronizes 8 information flow between data and a document 9 repository. So it's weaving together these data 10 and the documents into a single stream.</p>	<p>4 Q. Can you turn to Claim 1 and 2? 5 A. Right. So a knowledge integration 6 system for providing application 7 interoperability for data analysis between 8 heterogeneous documents and data sources. So 9 basically what this describes is it has database 10 memory.</p>
<p>11 Q. Does this have anything to do with 12 users?</p>	<p>11 It has a data source suitable for 12 interoperatively performing data analysis. That 13 basically means there's some application that's 14 doing statistical analysis out there. That's 15 the first data source.</p>
<p>13 A. No.</p>	<p>16 And as a source of documents, all 17 right, including document database memory. And 18 then this has a knowledge integration 19 application, which then kind of weaves together 20 the documents and the data that support those 21 documents to create this audit trail, this 22 history. And that's basically what's what it's 23 about.</p>
<p>14 Q. Okay. Can we turn to one other 15 place here in the patent?</p>	<p>21 Q. And if you look at Claim 2, --</p>
<p>16 I believe it's Column 6, Lines 22 17 through 26.</p>	
<p>18 And Dr. Herbstleb, I was hoping you 19 could explain what's being described here about 20 what the Swartz reference is about.</p>	
<p>21 A. Sure. Okay.</p>	
<p>22 More specifically, the middleware 23 is preferably employed to identify, including 24 tracking, monitoring, analyzing the context in</p>	
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<p>1 which information is employed so as to enable 2 the use of such context in the management of 3 knowledge.</p>	<p>1 A. Mm-hmm. 2 Q. -- does that confirm your 3 understanding of what's been disclosed in the 4 Swartz reference?</p>
<p>4 Okay. Here's one of those 5 examples that it uses some of the terminology of 6 '761, meaning tracking and context. It's using 7 those words in a completely different way.</p>	<p>5 A. The knowledge system wherein the 6 knowledge integration application generates an 7 audit trail to represent the flow of data. 8 Q. Okay.</p>
<p>8 So context here is the context in 9 this regulatory compliance scheme. Right.</p>	<p>9 A. So, again, how does the data flow 10 to create this report? That's what it's trying 11 to capture.</p>
<p>10 So you want to show that as you're 11 creating this document, that, you know, it's 12 based on these data, analyzed in this way. And 13 that's the kind of context it's referring to is 14 weaving together the statistical data the 15 document just talked about tracking.</p>	<p>12 Q. Can we take a look at Claim 5 of 13 the Swartz reference? And can you explain, what 14 does this mean to one of ordinary skill in the 15 art?</p>
<p>16 It's talking about tracking what's 17 going on in this regulatory compliance scheme, 18 what's being done to the documents, what's being 19 done to the data. There's no sense at all of it 20 tracking people, or tracking users or having 21 even workspaces for users.</p>	<p>16 A. So this is storing -- the 17 integration component is storing information 18 about the integration transaction. So what it 19 means here by integration transaction is when it 20 takes some data in a document and pulls them 21 together to sort of show that, you know, it's 22 been done correctly. So those are the 23 transactions it's talking about.</p>
<p>22 So this is a completely different 23 type of thing.</p>	<p>24 So it's -- so it stores those</p>
<p>24 Q. Is there anything in the claims of</p>	

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<p>1 transactions, everything, data and documents 2 into a trail. It stores that history of 3 transactions.</p>	<p>1 doesn't have user workspace. 2 Q. And how about the tracking 3 component element of Claim 1?</p>
<p>4 Q. It uses the words dynamically 5 stores. Is that the same concept of dynamically 6 stores or dynamic storing as disclosed in the 7 '761 patent?</p>	<p>4 A. The tracking component element of 5 Claim 1 is essentially in the same story, it 6 does not track users as they move from any 7 context to any other context. It's not centered 8 around users. It doesn't track users at all.</p>
<p>8 A. It doesn't really specify what 9 dynamically is here. Just means that if, you 10 know, something happens and then it stores the 11 information. It's not really very specific 12 about what that means.</p>	<p>9 Q. Do you have an opinion as to 10 whether or not the Swartz reference anticipates 11 Claim 1 of the '761 patent?</p>
<p>13 Q. How is that different than what's 14 disclosed in the '761 patent?</p>	<p>12 A. I do. It does not anticipate in 13 my opinion Claim 1 of the '761 patent.</p>
<p>15 A. Well, so the '761 patent, what 16 gets stored is, you know, the user takes some 17 action and that updates, you know, the metadata 18 either based on context information or the 19 tracking information.</p>	<p>14 Q. Let's look at Claims 4 and 7. 15 What is your opinion with respect to whether or 16 not the Swartz reference anticipates Claims 4 17 and 7 of the '761 patent?</p>
<p>20 This doesn't really say that it's 21 triggered necessarily by something the user 22 does. It doesn't -- it's not clear what 23 triggers it. It just says that it's, you know, 24 stored over time.</p>	<p>18 A. Right. My opinion it does not 19 anticipate Claim 4. Context information, this 20 is information from a user environment in which 21 the invention doesn't have, so it doesn't 22 anticipate Claim 4.</p>
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<p>1 Q. So by using the same words, does 2 it mean the same thing from the Swartz reference 3 to the '761?</p>	<p>1 second context. It doesn't have context in the 2 software.</p>
<p>4 A. No. No. 5 These words often get used in very 6 different ways and we have a claim construction 7 order that covers some of the words that are 8 used here. We have to understand them in that 9 sense.</p>	<p>3 Q. So is it your opinion that four 4 and seven -- 5 A. It does not anticipate either 6 Claim 4 or Claim 7.</p>
<p>10 Q. Okay. Let's look at the claims 11 now. So we'll turn to Claim 1.</p>	<p>7 Q. Let's turn to Claim 9. Do you 8 have an opinion with respect to Claim 9 as to 9 whether or not the Swartz reference anticipates 10 Claim 9?</p>
<p>12 A. Mm-hmm. 13 Q. Do you have an opinion as to 14 whether or not the Swartz reference discloses 15 the context component element of Claim 1?</p>	<p>11 A. Well, as we discussed the first 12 two elements comprise the context component, the 13 section two elements comprise the tracking 14 component and for all the same reasons that I 15 have discussed, it does not anticipate any of 16 the elements of Claim 9.</p>
<p>16 A. I have an opinion. It does not 17 disclose the context element of Claim 1 for many 18 of the same reasons we discussed. It doesn't 19 have a context component.</p>	<p>17 Q. Let's turn to Claims 11 and 16. 18 What is your opinion with Claims 11 and 16 as to 19 whether or not the Swartz reference anticipates 20 those claims?</p>
<p>20 There's nothing like an 21 environment. There's nothing like a user 22 workspace.</p>	<p>21 A. Well, again, we have indexing the 22 content of the user environment. It has no user 23 environment so it does not anticipate Claim 11. 24 Accessing the user environment via a portable</p>
<p>23 And so it can't do any of the 24 things, you know, described in here because it</p>	

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<p>1 wireless device, it has neither so it does not 2 anticipate Claim 16.</p> <p>3 Q. Is it your opinion also that since 4 Claims 11 and 16 depend on Claim 9 that the same 5 reasons you articulated for Claim 9 also apply 6 to those two claims?</p> <p>7 A. Right. Those same reasons apply 8 here as well as additional reasons.</p> <p>9 Q. Let's turn to Claim 21. 10 A. All right. 11 Q. Do you have an opinion as to 12 whether or not Claim 21 is anticipated by the 13 Swartz reference?</p> <p>14 A. I do. My opinion is that Claim 21 15 is not anticipated by the Swartz reference. 16 Again, we see here user workspace mentioned in 17 every element of this claim. And there is, you 18 know, no user workspace in the technology of 19 Swartz disclosure, so I don't think that any of 20 these elements are anticipated by Swartz.</p> <p>21 Q. Let's turn to Claim 23. Do you 22 have an opinion as to whether or not Claim 23 is 23 anticipated by the Swartz reference?</p> <p>24 A. Well, once again, I find myself</p>	<p>1 reference does not anticipate of these claims. 2 Q. Do you have an opinion as to 3 whether or not the Swartz reference affects the 4 validity of any of the asserted claims of the 5 '761 patent?</p> <p>6 A. I think the Swartz patent does not 7 affect the validity of any of the claims in the 8 '761 patent.</p> <p>9 Q. Do you have an opinion as to 10 whether or not the Hubert reference affects the 11 validity of any of the asserted claims of the 12 '761 patent?</p> <p>13 A. I do have an opinion. I think 14 that the Hubert reference does not affect the 15 validity of any of the claims in the '761 16 patent.</p> <p>17 Q. Do you have an opinion whether or 18 not the iManage reference affects the validity 19 of any of the asserted claims of the '761 20 patent?</p> <p>21 A. I do. I believe the iManage user 22 reference manual does not affect any of the 23 claims of the '761 patent.</p> <p>24 Q. Would there be any combination of</p>
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<p>1 saying the same thing over and over again. I 2 apologize if it's getting repetitive. But the 3 first element is the context component. The 4 second element is the tracking component. And 5 once again, for all the reasons I have 6 mentioned, it doesn't have a context component 7 as described here. It does not have a tracking 8 component as described here, so it does not 9 anticipate either of the elements of Claim 23.</p> <p>10 Q. How about the dependent claims, 11 Claims 25, 31 and 32, which depend on Claim 23?</p> <p>12 A. Well, they depend on Claim 23 in 13 the sense that they just make it more specific. 14 It does not anticipate any of these claims, 15 either, for the same reasons.</p> <p>16 Q. And when you say any of these 17 claims, you're referring to 25, 31 and 32; is 18 that correct?</p> <p>19 A. That's correct. 20 Q. So is it your opinion that the 21 Swartz reference doesn't anticipate any of the 22 asserted claims for all the reasons you have 23 testified to today?</p> <p>24 A. It is my opinion that the Swartz</p>	<p>1 these references that we have just talked about 2 that would render the asserted claims of the 3 '761 patent obvious in your opinion?</p> <p>4 A. No. In the first place, I haven't 5 seen any reference that anyone has offered as to 6 why someone would think to combine them anyway. 7 There has really been no reason offered as to 8 why we should do that. But even if we did, all 9 suffer from the same problems as we've seen. I 10 was saying the same thing over and over again, 11 if you can combine them all, none of them has a 12 context. None of them has a tracking component. 13 None of them invalidates any single element of 14 any of the claims. If you put them all 15 together, they still don't invalidate any of the 16 elements of any of the claims.</p> <p>17 Q. Do those references actually 18 practice the problems that the '761 patent 19 sought to solve?</p> <p>20 A. Yes. As we saw I think for all of 21 them, there is the same hierarchical arrangement 22 of data storage, folders, you name the folders, 23 you put stuff in the folders, so it does not 24 facilitate sharing in collaboration. In fact,</p>

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<p>1 it creates -- it's the same kind of system that 2 creates the problem that the '761 is trying to 3 solve.</p>	<p>1 to convert a standalone software product into a 2 web-based product?</p>
<p>4 Q. In Dr. Greenberg's report based on 5 your review of the it, did he provide the 6 motivation to combine any of these references 7 together that we have talked about?</p>	<p>3 A. Yeah, there are a number of 4 problems, depending on the product it could be 5 quite difficult. If you're creating a 6 standalone product, you can use whatever you 7 want to use on the computer, you're just totally 8 unrestricted. If you're trying to create a 9 web-based version of it, you have to create 10 something that runs inside of a browser, that's 11 a very, very restrictive environment, so it can 12 be quite challenging to do that, let alone 13 dealing with the fact that, you know, network 14 conductivity might be there, it might not be 15 there, it might die in the middle of a session, 16 there are a number of things to deal with. It 17 does not make it a trivial undertaking at all.</p>
<p>8 A. No, I don't believe he provided 9 any reason why someone would try to combine 10 these references together.</p>	<p>18 Q. I just asked that question in 19 connection with 2002. Today would that answer 20 be any different?</p>
<p>11 Q. Would the fact that on the face of 12 two of these references refer to an assignment 13 to Xerox suggest a motivation to combine?</p>	<p>21 A. It would be easier now, still not 22 trivial, but probably easier.</p>
<p>14 A. No, I believe those are Swartz and 15 Hubert. No, I don't think so. You know, Xerox 16 must have thousands or tens of thousands of 17 patents. Just the fact that it's the same 18 company doesn't suggest that you would 19 automatically think they would be combined in 20 some way.</p>	<p>23 Q. How about in 2002, would it have 24 been difficult to convert an existing product</p>
<p>21 Besides, I believe the Hubert 22 patent was a European patent, so I believe 23 Hubert is in Europe somewhere. And the Swartz 24 patent was patented in the U.S., so it's not</p>	
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<p>1 even clear -- you know, they're in different 2 continents presumably, that doesn't provide any 3 reason to think that someone would combine 4 those.</p>	<p>1 into one that's accessible by a portable 2 wireless device?</p>
<p>5 Q. Do you have an understanding for 6 the concept of obviousness that we had talked 7 about earlier whether an element-by-element 8 analysis combining the references is required?</p>	<p>3 A. Yes, the portable wireless devices 4 of 2002 have very small screens, for example, so 5 to create some way to interact with an 6 application on a little tiny screen is a very 7 big problem.</p>
<p>9 A. Yeah, my understanding is that it 10 is required.</p>	<p>8 And in 2002, that was before we 9 heard much about 3G connectivity, so it was 10 very, very small bandwidth, so it's hard to get 11 something useful to run with a tiny bit of 12 bandwidth and you have problems of being 13 connected and disconnected and what to do when 14 that happens. It's not a trivial exercise.</p>
<p>11 MS. KEEFE: Objection, Your Honor. 12 601, legal opinion.</p>	<p>15 MS. KOBIALKA: Your Honor, this 16 may be a good stopping point. I do have a 17 little more and it would extend into the lunch 18 break.</p>
<p>13 MS. KOBIALKA: I'm asking for his 14 understanding of --</p>	<p>19 THE COURT: That's fine. I think 20 it's an appropriate time for our lunch break and 21 we'll allow our jurors to go out to get their 22 lunch.</p>
<p>15 THE COURT: Overruled. If he has 16 an understanding, he can testify to it.</p>	<p>23 THE CLERK: All rise. 24 (Jury leaving the courtroom at</p>
<p>17 THE WITNESS: My understanding was 18 that one must sort of look at each element in 19 turn and find some reason to combine the 20 references rather than saying all these things 21 should be put together and somehow they add up 22 to the invention.</p>	
<p>23 Q. So in 2002, the time of the filing 24 of the provisional, would it have been difficult</p>	

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<p>1 12:28 p.m.)</p> <p>2 THE COURT: You can step down,</p> <p>3 Professor.</p> <p>4 Ms. Kubialka, your estimate about</p> <p>5 how much longer un direct?</p> <p>6 MS. KOBIALKA: Probably fifteen</p> <p>7 minutes.</p> <p>8 THE COURT: We'll be in recess</p> <p>9 until 1:30.</p> <p>10 (A brief recess was taken.)</p> <p>11 THE COURT: Good afternoon.</p> <p>12 Anything we need to discuss before we bring the</p> <p>13 jury in?</p> <p>14 MR. ANDRE: Just one quick matter,</p> <p>15 Your Honor, before the jury comes in. We'll be</p> <p>16 resting our case after Dr. Herbsleb. Before we</p> <p>17 do so, there was a stipulation early in the case</p> <p>18 about the commercial success of Facebook and</p> <p>19 realize they have recently challenged that</p> <p>20 stipulation once again and we don't know if we</p> <p>21 should offer proof before we close our case or</p> <p>22 how the Judge wants us to handle that.</p> <p>23 THE COURT: Right. Mr. Rhodes, do</p> <p>24 you want say something?</p>	<p>1 THE CLERK: Please be seated.</p> <p>2 THE COURT: Good afternoon.</p> <p>3 Welcome back.</p> <p>4 Ms. Kubialka, I believe you're</p> <p>5 still on.</p> <p>6 MS. KOBIALKA: Yes. Thank you,</p> <p>7 Your Honor. I would like to finish up with</p> <p>8 Dr. Herbsleb. While he's on his way up to the</p> <p>9 stand, we would like to move PTX 1125 into</p> <p>10 evidence.</p> <p>11 MS. KEEFE: No objection, Your</p> <p>12 Honor.</p> <p>13 THE COURT: It's admitted.</p> <p>14 BY MS. KOBIALKA:</p> <p>15 Q. Dr. Herbsleb, in your opinion,</p> <p>16 would any of the references that we have</p> <p>17 discussed today used in combination in any way</p> <p>18 render any of the asserted claims of the '761</p> <p>19 patent obvious?</p> <p>20 A. No, they would not. As I</p> <p>21 mentioned they all suffer from very similar kind</p> <p>22 of issues, so putting them together doesn't</p> <p>23 help.</p> <p>24 Q. And that's all based on the</p>
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<p>1 MR. RHODES: Not very much. I</p> <p>2 wanted to avoid evidence coming in on the</p> <p>3 matter. They over my objection got evidence in</p> <p>4 on the matter, so I told them there is no need</p> <p>5 for a stipulation, you can argue evidence.</p> <p>6 THE COURT: Well, my plan right</p> <p>7 now is to have one sentence in the jury</p> <p>8 instructions at the obviousness portion that --</p> <p>9 which I think is language that Leader proposed.</p> <p>10 Facebook's website is commercially successful,</p> <p>11 so that plus the evidence that came in is as</p> <p>12 much an commercial success as we're going to</p> <p>13 have.</p> <p>14 Anything else before we bring the</p> <p>15 jury in?</p> <p>16 MR. ANDRE: That's all, Your</p> <p>17 Honor. Thank you.</p> <p>18 THE COURT: Mr. Rhodes?</p> <p>19 MR. RHODES: No.</p> <p>20 THE COURT: No. Let's bring the</p> <p>21 jury in.</p> <p>22 THE CLERK: All rise.</p> <p>23 (Jury entering the courtroom at</p> <p>24 1:41 p.m.)</p>	<p>1 reasons that you have already provided today; is</p> <p>2 that right?</p> <p>3 A. Exactly.</p> <p>4 Q. In your opinion, does the</p> <p>5 invention of the '761 patent address a long-felt</p> <p>6 but unresolved need in the industry?</p> <p>7 A. I think it does. I mean, this</p> <p>8 2002 time frame was right at the end of the</p> <p>9 period where I was doing research in</p> <p>10 collaboration technology at Bell Labs. We were</p> <p>11 trying to introduce and develop some</p> <p>12 technologies to help distribute teams and share</p> <p>13 documents and it was a huge problem. And I</p> <p>14 think others were suffering from very similar</p> <p>15 kinds of problems trying to figure out how to</p> <p>16 get global distributed teams to share, for</p> <p>17 example.</p> <p>18 And, again, in terms of</p> <p>19 obviousness, I think if you know, a solution to</p> <p>20 that had been obvious, someone would have come</p> <p>21 up with it some time ago.</p> <p>22 Q. In your opinion, based on the</p> <p>23 techniques that were known around 2002, did</p> <p>24 those techniques teach a way from the invention</p>

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<p>1 of the '761 patent as it related to users?</p> <p>2 A. Yeah. I think what we saw in some</p> <p>3 of the other references are the kinds of things</p> <p>4 that were, you know, typical of the day, you</p> <p>5 know, hierarchy arranged filing systems, systems</p> <p>6 built around documents, managing documents,</p> <p>7 tracing history of documents, that is what was</p> <p>8 around.</p> <p>9 So that would not lead someone to</p> <p>10 suddenly go in the other direction and build</p> <p>11 everything around users. I think that's a</p> <p>12 significant shift and I don't think that was at</p> <p>13 all obvious from the technologies that were</p> <p>14 prevalent at the time.</p> <p>15 Q. In your opinion, did these factors</p> <p>16 provide evidence that the invention of the '761</p> <p>17 patent is not obvious?</p> <p>18 A. I think they do. I think they</p> <p>19 give another good indication that it was not</p> <p>20 obvious in that time frame.</p> <p>21 MS. KOBIALKA: Thank you. No</p> <p>22 further questions at this time.</p> <p>23 THE COURT: Thank you.</p> <p>24 Cross-examination.</p>	<p>1 nonobviousness that you used were your belief</p> <p>2 that there was some long-felt but unresolved</p> <p>3 need and teaching away by others of the</p> <p>4 invention; is that right?</p> <p>5 A. No. No. Those are not my only</p> <p>6 reasons for thinking that it was not obvious.</p> <p>7 I'm also thinking about the particular things</p> <p>8 that were disclosed in the references in the</p> <p>9 Greenberg report, and the other kinds of</p> <p>10 technology that were available and prevalent at</p> <p>11 the time. And all of those things together,</p> <p>12 along with the fact that there was a long-felt</p> <p>13 unmet need as well as teaching away, all those</p> <p>14 together caused me to think that it was</p> <p>15 definitely not obvious.</p> <p>16 Q. But in your report, the only</p> <p>17 secondary considerations of nonobviousness that</p> <p>18 you listed were long-felt but unresolved need</p> <p>19 and teaching away by others from the invention;</p> <p>20 is that correct?</p> <p>21 A. I don't believe so. I think that</p> <p>22 those are the only secondary considerations that</p> <p>23 I mentioned at the time. I believe that an</p> <p>24 examination of the references also indicates</p>
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<p>1 MS. KEEFE: Thank you.</p> <p>2 CROSS-EXAMINATION</p> <p>3 BY MS. KEEFE:</p> <p>4 Q. Good afternoon, Dr. Herbsleb.</p> <p>5 A. Good afternoon.</p> <p>6 Q. Dr. Herbsleb, are you being paid</p> <p>7 to be an expert in this case?</p> <p>8 A. Yes, I am.</p> <p>9 Q. How much are you being compensated</p> <p>10 at?</p> <p>11 A. They compensated my usual</p> <p>12 consultant fee which is \$300 an hour.</p> <p>13 Q. Dr. Herbsleb, you respect</p> <p>14 Dr. Greenberg, don't you?</p> <p>15 A. I do.</p> <p>16 Q. And, in fact, you would consider</p> <p>17 him to be an expert in collaboration</p> <p>18 technologies; correct?</p> <p>19 A. I would, that's correct.</p> <p>20 Q. And we've just heard you had</p> <p>21 expressed an opinion that the patent was</p> <p>22 nonobvious; right?</p> <p>23 A. That's correct.</p> <p>24 Q. And the only two considerations of</p>	<p>1 that it was not obvious. I believe I commented</p> <p>2 in the report on the fact, for example, that</p> <p>3 Dr. Greenberg did not attempt to provide any</p> <p>4 justification for combining references to</p> <p>5 indicate obviousness, so that indicates that his</p> <p>6 report did not adequately support a finding of</p> <p>7 obviousness.</p> <p>8 MS. KEEFE: Your Honor, I would</p> <p>9 like to play for the record at his deposition</p> <p>10 page 188, lines 10 through 14, please.</p> <p>11 THE COURT: Hold on a second.</p> <p>12 MS. KOBIALKA: No objection.</p> <p>13 THE COURT: No objection. You can</p> <p>14 play it.</p> <p>15 MS. KEEFE: Thank you.</p> <p>16 (Videotape.)</p> <p>17 Q. As I read your report, sir, your</p> <p>18 secondary considerations of nonobviousness are</p> <p>19 in the category of long-felt but unresolved need</p> <p>20 and teaching away by others from the invention.</p> <p>21 Is that accurate?</p> <p>22 A. Yes. That's right.</p> <p>23 BY MS. KEEFE:</p> <p>24 Q. But Dr. Herbsleb, you couldn't</p>

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<p>1 identify any products in the industry that</p> <p>2 implement the claims of the '761 patent that are</p> <p>3 asserted in this case, could you?</p> <p>4 A. I couldn't seem to identify any</p> <p>5 products in the industry. Could you repeat it</p> <p>6 again.</p> <p>7 Q. Absolutely. You could not</p> <p>8 identify any products out there in the industry</p> <p>9 that implement the claims of the '761 patent</p> <p>10 that are asserted in this case?</p> <p>11 A. So as you recall during the</p> <p>12 deposition, I was just responding to</p> <p>13 Dr. Greenberg's report and I was sticking mostly</p> <p>14 to commenting on that report. So since I was</p> <p>15 not asked to prepare for that report any survey</p> <p>16 of products out there in the world, I didn't do</p> <p>17 that.</p> <p>18 Q. And as a result, you did not</p> <p>19 identify any products out there in the industry</p> <p>20 that implement the claims of the '761 patent</p> <p>21 that are asserted in this case; correct?</p> <p>22 A. I don't actually remember that,</p> <p>23 but that could well be true, yes.</p> <p>24 Q. And you had no opinion one way or</p>	<p>1 experiments or anything, no, that's correct.</p> <p>2 Q. And you did not perform any</p> <p>3 surveys regarding the effectiveness of the</p> <p>4 systems and methods claimed in the '761 patent</p> <p>5 did you?</p> <p>6 A. No. As I pointed out, I was just</p> <p>7 responding to Dr. Greenberg's report, and it</p> <p>8 didn't seem to require conducting any</p> <p>9 experiments in surveys, I did not.</p> <p>10 Q. Now, you talked about the code</p> <p>11 that was attached to the back of the provisional</p> <p>12 application.</p> <p>13 A. That's right.</p> <p>14 Q. And I think your testimony earlier</p> <p>15 this morning was that you talked about it for</p> <p>16 you being something like a recipe, we talked</p> <p>17 about sauteing something. Do you recall that?</p> <p>18 A. I think what I said actually was</p> <p>19 that it is a concise way to convey information.</p> <p>20 That it's not the complete implementation of the</p> <p>21 invention disclosed, by any means, but it's</p> <p>22 something which would give someone skilled in</p> <p>23 the art, you know, information about how one</p> <p>24 would actually make and use this invention.</p>
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<p>1 the other as to whether anyone in the industry</p> <p>2 is following the teachings of the '761 patent;</p> <p>3 isn't that correct?</p> <p>4 A. So, I don't recall. I may have</p> <p>5 said that.</p> <p>6 Q. And you did not perform any tests</p> <p>7 to test how effective the '761 patent is?</p> <p>8 MS. KOBIALKA: Objection. Outside</p> <p>9 the scope of his direct.</p> <p>10 MS. KEEFE: It goes directly to</p> <p>11 the secondary considerations he's been</p> <p>12 discussing.</p> <p>13 THE COURT: Overruled.</p> <p>14 THE WITNESS: So, no, I didn't</p> <p>15 perform any tests, but I have on the other hand</p> <p>16 been involved in collaboration technology in</p> <p>17 sort of introducing collaboration technologies</p> <p>18 to industry and I think it's pretty clear that</p> <p>19 this technology is an effective approach to</p> <p>20 that.</p> <p>21 Q. But you did not perform any tests</p> <p>22 to test the efficacy of the systems and methods</p> <p>23 claimed in the '761 patent, did you?</p> <p>24 A. No, I didn't perform any</p>	<p>1 Q. But you also have testified before</p> <p>2 that the code attached to the provisional</p> <p>3 application is just pseudo code; correct?</p> <p>4 A. Yes. Well, that goes along with</p> <p>5 the idea that it's mainly a communication device</p> <p>6 for other people who might want to make and use</p> <p>7 this invention. It's not really a full</p> <p>8 implementation as I said, but it is designed to</p> <p>9 be helpful, you know, to give information and</p> <p>10 hints to someone who might want to actually make</p> <p>11 this invention.</p> <p>12 Q. To make hints, that is what you</p> <p>13 just said?</p> <p>14 A. For someone practicing the art, it</p> <p>15 would give strong indications of how to</p> <p>16 implement, make and use this invention.</p> <p>17 Q. And pseudo code would not actually</p> <p>18 function if you were to compile it into an</p> <p>19 executable program; right?</p> <p>20 A. Pseudo code would not, right.</p> <p>21 Q. And that's because it's not a real</p> <p>22 programing language; right?</p> <p>23 A. So pseudo code is not a real</p> <p>24 programing language, but there is really kind of</p>

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<p>1 a fine line here that I would like to clarify. 2 So the language that appears here 3 looks very much like Java, although I didn't 4 really try to compile it and test it and see if 5 it actually runs. But the purpose of that code 6 that looks a lot like Java is to provide 7 information to someone skilled in the art so you 8 know what kind of glasses had been imported, you 9 would know how data was being stored, you would 10 know where to go to access information about 11 users, and so on. 12 Q. You mentioned a lot of things in 13 that last answer that I would like to go 14 through. 15 A. Okay. 16 Q. Can we actually see the import 17 statement section of the provisional, please. 18 So you mentioned these import statements quite a 19 few times; is that correct? 20 A. That's right. 21 Q. And, in fact, the ones that we 22 pointed to most frequently were the import.com. 23 Leader.persist.vbsf, and the very last import, 24 com.leader.osapplication.sessionstate; is that</p>	<p>1 would say that anyone skilled in the art knows, 2 you know, you don't know every single detail of 3 exactly what is within those classes, but you 4 know that VBSF is middleware that allows you to 5 store information in a database, you know, that 6 session statement is there to sort of capture 7 and hold information about a session because web 8 protocols are stateless and they can't catch a 9 state, so you know that kind of stuff from just 10 looking at the names of these things because 11 those are very common names in the industry. 12 MS. KEEFE: Your Honor, I would 13 like to play from the deposition at page 132, 14 lines 19 through 22. 15 MS. KOBIALKA: I'll object. 16 That's an incomplete clip. We need to continue 17 on to -- 18 THE COURT: Which lines do you 19 propose in addition? 20 MS. KOBIALKA: At least page 133 21 through line one. 22 THE COURT: 133, one. 23 MS. KEEFE: That's fine, Your 24 Honor.</p>
Page 1857	Page 1859
<p>1 correct? 2 A. That's correct. 3 Q. You just mentioned that an import 4 statement imports classes that are defined 5 elsewhere; is that right? 6 A. That's right. 7 Q. What is a class? 8 A. It is a unit of code. 9 Q. So an import statement is used to 10 bring in code that lives somewhere else into the 11 code without having to repeat that code right 12 here; is that correct? 13 A. Yeah, it's used for, you know, 14 very common sort of utilities and boiler plate 15 sort of code that's used very frequently. And 16 every Java program and most programming language 17 these days import things like that. 18 Q. But with respect to the import 19 statements that we have highlighted here, you 20 can't really know what is in those classes 21 unless you actually have access to the 22 underlying source code that's being imported; 23 isn't that correct? 24 A. I would say that's not correct, I</p>	<p>1 THE COURT: Okay. 2 (Videotape.) 3 Q. You can't really know what's in 4 these classes unless you actually have access to 5 the underlying code. Correct? 6 A. So, that's correct -- except 7 someone with skill in the art would be able to 8 make reasonable guesses based on the names, I 9 would maintain. 10 BY MS. KEEFE: 11 Q. And, in fact, the best you could 12 do is guess as to what's in the code referred to 13 in an import statement; isn't that correct? 14 A. Not in the sense of a wild guess, 15 no. So as I said before, you don't know the 16 details of how each one of those is implemented 17 because you don't see the code. But VBSF are 18 very common well understood terms so that anyone 19 knowledgeable in the art would know basically 20 what they're doing and they would tell you that 21 if you are trying to make and use this 22 invention, certain kinds of information are 23 going to be stored in a relational database and 24 certain kinds of information are going to be</p>

Page 1860	Page 1862
<p>1 stured in a session state. That would be clear.</p> <p>2 MS. KEEFE: Your Honor, I would</p> <p>3 like to play page 133 lines, two through six.</p> <p>4 MS. KOBIALKA: I'll object as</p> <p>5 incomplete. If it goes through line 13 on page</p> <p>6 THE COURT: No objection through</p> <p>7 line 13?</p> <p>8 MS. KOBIALKA: Yes.</p> <p>9 THE COURT: Ms. Keefe.</p> <p>10 MS. KEEFE: I actually disagree, I</p> <p>11 literally asked the question directly and then</p> <p>12 the answer, but if that helps then we can go</p> <p>13 ahead and play it.</p> <p>14 THE COURT: It helps. Let's go</p> <p>15 ahead and play it then, the whole portion.</p> <p>16 (Videotape:)</p> <p>17 Q. But that's the most they could</p> <p>18 make, is reasonable guesses?</p> <p>19 A. Yes. But someone, you know,</p> <p>20 skilled in the art could make reasonable</p> <p>21 guesses, I think.</p> <p>22 Yes. But someone, you know,</p> <p>23 skilled in the art could make reasonable</p> <p>24 guesses, I think.</p>	<p>1 same for almost every application, a set of</p> <p>2 things that you're doing in web protocols, they</p> <p>3 don't know that you have logged in, they don't</p> <p>4 know that you have seen this page but not that</p> <p>5 page. But session state captures that sort of</p> <p>6 information and holds it.</p> <p>7 It is well-known that this is the</p> <p>8 purpose of session state libraries.</p> <p>9 Q. But you agree that with respect to</p> <p>10 the session state, you were speculating as to</p> <p>11 what it contained?</p> <p>12 A. I think that when something is</p> <p>13 well understood by people versed in the art it's</p> <p>14 not really quite speculation. It is a very</p> <p>15 informed inference.</p> <p>16 MS. KEEFE: Your Honor, I would</p> <p>17 like to play from page 132, line five through</p> <p>18 line 18.</p> <p>19 MS. KOBIALKA: Object, Your Honor.</p> <p>20 This isn't impeachment.</p> <p>21 THE COURT: Pass up a copy, please</p> <p>22 of the transcript. 132, line five through 18?</p> <p>23 MS. KEEFE: Yes, sir, Your Honor.</p> <p>24 THE COURT: The objection is</p>
Page 1861	Page 1863
<p>1 Q. So let's talk about VBSF for a</p> <p>2 minute. What is VBSF?</p> <p>3 A. Sort of a middleware that matches</p> <p>4 up object-oriented programs with relational</p> <p>5 databases so that it does the translation from</p> <p>6 the object model to a relational model, makes it</p> <p>7 much easier to use in a relational database.</p> <p>8 BY MS. KEEFE:</p> <p>9 Q. And, in fact, with respect to the</p> <p>10 sessions state classes, you were, in fact,</p> <p>11 speculating as to what was contained within</p> <p>12 them; isn't that correct?</p> <p>13 A. So, are you talking about this</p> <p>14 clip? This clip is talking about VBSF.</p> <p>15 Q. No, I'm talking about session</p> <p>16 state classes.</p> <p>17 A. Session state classes.</p> <p>18 Q. That were imported.</p> <p>19 A. So, as I mentioned, you can't see</p> <p>20 the details of what is session state because the</p> <p>21 source code is not here. But it is sort of</p> <p>22 boiler plate type code. Session state is</p> <p>23 something that if you're writing a web and you</p> <p>24 have to maintain session state, it's usually the</p>	<p>1 overruled. You can play it.</p> <p>2 MS. KEEFE: Thank you, Your Honor.</p> <p>3 (Videotape:)</p> <p>4 Q. So you would not know how to</p> <p>5 locate those classes. Correct?</p> <p>6 A. So there are session state classes</p> <p>7 in Java, for example, that may be very similar</p> <p>8 to this, so the functionality of these kinds of</p> <p>9 classes -- the reason -- well, I'm speculating.</p> <p>10 But the reason they're not fully reproduced here</p> <p>11 is simply because they're fairly common kinds of</p> <p>12 things that you wouldn't need to look at.</p> <p>13 Q. But you are speculating. I mean,</p> <p>14 you can't --</p> <p>15 A. I am.</p> <p>16 (End of videotape.)</p> <p>17 A. So if I may clarify what I was</p> <p>18 speculating about is the reason they don't</p> <p>19 appear here, if you go back and carefully read</p> <p>20 that, I'm not speculating about what the classes</p> <p>21 mean, I'm saying I'm speculating the reason they</p> <p>22 don't appear here is because they're very common</p> <p>23 and they don't need to appear here.</p> <p>24 Q. When you hired doctor -- you hired</p>

56 (Pages 1860 to 1863)

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<p>1 Dr. Caltaldo to actually attempt an experiment, 2 is that correct, using the provisional 3 application? 4 A. I'm not sure if hire is the 5 correct word. I'm the one that gave him the 6 task, I did not pay him, someone else paid him, 7 but yes, I gave him that task. 8 Q. And you agree that a person of 9 ordinary skill in the art in this case can have 10 as little as a bachelor of science in computer 11 science according to your testimony; is that 12 right? 13 A. Yes, that's right. 14 Q. But Dr. Caltaldo actually has a 15 Ph.D.? 16 A. He does. 17 Q. And Dr. Caltaldo has more than ten 18 years of experience in the field of computer 19 science? 20 A. That's correct. 21 Q. And you consider him to be very 22 talented; right? 23 A. He's talented, yes, but then on 24 the other hand, as I said before, having a Ph.D.</p>	<p>1 Q. But when you had your deposition 2 taken in this case, you were asked the question, 3 and you, in fact, answered that you did not know 4 if Dr. Caltaldo had referenced any outside 5 materials; isn't that correct? 6 A. That's correct. And it was the 7 deposition that convinced me that that was a 8 pretty important question and I ran off and 9 asked Dr. Caltaldo at which point he told me he 10 had not referenced any other materials in 11 preparation. 12 Q. You didn't know during the time of 13 your deposition whether or not Dr. Caltaldo had 14 worked with anyone else in connection with his 15 work; isn't that correct? 16 A. At the time of the deposition, I 17 probably didn't know that. 18 Q. And similarly at the time of your 19 deposition, you did not know whether anyone else 20 had contributed to the content of the pseudo 21 code that Dr. Caltaldo handed you; isn't that 22 correct? 23 A. So there is a little wrinkle here 24 that I should try to explain to make this clear</p>
Page 1865	Page 1867
<p>1 does not necessarily enhance somebody's ability 2 to create a web application. Having a Ph.D. 3 you're doing research that takes you into an 4 extremely specialized area and since I was his 5 thesis supervisor, I can tell you it had 6 absolutely nothing to do with web applications 7 or even applications. 8 I think ten years of experience 9 is, you know, probably fairly average for 10 someone in industry, so I think if you put all 11 that together, he was someone, you know, that 12 would be a representative of someone who was 13 well versed in the art. 14 Q. And other than assigning him this 15 task, you didn't actually oversee Dr. Caltaldo 16 in any way during the project; is that right? 17 A. Not in any way having to do with 18 this, no. 19 Q. And you don't know if Dr. Caltaldo 20 referenced any outside materials in coming up 21 with the pseudo code that he developed; isn't 22 that correct? 23 A. All I know is what he told me, and 24 he told me he did not, when I asked him.</p>	<p>1 is that at some point in the deposition, I think 2 it was at lunchtime or perhaps a break, I called 3 Dr. Caltaldo and asked him some of these 4 questions. So I didn't know during the first 5 half, I knew some of the answers during the 6 second half. There were some things I didn't 7 think to ask him which I asked him yet later, so 8 there are several different points in time here. 9 Q. Could we pull up the pseudo code, 10 please. I think it's the new exhibit, 1125. 11 1125, please. Can you highlight just the title, 12 Dr. Herbaleb, is this the title of 13 the report that Dr. Caltaldo gave you? 14 A. Yes, it is. 15 Q. And the terms at the end here, 16 context and tracking components. Those are 17 phrases used in the patent; isn't that correct? 18 A. That's correct, they are used in 19 the patent. 20 Q. In fact, it's -- you testified 21 earlier that it was possible that Dr. Caltaldo 22 actually had a copy of the final patent when he 23 was performing his analysis, didn't you? 24 A. I believe what I said is that it's</p>

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<p>1 public information, that anybody can access 2 that, so of course he had access to it as does 3 everyone.</p>	<p>1 iManage is accessible in any way, it means you 2 have a browser and you can go look at the web 3 that's all it says.</p>
<p>4 Q. Dr. Herbsleb, what Dr. Caltaldo 5 built was actually pseudo code, wasn't it?</p>	<p>4 Q. Go you pull that back up again, 5 please. But, in fact, can you read for me the 6 tool bar here under the address and what is the 7 name of that website?</p>
<p>6 A. Well, again, it appears to be 7 Java. It is very, very close to Java, but since 8 I didn't compile it, I don't know if it really 9 runs, so we could call it pseudo code. It looks 10 just like Java.</p>	<p>8 A. Tool bar under the address. It's 9 http.www.iManage.com. 10 Q. Thank you.</p>
<p>11 Q. You testified before that 12 Dr. Caltaldo did not build any actual working 13 system in connection with his work with the 14 provisional; isn't that correct?</p>	<p>11 Can you now please turn to page 83 12 in Figure 3.26. I believe you also testified 13 that it's your belief that iManage does not 14 involve users, or taking care of tracking users 15 or where users are; is that correct?</p>
<p>15 A. That's correct, because it does 16 make calls into the code, you know, provided in 17 the provisional patent application which we 18 didn't have in code form, so it couldn't run 19 because it makes those calls to the code that's 20 in the system.</p>	<p>16 A. It does not track users from one 17 context to another, that's correct. 18 Q. Can you read for me what the title 19 is on the left-hand column of this figure in the 20 iManage reference?</p>
<p>21 Q. And the fact that it is pseudo 22 code indicates to you that the code Dr. Caltaldo 23 developed could not be used to create a working 24 application; is that correct, by itself?</p>	<p>21 A. So that is the user, which in this 22 case happens to be the same user four times in 23 the row, it could be four different users. As 24 the figure caption says this is a document</p>
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<p>1 A. Not, it's not complete by itself, 2 right, it does rely on the code in the 3 provisional application.</p>	<p>1 history in which whatever user happens to 2 interact with the document. Those user names 3 would show up there. In this case it happens to 4 be the same user four times in a row, but if 5 Bowen went to do anything else this would not 6 track them.</p>
<p>4 Q. Dr. Herbsleb, with respect to the 5 iManage reference materials, you testified that 6 the iManage reference materials did not teach a 7 web-based system; is that correct?</p>	<p>7 Q. With the Hubert system, you also 8 believe that the Hubert system has nothing to do 9 with the web; is that correct?</p>
<p>8 A. Yes, that's right. 9 Q. Can you please pull up page 41 of 10 the iManage reference manual. This is in 11 chapter two.</p>	<p>10 A. The Hubert system has nothing to 11 do with the web, that's right. 12 Q. Could you please pull up page 25 13 of the Hubert reference. Paragraph 25, I'm 14 sorry. Can you please read for me the first 15 sentence of paragraph 25 of Hubert?</p>
<p>12 Dr. Herbsleb, could you please 13 read for me the first sentence under the header 14 web browsers out loud?</p>	<p>16 A. "Mcia-document 20 is then 17 forwarded via the internet to source 18 (environment) 34."</p>
<p>15 A. "iManage DcskSite has a web 16 browser utility to allow you to quickly access 17 the web directly from iManage Desktop."</p>	<p>19 So the internet is not the same as 20 the web. The Internet is the basic plumbing, 21 the basic functionality. It's a big network 22 that hooks computers together. The web is a set 23 of servers built on protocols on top of the 24 internet. So something going by Internet</p>
<p>18 Q. Thank you. Can you also please -- 19 A. So could I comment on that. That 20 does not mean that it's web-base system, that 21 means it has a browser built into it. Browser 22 simply goes out and makes the http requests and 23 gets web pages, but iManage is not a web-based 24 system. That is not to say the documents within</p>	

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<p>1 doesn't necessarily mean something going by web</p> <p>2 And the illustrations in the description here</p> <p>3 are sending something as an email attachment.</p> <p>4 Q. Isn't it possible that one of</p> <p>5 ordinary skill in the art could see the word via</p> <p>6 the internet and also assume that it could be</p> <p>7 done via the worldwide web?</p> <p>8 A. Well, it could be done, you know,</p> <p>9 with paper airplanes or something. It's not</p> <p>10 here.</p> <p>11 Q. So you also said that Hubert had</p> <p>12 nothing to do with users, I believe; is that</p> <p>13 correct?</p> <p>14 A. I said Hubert has nothing to do</p> <p>15 with tracking users from one context to another.</p> <p>16 It's not centered around users.</p> <p>17 Q. Could we pull up paragraph four,</p> <p>18 please. Paragraph four was talking about what</p> <p>19 Hubert was trying to solve; is that correct?</p> <p>20 Sort of the background of what was wrong in the</p> <p>21 past?</p> <p>22 A. Excuse me, let me take just a</p> <p>23 second to read this.</p> <p>24 Q. Sure.</p>	<p>1 attachment, who liked it, et cetera).</p> <p>2 So once again, that you know says</p> <p>3 that it is keeping a history of the document,</p> <p>4 everything that happens to a document.</p> <p>5 Q. Keeping track of what user touches</p> <p>6 that document?</p> <p>7 A. Exactly. So it's centered around</p> <p>8 the documents, it's not saying here is a user,</p> <p>9 here is what the user did, and here the user</p> <p>10 moving around from one context to another, it's</p> <p>11 not following users, it's following a document.</p> <p>12 Q. Can we look at paragraph 14,</p> <p>13 please. Can you please read for me the sentence</p> <p>14 that's highlighted?</p> <p>15 A. Sure.</p> <p>16 "All of the processing information</p> <p>17 in the meta-document is explicit, accessible,</p> <p>18 and reusable so that other tools or other people</p> <p>19 in different contexts can benefit from it."</p> <p>20 So this -- sorry.</p> <p>21 Q. Thank you. That's all.</p> <p>22 So with respect to the Swartz</p> <p>23 document, you also indicated that Swartz was not</p> <p>24 web based; is that correct?</p>
Page 1873	Page 1875
<p>1 A. (Witness reviewing.) Yes.</p> <p>2 Q. Okay.</p> <p>3 A. So, in fact, at the end it</p> <p>4 actually says one of the problems was, in fact,</p> <p>5 most of the information about what happened to</p> <p>6 the document during its whole life, e.g., who</p> <p>7 read it, reviewed it, a user, where it was sent</p> <p>8 as an email attachment, who liked it, et cetera,</p> <p>9 is lost. So that is what it says.</p> <p>10 And this as I believe I</p> <p>11 characterized it before is a document history,</p> <p>12 it's sort of here are all the things that</p> <p>13 happened to the meta-document, somebody read it,</p> <p>14 somebody else reviewed it, it got sent around,</p> <p>15 it's just accumulated history of what happened</p> <p>16 to it.</p> <p>17 Q. Can we turn to paragraph nine,</p> <p>18 please. Here in paragraph nine, can you please</p> <p>19 read for me the highlighted sentence?</p> <p>20 A. There is also a need for a system</p> <p>21 and method of managing documents which tracks</p> <p>22 all of the information about what happened to a</p> <p>23 document during its whole life (e.g., who</p> <p>24 reviewed it, where it was sent as an email</p>	<p>1 A. So Swartz does have a brief</p> <p>2 mention of the web. I don't believe I testified</p> <p>3 to whether it was web based or not, but it does</p> <p>4 have a brief sort of hand wave that in the</p> <p>5 future embodiment it would be good if we could</p> <p>6 do this on the web. I don't think it contains</p> <p>7 much more than that.</p> <p>8 Q. Can we pull up column nine, lines</p> <p>9 ten through fifteen, please. Is this what you</p> <p>10 were referred to?</p> <p>11 A. No, actually it's not. The client</p> <p>12 will run on a client server system as depicted</p> <p>13 in Figure 3 to provide web-based operability,</p> <p>14 use and users will operate PC client systems.</p> <p>15 This is the kind of thing that I was talking</p> <p>16 about, yes.</p> <p>17 Q. And I believe you also testified</p> <p>18 that Swartz didn't deal centrally with users; is</p> <p>19 that correct?</p> <p>20 A. That's right.</p> <p>21 Q. Can you please pull up column</p> <p>22 four, starting at line 55. Can you read me the</p> <p>23 first sentence starting line 55?</p> <p>24 A. Okay. "Alternative or improved</p>

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<p>1 embodiments of the invention will enable users</p> <p>2 to define and execute multiple tasks to be</p> <p>3 performed by one or more applications from</p> <p>4 anywhere within a document."</p> <p>5 Q. And can you also turn, please, to</p> <p>6 column eight at line 55. Can you read that for</p> <p>7 me, please?</p> <p>8 A. "Such a system also preferably</p> <p>9 captures metadata associated with the</p> <p>10 information shared, stored, and accessed by the</p> <p>11 users of the data so as to characterize the</p> <p>12 context in which the information is being used."</p> <p>13 But again, this is all tracking</p> <p>14 information being integrated into an audit</p> <p>15 trail, so the word context shouldn't be confused</p> <p>16 with context component as here in the '761</p> <p>17 patent.</p> <p>18 MS. KEEFE: I have no further</p> <p>19 questions. Thank you, Dr. Herbsleb.</p> <p>20 THE COURT: Thank you.</p> <p>21 Redirect.</p> <p>22 MS. KOBIALKA: Quickly.</p> <p>23 REDIRECT EXAMINATION</p> <p>24 BY MS. KOBIALKA:</p>	<p>1 A. Not at all. I still maintain that</p> <p>2 there was not a single element of a single claim</p> <p>3 disclosed in any of those references.</p> <p>4 Q. And as an inventor of one of the</p> <p>5 prior art references actually cited during the</p> <p>6 prosecution of the '761 patent, is it still your</p> <p>7 opinion that the invention of the '761 patent is</p> <p>8 valid?</p> <p>9 A. It is still my opinion that the</p> <p>10 '761 patent is valid.</p> <p>11 MS. KOBIALKA: Thank you very</p> <p>12 much.</p> <p>13 THE COURT: Thank you. You can</p> <p>14 step down.</p> <p>15 THE WITNESS: Thank you.</p> <p>16 MR. ANDRE: Your Honor, at this</p> <p>17 point Leader Technologies rests its case.</p> <p>18 THE COURT: Okay. Thank you.</p> <p>19 Mr. Rhodes.</p> <p>20 MR. RHODES: Your Honor, I</p> <p>21 incorporate by reference the statements and</p> <p>22 motions made by Mr. Weinstein during our break</p> <p>23 this morning at this point in the proceedings.</p> <p>24 THE COURT: I will take those</p>
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<p>1 Q. Dr. Herbsleb, when you were asked</p> <p>2 about whether or not the entirety of your</p> <p>3 opinion related to the long-felt need and</p> <p>4 teaching away for secondary considerations, was</p> <p>5 that just in reference to a specific paragraph</p> <p>6 in your report?</p> <p>7 A. It was. That was just a specific</p> <p>8 paragraph. The report said considerably more</p> <p>9 about obviousness.</p> <p>10 Q. And so the report provided much</p> <p>11 more background and information with respect to</p> <p>12 what your opinion was about why the invention of</p> <p>13 the '761 patent is valid?</p> <p>14 A. I had much more information than</p> <p>15 that. That was merely one --that was merely the</p> <p>16 secondary considerations about obviousness.</p> <p>17 There was all the other talk about obviousness,</p> <p>18 and so there was a couple of hundred pages of</p> <p>19 stuff in addition to that.</p> <p>20 Q. Did any of that snippets that were</p> <p>21 provided to you of the three references disclose</p> <p>22 -- indicate to you that the invention of the</p> <p>23 '761 patent was disclosed in any of those</p> <p>24 references?</p>	<p>1 under advisement.</p> <p>2 MR. RHODES: Thank you, Your</p> <p>3 Honor.</p> <p>4 MR. ANDRE: In light we renew our</p> <p>5 motions as well, Your Honor.</p> <p>6 THE COURT: I will take that under</p> <p>7 advisement as well.</p> <p>8 Mr. Rhodes is there anything in</p> <p>9 the way of rebuttal on the validity case?</p> <p>10 MR. RHODES: I'm happy to say that</p> <p>11 we have nothing further, Your Honor.</p> <p>12 THE COURT: Okay. I believe that</p> <p>13 means we're at the close of evidence and we're</p> <p>14 going to be able to let our jurors go a little</p> <p>15 bit early today. Am I right about that,</p> <p>16 counsel?</p> <p>17 MR. ANDRE: That's correct, Your</p> <p>18 Honor.</p> <p>19 MR. RHODES: Yes, Your Honor.</p> <p>20 THE COURT: We go then to agree</p> <p>21 on something.</p> <p>22 Ladies and gentlemen of the jury,</p> <p>23 we have now completed the evidentiary portion of</p> <p>24 the case. What still remains is for me to</p>

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<p>1 question the experts in ways that implicate the 2 experts' understanding of the wherein term and 3 both sides can argue consistent with the 4 evidence that came in when they're discussing 5 what wherein means.</p>	<p>1 will read to the jury all of the instructions 2 through 5.2, so I'll stop after I read the 3 unanimous verdict instruction, and I'll save for 4 myself the duty to deliberate which tells them 5 go ahead and start deliberating and that the 6 Court has no opinion.</p>
<p>6 In 3.4 I have also added some 7 language along the lines proposed by Facebook 8 with respect to the idea that the jurors are not 9 to consider prosecution history or specification 10 as a basis for altering the Court's claim 11 construction.</p>	<p>7 So after I read through all the 8 way through 5.2, turn to Leader for argument, 9 then Facebook, and then I'm going to let Leader 10 have the last word if they have any time left. 11 I'm not going to have a second Facebook argument 12 solely on validity. So Facebook will stand up 13 once, Leader twice, if they have got the time to 14 do it.</p>
<p>12 A general point that affects a 13 number of the instructions is that I'm not going 14 to be instructing the jury on theories of 15 indirect infringement. I'm only instructing on 16 direct infringement, so I'm not including any 17 instruction on induced infringement or 18 contributory infringement.</p>	<p>15 That is it for me. I know I have 16 a question about exhibits, but it was suggested 17 there were issues that the parties wanted to 18 raise, so let's go through those first.</p>
<p>19 I don't believe there has been 20 evidence from which the jury could find that any 21 third party other than Facebook is the direct 22 infringer, nor do I think there is any evidence 23 of Facebook's knowledge of the '761 patent at 24 this trial.</p>	<p>19 Mr. Andre. 20 MR. ANDRE: The only issue we have 21 is about exhibits. We have particularly 22 cumbersome exhibits that are I believe DTX 725. 23 THE COURT: Is that thirteen 24 volumes?</p>
Page 1885	Page 1887
<p>1 So the instructions, the verdict 2 form, and argument will be limited to theories 3 of direct infringement, literal as well as 4 Doctrine of Equivalents.</p>	<p>1 MR. ANDRE: The thirteen 2 three-inch binders that are an exhibit. And I 3 believe our paralegals have that ready to go, 4 but we just want to know the logistics of how to 5 -- people giving me death stares in the front 6 row here.</p>
<p>5 3.7, direct literal infringement, 6 this is where I have addressed the issue of 7 control or direction with respect to method 8 claims, 9, 11 and 16. I'm telling the jury that 9 this is a factual issue for them. I'm also 10 identifying some of the factors that they can 11 consider in making that factual determination.</p>	<p>7 THE COURT: I have a question 8 about the logistics, too. 9 MR. ANDRE: How do you want us to 10 get that to you? 11 THE COURT: First off, is there 12 any objection to its admissibility?</p>
<p>12 My instruction accommodates my 13 view that this is a factual dispute, and also 14 what I have put in here is in my view consistent 15 with the law.</p>	<p>13 MR. RHODES: I don't think we 14 object to the admissibility. I question the 15 wisdom of 3,000 documents in the room.</p>
<p>16 4.10, obviousness, the only thing 17 I wanted to point out there is as came up 18 earlier today, I have added in a sentence that 19 the Facebook website is commercially successful. 20 I have also pointed out that it is for the jury 21 to decide if Facebook embodies all of the 22 asserted -- all of the claims of the '761 23 patent.</p>	<p>16 THE COURT: We don't need to argue 17 about it. It is admitted. And let me confer 18 with my deputy for a second. 19 All right. It's just going to be 20 with all of the other exhibits in the custody of 21 my deputy, so you'll just need to give it to us 22 as you have given us any other exhibit, but it 23 is admitted.</p>
<p>24 So what we will do tomorrow is I</p>	<p>24 Anything further, Mr. Andre?</p>

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC., a Delaware corporation,) Trial Day 7)))
PLAINTIFF,))
v.	) C.A. No. 08-862-JJE-LPS))
FACEBOOK, INC., a Delaware corporation,)))
DEFENDANT.)

Tuesday, July 27, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK,
United States District Court Magistrate

APPEARANCES:

POTTER ANDERSON & CORROON, LLP
BY: PHILIP ROVNER, ESQ.

-and-

KING & SPALDING LLP
BY: PAUL ANDRE, ESQ.
BY: JAMES HANNAH, ESQ.

Counsel for Plaintiff

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<p>1 of the '761 patent.</p> <p>2 Four, the term "dynamically" means</p> <p>3 "automatically and in response to the preceding</p> <p>4 event." The term "dynamically" appears in</p> <p>5 claims 1, 9, 21, and 23 of the '761 patent.</p> <p>6 Five, the term "wherein" means "in</p> <p>7 which." The term "wherein" appears in claims 1,</p> <p>8 9, and 23.</p> <p>9 You must not take into</p> <p>10 consideration any argument that the prosecution</p> <p>11 history of the patent or the specification of</p> <p>12 the patent may suggest a different definition of</p> <p>13 the terms set forth in this instruction. You</p> <p>14 are not permitted to use any alternative or</p> <p>15 modified definition in your determination of the</p> <p>16 infringement and invalidity issues in this case.</p> <p>17 Open-ended or comprising claims.</p> <p>18 The preamble to claim 1 uses the phrase "[a]</p> <p>19 computer-implemented network-based system that</p> <p>20 facilitates management of data, comprising. . ."</p> <p>21 The preamble to claim 9 uses the</p> <p>22 phrase "[a] computer-implemented method of</p> <p>23 managing data comprising computer-executable</p> <p>24 acts of. . ."</p>	<p>1 In order to prove infringement,</p> <p>2 Leader must meet its burden of proof of a</p> <p>3 preponderance of the evidence, i.e., that it is</p> <p>4 more likely than not that all of the</p> <p>5 requirements for infringement have been proven.</p> <p>6 Direct literal infringement. In</p> <p>7 order to directly and literally infringe a</p> <p>8 patent claim, a product must include every</p> <p>9 limitation or element of the claim. If the</p> <p>10 accused Facebook system or method omits even a</p> <p>11 single element recited in a patent claim, then</p> <p>12 you must find that the accused Facebook system</p> <p>13 or method has not literally infringed that</p> <p>14 claim.</p> <p>15 Facebook can also be liable for</p> <p>16 direct infringement of a method claim -- that</p> <p>17 is, independent claim 9 of the '761 patent and</p> <p>18 its dependent claims, claims 11 and 16 -- if, by</p> <p>19 itself or in combination with a third party, it</p> <p>20 performs all the steps of the claimed method.</p> <p>21 For Facebook to be liable for the acts of third</p> <p>22 parties, Leader must have proven by a</p> <p>23 preponderance of the evidence, that Facebook</p> <p>24 controls or directs the activity of those</p>
Page 1922	Page 1924
<p>1 The preamble to claim 21 uses the</p> <p>2 phrase "[a] computer-readable medium for storing</p> <p>3 computer-executable instructions for a method of</p> <p>4 managing data, the method comprising. . ."</p> <p>5 The word "comprising" means</p> <p>6 "including the following, but not excluding</p> <p>7 others." If you find that Facebook's</p> <p>8 computer-readable medium practices all of the</p> <p>9 elements in claim 1, 9 or 21, the fact that</p> <p>10 Facebook's computer-readable medium might</p> <p>11 include additional steps would not avoid</p> <p>12 literal infringement of a claim that uses</p> <p>13 "comprising" language.</p> <p>14 Patent infringement generally. I</p> <p>15 will now instruct you how to decide whether or</p> <p>16 not Facebook has infringed the '761 patent.</p> <p>17 Infringement is assessed on a</p> <p>18 claim-by-claim basis; therefore, there may be</p> <p>19 infringement as to one claim but no infringement</p> <p>20 as to another.</p> <p>21 In this case, Leader has alleged</p> <p>22 that Facebook directly infringes claims 1, 4, 7,</p> <p>23 9, 11, 16, 21, 23, 25, 31, and 32 of the '761</p> <p>24 patent.</p>	<p>1 parties who perform the steps of the method</p> <p>2 claims.</p> <p>3 Determining whether Facebook</p> <p>4 controls or directs the activity of those</p> <p>5 parties who perform the steps of the method</p> <p>6 claims is a factual question for you alone to</p> <p>7 decide. In making this determination, factors</p> <p>8 you may consider include whether the claims at</p> <p>9 issue require those third parties to take action</p> <p>10 for the claims to be performed, or</p> <p>11 alternatively, whether the third parties merely</p> <p>12 activate functions already present in the</p> <p>13 underlying invention; whether there is a</p> <p>14 contractual relationship between Facebook and</p> <p>15 the third parties; whether users of Facebook are</p> <p>16 agents of Facebook; and whether Facebook</p> <p>17 supplies the instrumentalities, tools, and the</p> <p>18 website for the person using the website.</p> <p>19 Infringement under the doctrine of</p> <p>20 equivalents. If you decide that Facebook does</p> <p>21 not literally infringe an asserted patent claim,</p> <p>22 you must then decide if Facebook infringes the</p> <p>23 claim under what is called doctrine of</p> <p>24 equivalents.</p>

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 15, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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<p>1 would it change your opinion regarding the 2 iManage manual as it relates to the '761 patent? 3 A. If it's confidential as you say it 4 is, which I don't know, I'm not trying to argue 5 with you, I'm just saying I don't know, and if 6 iManage hadn't actually disclosed it to anyone, 7 the only -- the question in my mind is when 8 iManage had made it public. 9 It wouldn't change my opinion, it 10 would just change maybe when it was made public 11 so I would need more information to know about 12 the date. 13 Q. I think we're cross talking here. 14 A. Okay. 15 Q. I'm asking a very specific 16 question, not if it's public, I'm asking if it 17 is confidential, if this is a confidential 18 document not available to the public, ever? 19 A. Ever. 20 Q. Would it change your opinion with 21 regard to how the iManage manual relates to the 22 '761 patent? 23 A. Well, it wouldn't change my 24 opinion on how it relates to the '761. It may</p>	<p>1 time. 2 Q. Doctor, we're talking about the 3 document. That's all you relied on in this 4 Court, this document. You're not going to tell 5 me, are you, whether you think this is prior art 6 if it's confidential, are you? 7 A. If it is truly confidential, if it 8 wasn't disclosed at all, then I suppose then it 9 wouldn't anticipate. But again, it depends 10 totally on the date and when -- there are just 11 facts I just don't know about at this point. 12 Q. As you sit here right now, like 13 you said, you don't know if Autonomy, the 14 company who provided this in this litigation, if 15 it designated this as confidential, you don't 16 know if they made this public or not, you just 17 don't know? 18 MS. KEEFE: Objection. 19 THE COURT: I'll overrule it. 20 We'll get an answer to this and then we'll move. 21 THE WITNESS: I just don't know. 22 This is not information that I have. 23 THE COURT: Let's move on, 24 Mr. Andre.</p>
Page 1673	Page 1675
<p>1 change my opinion about the date. 2 Q. What do you mean the date? 3 A. Well, because I don't know if and 4 when it was made public. 5 Q. You keep changing my question, 6 Doctor. I don't want to quarrel with you, I 7 just want to make it real simple. 8 A. Just to clarify, do you mean would 9 it change my opinion about how the iManage 10 manual would relate to the '761 patent? 11 Q. You gave an opinion that the 12 iManage manual anticipates the '761 patent 13 because you believe it was a public document 14 published before the patent; correct? 15 A. Uh-huh. 16 Q. If it's a confidential document, 17 it was never published, never made available to 18 the public, would you still have the same 19 opinion that it anticipates the '761 patent? 20 A. Well, insofar as the iManage 21 reference manual actually describes a system 22 that is working, I relied on this particular 23 document to form that opinion, but it's my 24 understanding that a system also existed at the</p>	<p>1 MR. ANDRE: Thank you, Your Honor 2 Your Honor, it's not about the 3 data, I just want to do ask one more question 4 about the document itself. 5 BY MR. ANDRE: 6 Q. Now, you testified about this 7 document that someone with ordinary skill who 8 has a bachelor's degree -- 9 A. And two years plus. 10 Q. -- and two years of experience, 11 they could take this document and build the 12 system described in the document; right? 13 A. They could take this document and 14 use it as a specification to building certainly 15 the parts of the system that relate to the '761 16 patent. 17 Q. You could reverse engineer from 18 the document? 19 A. I would say so. 20 Q. That would be a good reason to 21 keep it confidential, wouldn't it, if you're 22 disclosing that type of proprietary technology? 23 A. I don't think so. It's a 24 reference manual. It's a user manual. You're</p>

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<p>1 asking me things I don't know about. But it's a 2 reference manual. I use this to publicize the 3 document. 4 Q. Fair enough. Let's talk about the 5 manual. Now, you just made reference to the 6 fact that there is a piece of software that this 7 manual refers to. When you formed your opinion 8 you had not used that software before; correct? 9 A. No, I had not. 10 Q. And if you look at the actual 11 manual itself, there is nowhere in this manual 12 does the word metadata appear, does it? 13 A. There are ideas in there. The 14 word metadata does not appear, but there are 15 ideas that relate to metadata. 16 Q. And the word context does not 17 appear in manual? 18 A. The actual word does not appear. 19 Q. Okay. And if you turn to page 12 20 of this document, and Doctor, would you please 21 refer to page 12 of the document in the 22 three-ring binder up there, DTX 1010, I want to 23 make sure we're using the same document. 24 A. Yes, I have it.</p>	<p>1 Q. What is DMS? 2 A. It says here software and/or 3 hardware that managed the repositories of 4 millions of documents or hundreds or thousands 5 of users. 6 Q. It's a document management system? 7 A. That's its main function, but it 8 has a lot of other functions also packed in with 9 it as well. 10 Q. If you go to the next page, page 11 13, it actually talks about what is iManage 12 DeskSite. Do you see that? 13 A. I see that. 14 Q. And so it searches millions of 15 documents, it searches for documents based on 16 document content, it shares documents, it 17 searches for open documents, check in and check 18 out documents, create new versions of documents 19 and track document usage and history. Do you 20 see that? 21 A. I do. 22 Q. This is what the iManage system is 23 about? 24 A. It describes the functions, yes.</p>
Page 1677	Page 1679
<p>1 Q. I believe you're looking at 2 something else. I believe you're looking at a 3 different version of this document. 4 A. Okay. I'll look up there. 5 Q. There is a three-ring binder up 6 there that has the document in it. I would like 7 you to actually use the exhibit we're using at 8 trial here. 9 A. Sorry. The number was DT? 10 Q. DTX 1010. 11 A. Thank you. 12 And you're talking about the Bates 13 number or the page number? 14 Q. Page number. Bottom right-hand 15 corner. 16 A. Sorry, lots of paper. Okay. I 17 see it. 18 Q. And in the middle of the page it 19 ask the question what is a DMS. Do you see 20 that? 21 A. Yes, I do. 22 Q. Do you have an understanding of 23 what a DMS is? 24 A. Yes, I do.</p>	<p>1 Q. It's about tracking documents and 2 managing documents; correct? 3 A. Well, it's tracking document 4 usage, right, by people. 5 Q. It doesn't track people, it tracks 6 documents, that's what the document says; 7 correct? 8 A. It says it's tracking document 9 usage and it's showing in the history system, 10 it's certainly tracking people. This is just a 11 high level description of what it does. I have 12 shown previous in the history system that it 13 does track people. It is tracking people using 14 those documents. 15 Q. That's with the document history 16 system; is that correct? 17 A. That's correct. 18 Q. That's on page 83 of the document; 19 correct? 20 A. I'll have to check. 21 Yes, it is. 22 Q. So this is a document history tab 23 and you have document versions, document 24 history, related documents, document profile,</p>

Page 1680	Page 1682
<p>1 this is the manage travel policy. This is the 2 type of document management system that you see 3 in most offices today, right, this type of a 4 document management system, if you go to the 5 office you have this type of system? 6 A. I'm only speaking towards this 7 one, but this is a feature of this particular 8 system. I don't know if every document 9 management system has a management history in 10 it. This is one thing that sets iManage apart. 11 Q. And you can take that down. With 12 the iManage system, do you need to be connected 13 to the Internet to make this system work? 14 A. It has a -- 15 Q. I'm just asking a real simple 16 question. 17 A. I'm sorry. 18 Q. Okay. Do you need to be connected 19 to the internet to make this system work? 20 A. When you say the "system", what 21 part of the system are you referring to? 22 Q. The document management system. 23 A. Well, it's a big system. It has a 24 portable mode that I mentioned previously.</p>	<p>1 so then you can reconnect. 2 Q. It's not an internet website, is 3 it? 4 A. Beg your pardon? 5 Q. It's not an internet website? 6 A. It has internet capability. I'm 7 not sure what you mean. 8 Q. You don't know what website is? 9 A. I do. When you say it, what do 10 you mean? 11 Q. iManage Desktop system. 12 A. Okay. 13 Q. It's not an internet website? 14 A. It has workings that allows you to 15 access the internet within it. Like you're kind 16 of saying a blanket. I can't say it's yes or no 17 because part of it does let you operate with the 18 internet. 19 Q. I'm not asking you that. I'm 20 asking you a very simple question. 21 Is that an internet website? 22 A. So are you -- just to clarify, 23 you're asking me does one normally access 24 iManage via the internet?</p>
Page 1681	Page 1683
<p>1 Q. I'm saying is it possible to 2 operate the iManage system without being 3 connected to the internet? 4 A. There is -- that's not a yes or no 5 question, because there's a part of the system 6 that lets you operate it in disconnect mode. 7 And then as soon as you connect it, it 8 synchronizes with it. 9 Q. So it's possible. The internet is 10 something you could be on a closed system, 11 closed network now, not on the internet and this 12 system works perfectly fine; correct? 13 A. Well, that kind of 14 mischaracterizes it, because what it is, it's a 15 document of repository, which is what iManage 16 holds. And when you go off on the road, you -- 17 and I think I showed a quote of that earlier, it 18 will -- you can kind of take certain versions 19 and you can work on it. And then you can --when 20 you reconnect, it will come back. 21 So it's not meant to just operate 22 entirely by itself. It's meant to kind of delay 23 what happens. 24 So like you work off line a bit,</p>	<p>1 Q. That's not what I'm asking, 2 Doctor. 3 A. Okay. I just needed to clarify. 4 Q. Do you know what an internet 5 website is? 6 A. Of course. 7 Q. Is the iManage system an internet 8 website? 9 A. I believe that the main way you 10 interact with iManage system is throughout -- 11 no, it's not via the web. 12 Q. There you go. 13 A. Yes. 14 Q. Let's go to Figure 2.2 on Page 24. 15 A. Page 24? 16 Q. Yeah. 17 A. Okay. 18 Q. You see how the tree frame is set 19 up here? 20 A. I do. 21 Q. Is this how iManage manages its 22 documents in this type of file folder structure? 23 A. Well, certainly. iManage does 24 have a file folder structure that it can use.</p>

Page 1684	Page 1686
<p>1 Yes.</p> <p>2 Q. Okay. Can you take that down.</p> <p>3 Now, you testified on Friday that</p> <p>4 the iManage DeskSite is a web-based system;</p> <p>5 right?</p> <p>6 A. It has a feature of a web-based</p> <p>7 system.</p> <p>8 Q. And it says -- I believe you</p> <p>9 testified it could send URL to a document. And,</p> <p>10 therefore, iManage must be web-based; correct?</p> <p>11 A. I have to go back and just check</p> <p>12 my reference because I think I had several up</p> <p>13 there.</p> <p>14 Q. Do you recall testifying to that?</p> <p>15 A. Yes.</p> <p>16 Q. Okay. Now, in order to send a</p> <p>17 document URL link, your system must also include</p> <p>18 the iManage DeskSite web component server?</p> <p>19 A. I believe that's what the</p> <p>20 quotation said. Yes.</p> <p>21 Q. And the web component server is</p> <p>22 not part of the desk site; is that right? It's</p> <p>23 a separate product?</p> <p>24 A. Well, this is all I'm talking here</p>	<p>1 software in the iManage disclosure is one of the</p> <p>2 aspects of the software.</p> <p>3 So I am --</p> <p>4 Q. So that's a different product,</p> <p>5 though; right?</p> <p>6 A. But it's part of iManage.</p> <p>7 Q. So, basically your opinion is if</p> <p>8 the manual is made by iManage, you get the</p> <p>9 entire iManage portfolio of products?</p> <p>10 A. Well, what my opinion is is that</p> <p>11 there's certain disclosures in this manual and</p> <p>12 it discloses lots of things. And these do map</p> <p>13 into the '761 disclosures.</p> <p>14 Q. Now, you just testified also that</p> <p>15 you believe this manual would enable someone to</p> <p>16 go out and build the product that's described in</p> <p>17 the manual; correct?</p> <p>18 A. I believe so, yes.</p> <p>19 Q. And is it your understanding that</p> <p>20 user manuals normally allow people to go out and</p> <p>21 reverse engineer and just build the product</p> <p>22 that's in the user manual?</p> <p>23 A. Well, in fact, as a computer</p> <p>24 scientist often we do specifications to</p>
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<p>1 about what iManage Reference Manual discloses.</p> <p>2 And it discloses that. So it's part -- all part</p> <p>3 of the same iManage system.</p> <p>4 Q. So if you go to Page 75 of the</p> <p>5 document --</p> <p>6 A. Okay.</p> <p>7 Q. So actually on the previous page</p> <p>8 before this is the site you're referencing where</p> <p>9 you can send an URL link. And that was your</p> <p>10 basis for a web-based system; correct?</p> <p>11 A. For web-based capabilities, yes.</p> <p>12 Q. And if you go to the next page,</p> <p>13 the top of the page it says, in order to send a</p> <p>14 document URL link, your system must include an</p> <p>15 iManage work site web component server; correct?</p> <p>16 A. That's correct.</p> <p>17 Q. And that web component server is</p> <p>18 not part of the desk set itself; right?</p> <p>19 A. Well, it's part of iManage.</p> <p>20 Q. Well the entire -- there's 50</p> <p>21 products in iManage, but you are relying on the</p> <p>22 DeskSite?</p> <p>23 A. I'm referring to the disclosure in</p> <p>24 the manual. And this is part of all -- the</p>	<p>1 engineers and one of the ways we specify things</p> <p>2 is by giving a detailed user interface, because</p> <p>3 the interface itself is often one of the most</p> <p>4 fundamentally important part of the system.</p> <p>5 It's how do people use it? How do</p> <p>6 they see it?</p> <p>7 How do they present themselves?</p> <p>8 In fact, I train my students with that. The</p> <p>9 function should be the user interface.</p> <p>10 Q. Doctor, when you gave your opinion</p> <p>11 in this case, when you gave your written</p> <p>12 opinion, you didn't have an opinion whether or</p> <p>13 not this was an enabling disclosure, did you?</p> <p>14 A. I can't recall at that point. I'd</p> <p>15 have to go back and check.</p> <p>16 Q. You didn't provide it in the</p> <p>17 written opinion, though, did you?</p> <p>18 A. I just can't recall. My expert</p> <p>19 report is several hundred pages long, so I just</p> <p>20 can't recall. I can go back and check if you'd</p> <p>21 like.</p> <p>22 Q. That's okay. If you don't recall,</p> <p>23 that's fair enough.</p> <p>24 A. Okay.</p>

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<p>1 Q. Now, the next reference that you</p> <p>2 referred to was the Swartz reference; correct?</p> <p>3 A. That's correct.</p> <p>4 Q. Actually before we go to Swartz, I</p> <p>5 believe we had a conversation Friday about PTX</p> <p>6 1105. I just want to clarify a point.</p> <p>7 We talked about how you had broke</p> <p>8 the claim out into these different subsections;</p> <p>9 correct?</p> <p>10 A. That's correct.</p> <p>11 Q. And you stated that you broke up</p> <p>12 this clause here, the wherein clause because of</p> <p>13 the comma; correct?</p> <p>14 A. Well, you know what -- yes, I did.</p> <p>15 Q. Okay. Now, there's a comma there</p> <p>16 in the first paragraph on the context component;</p> <p>17 correct?</p> <p>18 A. That's correct.</p> <p>19 Q. And there's like another comma</p> <p>20 right here, second comma in the context</p> <p>21 component as well?</p> <p>22 A. That's correct.</p> <p>23 Q. You didn't break those out, did</p> <p>24 you?</p>	<p>1 software. It does sit between things. Yes.</p> <p>2 Q. And I believe you showed Figure 2A</p> <p>3 in your demonstrative slide. Do you have his</p> <p>4 demonstrative?</p> <p>5 This figure here.</p> <p>6 A. That's correct.</p> <p>7 Q. Now, this is -- the DataDocket is</p> <p>8 actually Swartz; correct?</p> <p>9 A. It -- well, Swartz is interacting</p> <p>10 with the other -- with the applications.</p> <p>11 Q. And these are third-party</p> <p>12 applications; right?</p> <p>13 A. In -- yes, but there is an API</p> <p>14 that DataDocket uses to communicate with those.</p> <p>15 Q. I understand. But these are --</p> <p>16 this could be, for example, Microsoft Word?</p> <p>17 A. Well, they're much -- Swartz looks</p> <p>18 at much broader things, but it's a system.</p> <p>19 Q. Yeah.</p> <p>20 A. It's a system.</p> <p>21 Q. It's third parties?</p> <p>22 A. Yes.</p> <p>23 Q. Now, you stated the tracking</p> <p>24 component would reside within Swartz; is that</p>
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<p>1 A. Well, actually if you could look</p> <p>2 at my claim chart, I did break --</p> <p>3 Q. Doctor, the claim charts are not</p> <p>4 into evidence. I don't want to talk to this.</p> <p>5 You didn't break those into</p> <p>6 separate elements, did you?</p> <p>7 A. Well, I -- this was presented to</p> <p>8 me during the deposition because you're talking</p> <p>9 about my claim charts. And my claim charts do</p> <p>10 break up all the elements in much the same way</p> <p>11 that they're talking about right now.</p> <p>12 Q. You can take down that.</p> <p>13 All right. Dr. Schwartz -- I</p> <p>14 mean, Dr. Greenberg, let's go back to Swartz.</p> <p>15 A. Okay.</p> <p>16 Q. Now, Swartz is a middleware</p> <p>17 product; correct?</p> <p>18 A. Swartz is a product that's</p> <p>19 primarily middleware, but also interacts with --</p> <p>20 through the applications with an API.</p> <p>21 Q. And the middleware sits between</p> <p>22 two applications; correct?</p> <p>23 A. Middleware generally is described</p> <p>24 as a software that interacts with other</p>	<p>1 correct?</p> <p>2 A. The tracking component resides in</p> <p>3 the DataDocket Software, which has an API that</p> <p>4 communicates through all these systems. That's</p> <p>5 actually also indicated in Swartz.</p> <p>6 Q. And where is the context component</p> <p>7 in Swartz, did you say?</p> <p>8 A. The context component is some of</p> <p>9 the software that resides on the DataDocket</p> <p>10 software.</p> <p>11 Q. So --</p> <p>12 A. Again, that interacts with an API.</p> <p>13 Swartz specifically discloses an API that talks</p> <p>14 with the systems.</p> <p>15 Q. So, in your opinion, these</p> <p>16 third-party systems somehow interact and perform</p> <p>17 the functions of the '61?</p> <p>18 A. Yes, it's not somehow. It does.</p> <p>19 It's -- Swartz, it actually describes how it has</p> <p>20 an API that talks to these third-party systems.</p> <p>21 This is a standard on the client</p> <p>22 server type of architecture, so...</p> <p>23 Q. And this document, this system,</p> <p>24 the Swartz system, this doesn't rely on the</p>

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<p>1 internet, either, does it?</p> <p>2 A. Let me try to recall. Can I just</p> <p>3 do a quick check to my report?</p> <p>4 Q. If you need to.</p> <p>5 A. Okay. Thank you.</p> <p>6 Swartz actually has web-based</p> <p>7 capabilities and I believe I showed that on --</p> <p>8 Q. I understand it's web based, but I</p> <p>9 think we're cross talking again.</p> <p>10 A. Okay.</p> <p>11 Q. You don't need to be on the</p> <p>12 internet to have Swartz working; correct?</p> <p>13 A. Certain parts of Swartz, you don't</p> <p>14 have to be on the internet. I think that's fair</p> <p>15 to say.</p> <p>16 But other parts do allow you to be</p> <p>17 on the internet. It discloses what is</p> <p>18 interacting.</p> <p>19 Q. I understand. I understand.</p> <p>20 Now, if you go to Figure 11 of the</p> <p>21 document, once again, Swartz organizes the data</p> <p>22 in these tree structures and files them in</p> <p>23 folders; correct?</p> <p>24 A. On this figure, it does.</p>	<p>1 index; right, FileNet's Foundation?</p> <p>2 A. Yes.</p> <p>3 Q. Not the Swartz system itself;</p> <p>4 right?</p> <p>5 A. Correct. The defining is defining</p> <p>6 the context of this. But indexing is a standard</p> <p>7 term known to those in the art.</p> <p>8 Q. But what I am saying, what you</p> <p>9 relied upon in your opinion is talking about the</p> <p>10 FileNet's paper, not the Swartz reference, not</p> <p>11 the Swartz disclosure or --</p> <p>12 THE COURT: Ms. Keele.</p> <p>13 MS. KEEFE: I just want to insert</p> <p>14 an objection. Please let him answer the</p> <p>15 question instead of talking over him so many</p> <p>16 times.</p> <p>17 THE COURT: Sustained. But let's</p> <p>18 let him answer this question if he knows what</p> <p>19 the question is.</p> <p>20 THE WITNESS: Okay. So, yes, it</p> <p>21 was introducing the context of this, but it's</p> <p>22 talking about indexing in a way that's well</p> <p>23 known to those of ordinary skill in the art.</p> <p>24 It's talking about database. This</p>
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<p>1 Q. Okay. And if you go to -- you</p> <p>2 mentioned the indexing of Claim 21 and Claim 11.</p> <p>3 I believe it was in Swartz; correct?</p> <p>4 And you used Column 3, and you</p> <p>5 cited Line 6 to 69.</p> <p>6 Let's go right up here.</p> <p>7 A. I see that. Yes.</p> <p>8 Q. This was the part you cited</p> <p>9 towards -- for the indexing portion of Swartz</p> <p>10 for the claims; right?</p> <p>11 A. That's correct.</p> <p>12 Q. Okay. And the indexing in this</p> <p>13 particular instance, is not really talking about</p> <p>14 Swartz at all, is it?</p> <p>15 A. Well, it's part of the background</p> <p>16 to Swartz. It talks about all the capabilities</p> <p>17 that a system like this should have.</p> <p>18 Q. And actually if you go back to the</p> <p>19 previous column in Column 2, it's actually</p> <p>20 talking about another product right down here;</p> <p>21 correct? It's a continuation?</p> <p>22 A. Well, in this case.</p> <p>23 Q. It's FileNet's Foundation. This</p> <p>24 was a different system that we're talking about</p>	<p>1 is really standard stuff that any second year</p> <p>2 student would know. It was nothing surprising</p> <p>3 here.</p> <p>4 Q. And that's kind of your take on</p> <p>5 the entire patent. There's nothing surprising</p> <p>6 about this patent at all, the '761 patent;</p> <p>7 right?</p> <p>8 A. Oh, I didn't say that. You know,</p> <p>9 there is things in the '761 that would be</p> <p>10 surprising if it was in fact new.</p> <p>11 Q. All right. Let's go to Hubert</p> <p>12 real quick.</p> <p>13 Go to DTX 604.</p> <p>14 A. Okay.</p> <p>15 Q. Dr. Greenberg, you're testifying</p> <p>16 that something called a meta-document is the</p> <p>17 same thing as the '761 patented technology;</p> <p>18 correct?</p> <p>19 A. What I'm saying -- what I said was</p> <p>20 that the ideas disclosed in this patent</p> <p>21 discloses the ideas in the '761 patent.</p> <p>22 Q. And if you go to the figure in</p> <p>23 this -- I'm sorry. Go back to the previous.</p> <p>24 It's Figure 2.</p>

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<p>1 Page 9 of the document. So this</p> <p>2 is the meta-document right here; correct?</p> <p>3 A. It's that inter-component of a</p> <p>4 source or environment.</p> <p>5 Q. And so this document travels from</p> <p>6 source to source to source; correct?</p> <p>7 A. The meta-document travels from</p> <p>8 source to source, which contains a document plus</p> <p>9 metadata plus processing information, which is</p> <p>10 another type of metadata.</p> <p>11 Q. And in your opinion, as you sit</p> <p>12 here today, you believe that that's somehow</p> <p>13 tracking users on a system? That's your</p> <p>14 opinion; correct?</p> <p>15 A. Yes, it is.</p> <p>16 Q. And the storage component of this</p> <p>17 system is where?</p> <p>18 A. Well, there's -- there's a few</p> <p>19 storage components. There's the storage</p> <p>20 component on the meta-document itself and</p> <p>21 there's -- because meta-document is stored and</p> <p>22 there was a section in Hubert that talks about</p> <p>23 that.</p> <p>24 And as well as part of this</p>	<p>1 patent. You know, there's parts of Hubert that</p> <p>2 are different. But the ideas there are</p> <p>3 disclosed.</p> <p>4 Q. The ideas there are disclosed.</p> <p>5 You also mentioned -- you can take</p> <p>6 that down -- that you believe the patent is</p> <p>7 obvious; correct?</p> <p>8 A. That is correct.</p> <p>9 Q. And you said basically in these</p> <p>10 references to be combined in any way to cover</p> <p>11 whatever elements to make it obvious; correct?</p> <p>12 A. That's correct.</p> <p>13 Q. You didn't go through and actually</p> <p>14 say this part of this reference and that part of</p> <p>15 that reference would make it obvious; correct?</p> <p>16 A. No, I did not. Although here we</p> <p>17 are only talking about those three references.</p> <p>18 We're not talking about Ausems.</p> <p>19 With Ausems, I did say where it</p> <p>20 would be combined.</p> <p>21 Q. You also gave an opinion, Dr.</p> <p>22 Greenberg, that the provisional patent did not</p> <p>23 disclose the '761; is that correct?</p> <p>24 A. That's correct.</p>
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<p>1 pollination that I mentioned.</p> <p>2 Q. I understand. I don't mean to</p> <p>3 interrupt you. If you just give me where it is</p> <p>4 in simple terms.</p> <p>5 THE COURT: You did interrupt him.</p> <p>6 Let's let him answer the question.</p> <p>7 THE WITNESS: So what -- a</p> <p>8 meta-document stores the information. So it's</p> <p>9 stored on the particular source that it happens</p> <p>10 to reside on.</p> <p>11 There's also another storage</p> <p>12 that's part of this pollination that happens.</p> <p>13 So as the meta-document travels around, it</p> <p>14 actually deposits some of the knowledge in</p> <p>15 those.</p> <p>16 So the storage can be all</p> <p>17 throughout the system only if the meta-document</p> <p>18 it arrives there.</p> <p>19 Q. And it's your opinion that in a</p> <p>20 meta-document is the same type of system in the</p> <p>21 '761 patent?</p> <p>22 A. Well, as I mentioned, my opinion</p> <p>23 is that there's concepts disclosed by Hubert</p> <p>24 that disclose the same concepts in the '761</p>	<p>1 Q. So --</p> <p>2 A. Sorry. That it did not disclose</p> <p>3 certain elements of the '761.</p> <p>4 Q. So your opinion is that a document</p> <p>5 management system, a middleware product or</p> <p>6 meta-document does disclose everything the</p> <p>7 actual source code that the inventors used to</p> <p>8 make their product and they put into the</p> <p>9 provisional did not disclose all the elements;</p> <p>10 correct?</p> <p>11 A. Well, there's several questions</p> <p>12 there. Should I take them -- I'll try.</p> <p>13 Q. Well, let me just give you a</p> <p>14 conclusion. It's your opinion that the codes in</p> <p>15 the back of the provisional application did not</p> <p>16 disclose the invention of the '761 patent;</p> <p>17 correct?</p> <p>18 A. No. My opinion was that it did</p> <p>19 not disclose the elements of the asserted</p> <p>20 claims. There are parts of that disclosure that</p> <p>21 talk about other parts of the patent, the '761</p> <p>22 patent.</p> <p>23 In fact, in other claims that</p> <p>24 aren't to my understanding being asserted in</p>

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<p>1 this case, that are there, but not in the</p> <p>2 asserted claims. That's what I'm saying. It's</p> <p>3 quite a different thing.</p> <p>4 Q. Right. And you stated that in</p> <p>5 your presentation that there was no mention of</p> <p>6 context data in the provisional application;</p> <p>7 correct?</p> <p>8 A. There's no mention of context</p> <p>9 information. There is no mention of a context</p> <p>10 data itself in terms of that phrase.</p> <p>11 Q. You're drawing a distinction</p> <p>12 between context information and context data?</p> <p>13 A. No, the main thing I'm saying is</p> <p>14 that there's no context component and there's no</p> <p>15 tracking component. I think when I was showing</p> <p>16 those words, I actually said, Here's the words</p> <p>17 that don't actually appear, but the main</p> <p>18 argument throughout was that there's no context</p> <p>19 component. There's no tracking component in the</p> <p>20 way that's used in the asserted elements.</p> <p>21 Q. You also mentioned the word</p> <p>22 metadata doesn't appear?</p> <p>23 A. I said it appears once in the</p> <p>24 background.</p>	<p>1 5. When it talks about in the first, in</p> <p>2 paragraph 13, it is an objection of the</p> <p>3 invention to provide a communication tool that</p> <p>4 seamlessly facilitates comments, compiles, and</p> <p>5 distributes communication data?</p> <p>6 A. Yes, I see that.</p> <p>7 Q. You wouldn't consider that</p> <p>8 metadata?</p> <p>9 A. It just says communication data,</p> <p>10 that's the data, I don't see where the metadata</p> <p>11 is in that.</p> <p>12 Q. Really, it's your opinion that</p> <p>13 wouldn't be talking about data about data?</p> <p>14 A. Where is data about data? It says</p> <p>15 communication data, so if I'm sending, for</p> <p>16 example, a document, that's the data. It</p> <p>17 doesn't say anything about metadata in there to</p> <p>18 me.</p> <p>19 Q. Go down to paragraph 16, where it</p> <p>20 says it is still a further object of the</p> <p>21 invention to provide a communication tool that</p> <p>22 automatically stores contextual information</p> <p>23 relating to an item of communication and</p> <p>24 utilizes that contextual in performance of</p>
Page 1701	Page 1703
<p>1 Q. And that meant something to you</p> <p>2 regarding the provisional; correct?</p> <p>3 A. That's correct.</p> <p>4 Q. But when -- the words metadata</p> <p>5 didn't appear in iManage and it wasn't a</p> <p>6 problem, was it?</p> <p>7 A. Well, iManage has distinctly</p> <p>8 talked about history record.</p> <p>9 Q. Mm-hmm.</p> <p>10 A. It talks about profiles. It talks</p> <p>11 about all these things, which is really data</p> <p>12 about data.</p> <p>13 So in there they use different</p> <p>14 language because -- as user language. They are</p> <p>15 not using jargon, technical jargon.</p> <p>16 So they use every day language,</p> <p>17 but or more something more akin to every day</p> <p>18 language as you can get in computer system.</p> <p>19 But so certainly they're talking</p> <p>20 about data about data. So it's metadata.</p> <p>21 That's the definition of it.</p> <p>22 Q. And if we go to the summary of the</p> <p>23 invention of the provisional application.</p> <p>24 On page -- this is PTX 3 -- Page</p>	<p>1 communication tasks?</p> <p>2 A. I see that.</p> <p>3 Q. It's your understanding that the</p> <p>4 contextual information is not context data?</p> <p>5 A. Well, I didn't say that. What I</p> <p>6 said, in fact, was that a board actually</p> <p>7 contains -- I can't actually recall how I</p> <p>8 defined it on my slide, but the board would</p> <p>9 contain that kind of data, but it's not done in</p> <p>10 the way that's described in the asserted claims,</p> <p>11 elements of the asserted claims.</p> <p>12 Q. In your slide you said there is no</p> <p>13 mention of context data. You don't think that's</p> <p>14 a mention of context data?</p> <p>15 A. What I said in my slide, and</p> <p>16 remember that slide said at a face value here is</p> <p>17 what we see, that these words are not there, and</p> <p>18 then I went to talk about the particular ideas,</p> <p>19 particular context component and tracking</p> <p>20 component, just to clarify. I just want to</p> <p>21 clarify.</p> <p>22 Q. Sure. I want your clearest</p> <p>23 testimony.</p> <p>24 And then go to the next page,</p>

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<p>1 paragraph 22. The last sentence of that 2 paragraph, as users create and change their 3 contexts, going from one context to another; 4 right? 5 A. So -- 6 Q. I want to make sure, we seem to be 7 talking past each other. I just want to get 8 your understanding. As users create and change 9 their contexts, they're going from one context 10 to another, right? They're changing the 11 context. Do you agree with that? 12 A. Uh-huh. 13 Q. They're going from one to the 14 other, they're moving the files and applications 15 automatically follow, you got that? 16 A. Uh-huh. 17 Q. They're being tracked, they're 18 being followed, dynamically capturing those in 19 context, do you see that? 20 A. I see that, but I don't agree with 21 that. 22 Q. You don't agree that the words say 23 that? 24 A. No. You said tracking. Remember,</p>	<p>1 MR. ANDRE: Your Honor, may I have 2 a side-bar? 3 THE COURT: Yes. 4 (Side-bar discussion.) 5 MR. ANDRE: Your Honor, I just 6 would like to make an offer of proof regarding 7 the Swartz reference that the substance, purpose 8 and relevance of the following testimony will 9 make clear on the record we expected if 10 permitted to cross-examine Dr. Greenberg would 11 have established the testimony of Facebook's 12 expert that this same examiner who appeared on 13 the face of the '76 I also appeared on the Swartz 14 reference. We believe this is relevant because 15 they are going to put into evidence and put it 16 in front of the jury and show the jury the face 17 of the patent on multiple occasions. We did in 18 our request on Friday say that patent office 19 considered that reference. We state that the 20 examiner would likely be aware of the reference. 21 We think that the testimony would 22 provide the jury with valuable information 23 regarding what was actually the process in the 24 patent office and the fact of the matter is that</p>
Page 1705	Page 1707
<p>1 I showed -- 2 Q. I understand you don't agree? 3 THE COURT: Mr. Andre, let him 4 answer the question. 5 THE WITNESS: I actually showed 6 this, this phrase to the jury when I was talking 7 about how the system presents boards and then 8 relationships between boards and the workflow. 9 That's -- and then I showed in the code where 10 this is specified manually. 11 So this is kind of what happened, 12 what people do with that afterwards. So you 13 have a workflow, essentially here is a procedure 14 that you can follow. And that's what I think 15 this thing is saying is that as you follow that 16 procedure, this will happen. 17 But these relationships were not 18 done by tracking people. As I said, there is 19 nothing about tracking people in this or 20 capturing the context as they're doing it, this 21 is an after-the-fact thing. 22 MR. ANDRE: I have no further 23 questions, Your Honor. 24 THE WITNESS: Thank you.</p>	<p>1 information is factually based, put into 2 evidence by Facebook in this case. 3 THE COURT: Okay. 4 MS. KEEFE: Do you want me to 5 respond? 6 THE COURT: Only if you feel you 7 have to, I have ready already made my ruling. 8 MS. KEEFE: I agree. 9 THE COURT: Fine. Thank you. 10 (End of side-bar.) 11 THE COURT: Redirect. 12 MS. KEEFE: Just two small things, 13 Your Honor. 14 BY MS. KEEFE: 15 Q. Dr. Greenberg, do you have a copy 16 of your report there in front of you? 17 A. Yes, I do. 18 Q. I believe Mr. Andre was asking you 19 whether or not you had actually opined about 20 whether the iManage reference manual was 21 enabling; is that correct? 22 A. Yes, he did. 23 Q. Could I turn your attention to 24 paragraph 48.</p>

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1 A. Sorry. Are we looking at my	1 THE COURT: Thank you, Professor.
2 report.	2 THE WITNESS: Thank you.
3 Q. I'm sorry. Paragraph 48 of your	3 MS. KEEFE: We're about to finish
4 report.	4 up. At this time Facebook rest its ease on
5 A. Okay.	5 invalidity.
6 Q. And did you, in fact, express an	6 THE COURT: Okay. Thank you.
7 opinion regarding the enablement of the iManage	7 MR. ANDRE: Your Honor, we would
8 reference?	8 like to do some housekeeping matters at this
9 A. Yes, I did. And thanks for	9 point. I don't know if it's appropriate to have
10 reminding me. It's been a while since I wrote	10 the jury step out.
11 this.	11 THE COURT: We can go to the
12 MR. ANDRE: Objection, Your Honor.	12 side-bar.
13 Hearsay.	13 MR. ANDRE: It will be a pretty
14 MS. KEEFE: He opened the door,	14 long one. If we can do it at side-bar --
15 Your Honor.	15 THE COURT: And without telling me
16 THE COURT: Overruled.	16 in front of the jury what the housekeeping is,
17 A. Paragraph 48, I say it is my	17 it's something that needs to be done now I take
18 opinion that iManage user manual and the system	18 it?
19 that it describes invalidates every asserted	19 MR. ANDRE: It is. It's
20 claim of the '761 patent.	20 essential.
21 Q. And regarding --	21 THE COURT: Okay. Well, let's
22 MR. ANDRE: Objection, Your Honor.	22 start at side-bar and if it's going to take too
23 Move to strike. That's not what was asked.	23 long, we'll excuse the jury. Let's see if we
24 MS. KEEFE: I agree.	24 can get it done.
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1 THE COURT: I'm not going to	1 (Discussion at side-bar.)
2 strike it, but let's move on. I'm overruling	2 THE COURT: You're here to make a
3 the motion, or denying the motion to strike.	3 motion.
4 MS. KEEFE: Thank you.	4 MR. ANDRE: I'm here to make a
5 BY MS. KEEFE:	5 motion. It's on behalf of Leader Technologies.
6 Q. Also with respect to the iManage	6 On behalf of Leader Technologies, we move for
7 DeskSite user reference manual, Dr. Greenberg,	7 judgment as a matter of law with respect to a
8 when you were writing your report, did the copy	8 number of issues presented in the case.
9 of the manual that you were using contain a	9 THE COURT: As I did with
10 confidentiality designation?	10 Mr. Rhodes, I'm not going -- I'm going to be
11 A. No. I have it right in front of	11 reserving judgement on this. Other than just
12 me, this is an exact copy used, and it did not	12 identifying what the issues are, do you feel to
13 have that confidentiality designation.	13 you need to make a record at this time?
14 MS. KEEFE: Your Honor, at this	14 MR. ANDRE: We do, Your Honor. We
15 time we would move into evidence Exhibit 925E.	15 believe that with the uncertain flux of the
16 MR. ANDRE: Objection, Your Honor.	16 appellate courts, I just don't feel comfortable
17 This is not the document that he has testified	17 not making a complete record on it. We do have
18 to.	18 a script to read through each of the claims.
19 THE COURT: I'm overruling the	19 It's go to take some time to go through what we
20 objection. It's admitted.	20 believe is the proper procedure.
21 MS. KEEFE: Thank you, Your Honor.	21 THE COURT: And then you'll recall
22 Nothing further, Dr. Greenberg.	22 Dr. Herbsleb?
23 Thank you.	23 MR. ANDRE: And Dr. Herbsleb will
24 THE WITNESS: Thank you very much.	24 be our last witness.

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<p>1 THE COURT: He's going to be 2 approximately how long?</p>	<p>1 prior art and are therefore not invalid for that 2 reason.</p>
<p>3 MR. ANDRE: Honor, hour-and-a-half.</p>	<p>3 Number three, judgment as a matter</p>
<p>4 MR. RHODES: May I speak, Your 5 Honor?</p>	<p>4 of law that the invention covered by any of the 5 asserted claims of U.S. Patent Number 7,139,761</p>
<p>6 THE COURT: Yes.</p>	<p>6 was not in public use or on sale by Leader</p>
<p>7 MR. RHODES: I don't fundamentally 8 agree with Mr. Andre. There is some confusion 9 at least in my mind, I'm a trial lawyer, not an 10 appellant lawyer. There are some issues in the 11 record. What I would propose for the record, we 12 would want to do the same thing at the same 13 time, but we have more records. Perhaps you 14 could let the jury out and we could each read it 15 in and then we're done.</p>	<p>7 Technologies more than one year prior to the 8 effective filing date and the asserted claims of 9 U.S. Patent Number 7,139,761 are therefore not 10 invalid for that reason.</p>
<p>16 THE COURT: I'll give them their 17 break early.</p>	<p>11 Number four, judgment as a matter 12 of law that Facebook has no defense to 13 infringing the asserted claims of U.S. Patent 14 Number 7,139,761 under the Doctrine of 15 Equivalents, including but not limited to, that 16 Facebook has not demonstrated that infringement 17 under the Doctrine of Equivalents results in the 18 asserted claims ensnaring the prior art, as 19 Facebook has failed to provide a hypothetical 20 claim as required to prove ensnarement.</p>
<p>18 MR. ANDRE: I just know that we 19 want to put it on the record before we begin our 20 rebuttal case.</p>	<p>21 Number five, judgment as a matter 22 of law that the U.S. Provisional Patent 23 Application 60/432,255 supports the asserted 24 claims of the U.S. Patent Number 7,139,761 and</p>
<p>21 THE COURT: I understand.</p>	
<p>22 (End of side-bar discussion.)</p>	
<p>23 THE COURT: Ladies and gentlemen, 24 there are some matters that I need to discuss</p>	
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<p>1 with the lawyers and they are going to take more 2 than just a couple of minutes, so we're going to 3 give you your break early this morning and we'll 4 hope to have you back in about fifteen minutes. 5 But rest assured we'll have you back just as 6 soon as we can.</p>	<p>1 U.S. Patent Number 7,139,761 Patent properly 2 relies on the December 11th, 2002 priority date 3 of that provisional application.</p>
<p>7 THE CLERK: All rise. 8 (Jury leaving the courtroom at 9 10:14 a.m.)</p>	<p>4 On Leader's claims. Number one, 5 judgment as a matter of law that Facebook 6 literally infringes Claim 1 of United States 7 Patent Number 7,139,761 in violation of 35 8 U.S.C. Sections 271(a), (b), and/or (c).</p>
<p>10 THE COURT: You can be seated.</p>	<p>9 Number two, judgment as a matter 10 of law that Facebook infringes under the 11 Doctrine of Equivalents Claim 1 of U.S. Patent 12 Number 7,139,761 in violation of 35 U.S.C. 13 Sections 271 at (a), (b) and/or (c).</p>
<p>11 Mr. Andre, come forward and make 12 your motion.</p>	<p>14 Number three, judgment as a matter 15 of law that Facebook literally infringes Claim 4 16 of U.S. Patent Number 7,139,761 in violation of 17 35 U.S.C. Sections 271(a), (b) and/or (c).</p>
<p>13 MR. ANDRE: Thank you, Your Honor. 14 On behalf of Leader Technologies, we move for 15 judgment as a matter of law with respect to a 16 number of issues presented.</p>	<p>18 Number four, judgment as a matter 19 of law that Facebook infringes under the 20 Doctrine of Equivalents Claim 4 of U.S. Patent 21 Number 7,139,761 in violation of 35 U.S.C. 22 Sections 271(a), (b) and/or (c).</p>
<p>17 On Facebook's claims. Number one, 18 judgment as a matter of law that the asserted 19 claims of U.S. Patent Number 7,139,761 were not 20 anticipated by prior art and are therefore not 21 invalid for that reason.</p>	<p>23 Number five, judgment as a matter 24 of law that Facebook literally infringes Claim 7</p>
<p>22 Number two, judgment as a matter</p>	
<p>23 of law that the asserted claims of U.S. Patent</p>	
<p>24 Number 7,139,761 are not obvious in light of the</p>	

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<p>1 of U.S. Patent Number 7,139,761 in violation of</p> <p>2 35 U.S.C. Sections 271(a), (b) and/or (c).</p> <p>3 Number six, judgment as a matter</p> <p>4 of law that Facebook infringes under the</p> <p>5 Doctrine of Equivalents Claim 7 of U.S. Patent</p> <p>6 Number 7,139,761 in violation of 35 U.S.C.</p> <p>7 Sections 271(a), (b) and/or (c).</p> <p>8 Number seven, judgment as a matter</p> <p>9 of law that Facebook literally infringes Claim 9</p> <p>10 of U.S. Patent Number 7,139,761 in violation of</p> <p>11 35 U.S.C. Sections 271(a), (b) and/or (c).</p> <p>12 Number eight, judgment as a matter</p> <p>13 of law that Facebook infringes under the</p> <p>14 Doctrine of Equivalents Claim 9 of U.S. Patent</p> <p>15 Number 7,139,761 in violation of 35 U.S.C.</p> <p>16 Sections 271(a), (b) and/or (c).</p> <p>17 Number nine, Facebook as a matter</p> <p>18 of law -- strike that.</p> <p>19 Number nine, judgment as a matter</p> <p>20 of law that Facebook literally infringes Claim</p> <p>21 11 of U.S. Patent Number 7,139,761 in violation</p> <p>22 of 35 U.S.C. Sections 271(a), (b) and/or (c).</p> <p>23 Number ten, judgment as a matter</p> <p>24 of law that Facebook infringes under the</p>	<p>1 matter of law that Facebook literally infringes</p> <p>2 Claim 23 of U.S. Patent Number 7,139,761 in</p> <p>3 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>4 and/or (c).</p> <p>5 Number sixteen, judgment as a</p> <p>6 matter of law that Facebook infringes under the</p> <p>7 Doctrine of Equivalents Claim 23 of U.S. Patent</p> <p>8 Number 7,139,761 in violation of 35 U.S.C.</p> <p>9 Sections 271(a), (b) and/or (c).</p> <p>10 Number seventeen, judgment as a</p> <p>11 matter of law that Facebook literally infringes</p> <p>12 Claim 25 of U.S. Patent Number 7,139,761 in</p> <p>13 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>14 and/or (c).</p> <p>15 Number eighteen, judgment as a</p> <p>16 matter of law that Facebook infringes under the</p> <p>17 Doctrine of Equivalents Claim 25 of U.S. Patent</p> <p>18 Number 7,139,761 in violation of 35 U.S.C.</p> <p>19 Sections 271(a), (b) and/or (c).</p> <p>20 Number nineteen, judgment as a</p> <p>21 matter of law that Facebook literally infringes</p> <p>22 Claim 31 of U.S. Patent Number 7,139,761 in</p> <p>23 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>24 and/or (c).</p>
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<p>1 Doctrine of Equivalents Claim 11 of U.S. Patent</p> <p>2 Number 7,139,761 in violation of 35 U.S.C.</p> <p>3 Sections 271(a), (b) and/or (c).</p> <p>4 Number eleven, judgment as a</p> <p>5 matter of law that Facebook clearly infringes</p> <p>6 Claim 16 of U.S. Patent Number 7,139,761 in</p> <p>7 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>8 and/or (c).</p> <p>9 Number twelve, judgment as a</p> <p>10 matter of law that Facebook infringes under the</p> <p>11 Doctrine of Equivalents Claim 16 of U.S. Patent</p> <p>12 Number 7,139,761 in violation of 35 U.S.C.</p> <p>13 Sections 271(a), (b) and/or (c).</p> <p>14 Number thirteen, judgment as a</p> <p>15 matter of law that Facebook literally infringes</p> <p>16 Claim 21 of U.S. Patent Number 7,139,761 in</p> <p>17 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>18 and/or (c).</p> <p>19 Number fourteen, judgment as a</p> <p>20 matter of law that Facebook infringes under the</p> <p>21 Doctrine of Equivalents Claim 21 of U.S. Patent</p> <p>22 Number 7,139,761 in violation of 35 U.S.C.</p> <p>23 Sections 271(a), (b) and/or (c).</p> <p>24 Number fifteen, judgment as a</p>	<p>1 Number twenty, judgment as a</p> <p>2 matter of law that Facebook infringes under the</p> <p>3 Doctrine of Equivalents Claim 31 of U.S. Patent</p> <p>4 Number 7,139,761 in violation of 35 U.S.C.</p> <p>5 Sections 271(a), (b) and/or (c).</p> <p>6 Number twenty-one, judgment as a</p> <p>7 matter of law that Facebook literally infringes</p> <p>8 Claim 32 of U.S. Patent Number 7,139,761 in</p> <p>9 violation of 35 U.S.C. Sections 271(a), (b)</p> <p>10 and/or (c).</p> <p>11 Number twenty-two, judgment as a</p> <p>12 matter of law that Facebook infringes under the</p> <p>13 Doctrine of Equivalents Claim 32 of U.S. Patent</p> <p>14 Number 7,139,761 in violation of U.S.C. Sections</p> <p>15 271(a), (b) and/or (c).</p> <p>16 I have completed my motion, Your</p> <p>17 Honor.</p> <p>18 THE COURT: Okay. I'm going to be</p> <p>19 reserving judgment on those motions.</p> <p>20 Is there anything that Facebook</p> <p>21 would like to say at this time?</p> <p>22 MR. RHODES: Yes, Your Honor.</p> <p>23 MR. WEINSTEIN: We also have quite</p> <p>24 a few more motions, but we were going to go into</p>

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<p>1 quite a bit more detail than they were and I 2 realize that -- I don't want to be Jimmy Stewart 3 and Mr. Weinstein goes to Wilmington here, but 4 it will take about thirty-five to forty minutes 5 to read this into the record. 6 THE COURT: Thirty-five to forty 7 minutes? 8 MR. WEINSTEIN: Yes, Your Honor. 9 If Your Honor would like I could outline them 10 and file a written submission that would be 11 deemed submitted at the close of all evidence. 12 THE COURT: That's certainly 13 preferable to making the jury wait for forty 14 more minutes. 15 MR. WEINSTEIN: That's what I 16 thought, Your Honor. 17 THE COURT: So give me the five- 18 to ten-minute version and then we'll deem your 19 written filings submitted as of this point in 20 the presentation. 21 MR. WEINSTEIN: Thank you, Your 22 Honor. 23 Pursuant to Rule 50(a) for the 24 Federal Rules of Civil Procedure, Facebook moves</p>	<p>1 matter of law of noninfringement on the grounds 2 that Leader has presented no legally sufficient 3 evidentiary basis from which a reasonable jury 4 can find that Facebook exercises direction or 5 control over any user with respect to claim 6 elements that user must satisfy, or claim step 7 that user must perform, as required by the 8 Muniauction and BMC decisions. Each of these 9 independent claims contain at least one claim 10 step or claim element that requires user 11 involvement to satisfy all elements of such 12 claim. I'll detail this more in our written 13 submissions, the specific basis and more of the 14 evidence on which this particular motion is 15 based, Your Honor. 16 Facebook also seeks judgement as a 17 matter of law with respect to Leader's claim for 18 direct patent infringement on the ground that 19 Leader has presented no legally sufficient 20 evidentiary basis from which a reasonable jury 21 could find that Facebook performs each and every 22 element of any asserted claim, literally or 23 under the Doctrine of Equivalents, under the 24 claims as properly construed).</p>
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<p>1 for a judgment as a matter of law as to Leader's 2 first cause of action for infringement of United 3 States Patent Number 7,139,761 and with respect 4 to all asserted claims which include Claims 1, 5 4, 7, 9, 11, 16, 21, 23, 25, 31, and 32. Any 6 reference to these claims shall be referred to 7 as the asserted claims, the claims asserted, or 8 any other variant intended to refer only to 9 those claims that I just mentioned. 10 Initially Facebook seeks judgment 11 as a matter of law with respect to all the other 12 claims on which no evidence was presented at 13 trial which includes Claims 2, 3, 5, 6, 8, 10, 14 12, 13, 14, 15, 17, 18, 19, 20, 22, 24, 26 15 through 30 and 33 through 35 which includes 16 several claims that were previously asserted in 17 this case, but abandoned during discovery and 18 expert discovery. 19 No reasonable jury could find 20 infringement under any of these claims literally 21 or under the Doctrine of Equivalents through any 22 theory based on direct, induced and/or 23 contributory infringement. 24 Facebook seeks judgment as a</p>	<p>1 There are additional elements that 2 apply to Leader's claims for induced and 3 contributory infringement which I will address 4 separately. 5 With respect to the direct 6 infringement claims, each claim includes either 7 a tracking component of the number, for tracking 8 a change of the user from the first context to a 9 second context and dynamically updating the 10 stored metadata based on the change, wherein the 11 user accesses data from the second context in 12 all four independent claims and I will deal with 13 those claims as set forth in the written 14 submissions. 15 Judge Farnan finds dynamically as 16 automatically in response to preceding event. 17 Judge Farnan's claim construction order, docket 18 entry number 200 further clarified in the 19 preceding event for purposes of clarification of 20 these claims is the user movement from the first 21 context workspace or environment to a second 22 context workspace or environment. With respect 23 to this element, no evidentiary basis was 24 presented at trial whatsoever to establish this,</p>

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<p>1 so infringement can not be established either</p> <p>2 literally under the Doctrine of Equivalents.</p> <p>3 Leader has presented no -- Leader</p> <p>4 has not presented any legally sufficient</p> <p>5 evidentiary basis from which a reasonable jury</p> <p>6 could find that the elements of dynamically</p> <p>7 updating, dynamically associating, or</p> <p>8 dynamically storing information in the metadata</p> <p>9 in the second context, environment or workspace</p> <p>10 are satisfied. And I'll go into more detail in</p> <p>11 the written submissions with respect to the</p> <p>12 basis in evidence on which that motion is based,</p> <p>13 Your Honor.</p> <p>14 With respect to each of the</p> <p>15 asserted claims, independent claims, Your Honor,</p> <p>16 they include additional limitations as well.</p> <p>17 Facebook, Leader has failed to show legally</p> <p>18 sufficient evidentiary basis from which a</p> <p>19 reasonable jury could find that the stored</p> <p>20 metadata or that metadata is updated, modified,</p> <p>21 changed, or affected in any way whatsoever in</p> <p>22 alone based on a change or movement of the user</p> <p>23 from a first context to a second context,</p> <p>24 workspace or environment.</p>	<p>1 no reasonable evidentiary basis has been put</p> <p>2 forth as to any claim of literal infringement as</p> <p>3 it requires that each and every element of the</p> <p>4 claim be met by the accused system. Therefore,</p> <p>5 it cannot be established.</p> <p>6 With respect to Doctrine of</p> <p>7 Equivalents, Your Honor, Leader has presented no</p> <p>8 legally sufficient evidentiary basis for a</p> <p>9 reasonable jury to find that Facebook infringes</p> <p>10 any claim under the Doctrine of Equivalents,</p> <p>11 which requires Leader to show that the</p> <p>12 differences between that accused product and the</p> <p>13 allegedly equivalent claim limitations are</p> <p>14 insubstantial to one of ordinary skill in the</p> <p>15 art, or that the accused product performs</p> <p>16 substantially the same function, in</p> <p>17 substantially the same way to achieve</p> <p>18 substantially the same result as the claim</p> <p>19 element. That's DeMartini Sports at 239 Fed</p> <p>20 3rd, 1314.</p> <p>21 The evidence presented at trial</p> <p>22 established no case of Doctrine of Equivalents,</p> <p>23 no -- I apologize, Your Honor -- evidence in</p> <p>24 argument of Doctrine of Equivalents was merely</p>
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<p>1 I will detail the basis of that in</p> <p>2 the written submission, Your Honor.</p> <p>3 With respect to the other</p> <p>4 elements, computer-implemented context component</p> <p>5 of the network-based system for capturing</p> <p>6 context information associated with user-defined</p> <p>7 data created by user interaction of a user in a</p> <p>8 first context of the network-based system, the</p> <p>9 context component dynamically storing the</p> <p>10 context information in metadata associated with</p> <p>11 the user-defined data, the user-defined data and</p> <p>12 metadata stored on a storage component of the</p> <p>13 network-based system.</p> <p>14 In other claims which I will</p> <p>15 detail in the written submission, Leader has</p> <p>16 failed to present a legally sufficient</p> <p>17 evidentiary basis from which a reasonable jury</p> <p>18 could find that each aspect of these claims have</p> <p>19 been satisfied. There has been no evidence</p> <p>20 submitted as to the creation of user-defined or</p> <p>21 user-created data in the first context,</p> <p>22 environment or workspace.</p> <p>23 Leader has failed to show</p> <p>24 infringement of any sort of claim of the patent,</p>	<p>1 subsumed in the literal infringement analysis</p> <p>2 contrary to PC Connector Solutions LLC at 406</p> <p>3 Federal 3rd 1359. No differences or a single</p> <p>4 cause of limitations were identified in a</p> <p>5 Doctrine of Equivalents analysis at trial.</p> <p>6 No particularized testimony or</p> <p>7 linking argument was also provided by Dr. Vigna</p> <p>8 as to either the insubstantiality of differences</p> <p>9 or with respect to the function, way and result</p> <p>10 test as required by Motionless Keyboard versus</p> <p>11 Microsoft 486 Federal 3rd 1376.</p> <p>12 With respect to the testimony of</p> <p>13 Doctrine of Equivalents, to the extent any was</p> <p>14 given it was tied only to the independent claims</p> <p>15 and not the dependent claims. There is no</p> <p>16 legally sufficient evidence presented with</p> <p>17 respect to the asserted dependent claims</p> <p>18 whatsoever. No reasonable jury could find for</p> <p>19 Leader on those claims with respect to the</p> <p>20 Doctrine of Equivalents.</p> <p>21 With respect to the Doctrine of</p> <p>22 Equivalents, Federal Circuit law is clear that</p> <p>23 may not be employed in a manner the wholly</p> <p>24 violates a claim limitation. Under Scimed Life</p>

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<p>1 Systems, 242 Federal 3rd 1337. The elements 2 missing from the Facebook site cannot be found 3 by equivalent because they are entirely absent. 4 Additionally with respect to the 5 Doctrine of Equivalents, the claim is barred by 6 the doctrine of prosecution history estoppel 7 under Festo at 535 U.S. 722, precludes Doctrine 8 of Equivalents to any claim. 9 The doctrine likewise cannot be 10 applied in a manner suggested by Leader because 11 to do so would ensnare the prior art as 12 explained in the testimony of Professor Kearns. 13 With respect to the inducement 14 claim, which was covered by 35 U.S.C. 271(b), 15 required for a claim of inducement have not been 16 established. These include Facebook knowing of 17 the '761 patent, Facebook's evidence of specific 18 intent, specific intent to induce infringement 19 of any claim. There was failure to present 20 evidence of third parties having directly 21 infringed any claim of the '761 patent, a 22 necessary prerequisite for a claim of inducement 23 under 271(h), under DSU Medical at 471 Federal 24 3rd at 1293.</p>	<p>1 Your Honor. I just want to make sure in case I 2 misread one of them. As I understand the rule, 3 as long as I get this in before the submission 4 of the case to the jury, I'm okay. 5 THE COURT: I'm not sure. But 6 we're going to deem -- we've already agreed to 7 deem submitted your written submission at this 8 point in the trial and I do want to bring the 9 jury in in just a couple of minutes. 10 MR. WEINSTEIN: I'll conclude very 11 quickly. 12 With respect to the on sale bar, 13 and the effective filing date, there is no 14 legally sufficient evidentiary basis for a 15 reasonable jury to find or a reasonable jury to 16 refuse to find that the '761 patent is entitled 17 to the filing date of the provisional 18 application. 19 A reasonable jury also could not 20 fail to find that the '761 patent is not 21 entitled to the patent date, regardless which 22 way the burden is, judgment as a matter of law 23 is warranted with respect to the on sale bar, 24 the invention must be the subject of the</p>
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<p>1 With respect to contributory 2 infringement as governed by 35 U.S.C. 271(c), 3 multiple elements have not been established by 4 the trial evidence. As with the indirect 5 infringement claim, no legally sufficient 6 evidence was presented as to any direct 7 infringement by any third party, a necessary 8 prerequisite to a claim of indirect infringement 9 including contributory infringement under 10 271(c), no third party allegedly infringing has 11 been identified, let alone the manner in which 12 such third party alleged infringement takes 13 place. And no element-by-element analysis has 14 been provided with respect to any third party's 15 performance. 16 THE COURT: Mr. Weinstein, how 17 much more do you think you have? 18 MR. WEINSTEIN: About -- I'm about 19 two-thirds through it. If you would like me to, 20 I can just do this all in a written submission, 21 Your Honor, that would make it easier for you. 22 THE COURT: That fine with you just 23 listing for us if there are additional motions. 24 MR. WEINSTEIN: I can do that,</p>	<p>1 commercial sale or offered for sale, no jury 2 could fail to find that both these elements were 3 satisfied based on the trial evidence. 4 No reasonable jury could fail to 5 find that the Leader2Leader product embodied the 6 asserted claims of the '761 patent for the 7 reasons discussed in the trial evidence. 8 No reasonable jury could fail to 9 find that Leader2Leader was subject to at least 10 three commercial offers for sale, including to 11 The Limited, Boston Scientific and Wright 12 Patterson Air Force Base, to whom Leader made 13 offers for sale as detailed in the testimony of 14 Mr. McKibben. 15 With respect to anticipation, no 16 reasonable jury could fail to find that U.S. 17 Patent Number 6,236,994 to Swartz, the published 18 European application to Hubert, the issued '349 19 patent to Hubert which contains a disclosure to 20 the European patent and the iManage, each 21 anticipate Claims 1, 4, 7, 9, 11, 21, 23, 25, 31 22 and 32. 23 With respect to Claim 16, it is 24 anticipated by iManage as described by Professor</p>

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<p>1 Greenberg. No reasonable jury could fail to 2 find that each of these references qualifies as 3 a printed publication prior art reference that 4 discloses, either expressly or inherently, each 5 element of these asserted claims as explained in 6 the testimony of Dr. Greenberg. No reasonable 7 jury could fail to find that each of these 8 references provides an enabling disclosure 9 because each is either entitled to a presumption 10 of enablement as an issued U.S. patent that has 11 not been rebutted, or because no reasonable jury 12 could fail to find enablement in light of the 13 evidence presented by Dr. Greenberg and other 14 evidence at trial.</p> <p>15 Facebook's defense of obviousness 16 under the '761 is governed by 35 U.S.C. 103(a) 17 and the Supreme Court's decision in KSR, 550 18 U.S. 398. Factors to consider include the scope 19 and content of the prior art, the differences 20 between the prior art and the claims of the 21 patent, and the level of ordinary skill in the 22 art.</p> <p>23 I have three paragraphs left, Your 24 Honor.</p>	<p>1 jury comes in, we also -- I think Your Honor 2 also already made this clear. We're going to 3 reserve our right to the file written submission 4 on the Rule 50 motion.</p> <p>5 THE COURT: That's fine. That 6 right is now reserved --</p> <p>7 MR. ANDRE: Thank you.</p> <p>8 THE COURT: -- to the extent, it 9 wasn't earlier.</p> <p>10 MR. ANDRE: I thought it was, but 11 after that long --</p> <p>12 THE COURT: That's fine.</p> <p>13 MR. RHODES: And, Your Honor, at 14 the end of the case, I'm literally just going to 15 say and I reiterate what Mr. Weinstein said and 16 then say no more. I can do it at a side-bar.</p> <p>17 I don't want to interrupt your 18 flow at the end. So I'll look at you, and all I 19 am going to say is remake the motion again for 20 the reasons stated. That is all I am going to 21 do.</p> <p>22 THE COURT: I think you will 23 probably be able to do that in front of the 24 jury.</p>
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<p>1 THE COURT: Three paragraphs, one 2 sentence. One more sentence.</p> <p>3 MR. WEINSTEIN: Can I use 4 semicolons? I'm sorry, Your Honor.</p> <p>5 Each and every claim of the '761 6 patent is invalid as obvious as detailed in the 7 testimony of Professor Greenberg and no 8 reasonable jury could fail to find as much.</p> <p>9 And we just want to reserve our 10 right under the IPXL Holdings. I understand 11 Your Honor has reviewed the IPXL ruling.</p> <p>12 THE COURT: I'm willing to reserve 13 judgment on all of Facebook's motions as I have 14 on Leader's.</p> <p>15 I do want to give counsel a 16 five-minute break. Is there anything else that 17 needs to be discussed first? Hopefully not. 18 No.</p> <p>19 We'll see you in five minutes. 20 (A brief recess was taken.)</p> <p>21 THE CLERK: All rise.</p> <p>22 THE COURT: Okay. We'll bring the 23 jury in. 24 MR. ANDRE: Your Honor, before the</p>	<p>1 MR. ANDRE: We'll do the same 2 thing.</p> <p>3 THE COURT: Okay.</p> <p>4 THE CLERK: All rise. 5 (Jury entering the courtroom at 6 10:43 a.m.)</p> <p>7 THE CLERK: Please be seated.</p> <p>8 THE COURT: All right. Welcome 9 back.</p> <p>10 We are finally prepared to proceed 11 again. Again, I've done the work I need to do 12 with the lawyers. Turn it over to Ms. Kobialka.</p> <p>13 MS. KOBIALKA: Thank you, Your 14 Honor. Thank you.</p> <p>15 We'd like to call Dr. Herbsleb to 16 the stand.</p> <p>17 THE COURT: That's fine.</p> <p>18 MS. KOBIALKA: And at this time, 19 we have some jury binders that we'd like to 20 provide, which include the exhibits that were 21 moved into evidence on Friday, as well as one 22 that we'll be using today.</p> <p>23 THE COURT: Have you shown the 24 defense that?</p>

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<p>1 MS. KEEFE: We have no objection, 2 Your Honor. 3 THE COURT: Fine. You may 4 distribute. 5 THE CLERK: Please state and raise 6 your right hand. State and spell your full name 7 for the record. 8 THE WITNESS: James Herbsleb. 9 J-A-M-E-S H-E-R-B-S-L-E-B. 10 THE CLERK: Do you, James 11 Herbsleb, swear the testimony you're about to 12 give to the Court and the jury will be the 13 truth, the whole truth and nothing but the 14 truth? 15 THE WITNESS: Yes, I do. 16 THE CLERK: Thank you. You may be 17 seated. 18 THE COURT: Good morning. 19 THE WITNESS: Hi. 20 MS. KOBIALKA: I'll note there's 21 actually one really long exhibit that's not 22 included in these jury binders from Friday, but 23 that will be provides one set since it's 13 24 binders long.</p>	<p>1 A. Yes. Yes, I am. 2 Q. And are you also here today to 3 provide your opinion with respect to what 4 information is disclosed in the provisional 5 application? 6 A. Yes, that's right. 7 Q. What were you asked to do? 8 A. Basically I was asked to respond 9 to Dr. Greenberg's report. 10 Q. Okay. And if we could maybe take 11 a look at the front of the '761 patent. 12 And if we can blow up the prior 13 art references recited. Is there anything that 14 looks familiar here? 15 A. Yes. I see my old colleague, 16 Randy Hackbarth's name, third from the bottom, 17 Randy Hackbarth and myself and Graham Wills are 18 the inventors on this patent. 19 This was a patent that came out of 20 the days when I was leading the Bell Labs 21 collaborative project. This was one of the 22 patents that came from that. 23 Q. Okay. So you're one of the 24 inventors of the patent?</p>
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<p>1 THE COURT: Oh, okay. 2 MS. KOBIALKA: Thank you very 3 much. 4 BY MS. KOBIALKA: 5 Q. Welcome back, Dr. Herbsleb. It's 6 been about a week. 7 Could you just remind the jurors 8 where you currently are working? 9 A. I'm a professor at Carnegie Mellon 10 University, the School of Computer Science. 11 Q. And just briefly, what were your 12 degrees that you have in research areas? 13 A. So my degrees, I had a bachelor's 14 in psychology in economics. I have a Ph.D. in 15 collaborative social psychology. 16 I have a Master's degree in 17 computer science. And my research area is in 18 collaborative technologies, you know, designing 19 collaborative technologies, understanding how 20 people use them, what problems are solved and 21 not solved by collaborative technologies. 22 Q. And are you here today to provide 23 your opinion with respect to the validity of the 24 asserted claims of the '761 patent?</p>	<p>1 A. That's right. I'm one of the 2 inventors of that patent. 3 MS. KOBIALKA: Okay. At this 4 time, Your Honor, I'd like to tender Dr. 5 Herbsleb as an expert in computer science for 6 his opinions. 7 MS. KEEFE: No objection. 8 THE COURT Ms. Keefe. Okay. 9 BY MS. KOBIALKA: 10 Q. What is your opinion with respect 11 to whether or not the provisional application 12 discloses all the elements of the asserted 13 claims of the '761 patent? 14 A. That -- my opinion is that the 15 provisional application does disclose all of the 16 elements of the asserted claims of the '761 17 patent. 18 Q. We'll go through that in more 19 detail. What is your opinion with respect to 20 whether the asserted claims of the '761 patent 21 is valid in light of the prior art that Dr. 22 Greenberg relied upon? 23 A. All right. My opinion is all 24 those claims are valid in light of the prior art</p>

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<p>1 that is in Dr. Greenberg's report.</p> <p>2 Q. What information did you review in</p> <p>3 order to come to your opinion?</p> <p>4 A. Well, I reviewed Dr. Greenberg's</p> <p>5 report and all of the citations or all of the</p> <p>6 references cited in his report.</p> <p>7 I reviewed the '761 patent. I</p> <p>8 reviewed the claim construction order. I</p> <p>9 reviewed the prosecution history of the patent.</p> <p>10 And I think that completes the</p> <p>11 list.</p> <p>12 Q. And you reviewed the provisional</p> <p>13 application?</p> <p>14 A. Of course, I did review the</p> <p>15 provisional application.</p> <p>16 Q. For all of your analysis, did you</p> <p>17 understand that you needed to identify who</p> <p>18 constitutes one of ordinary skill in the art as</p> <p>19 it relates to the '761 patent?</p> <p>20 A. Yes, I did.</p> <p>21 Q. Who would that person be?</p> <p>22 A. Well, it might be one of ordinary</p> <p>23 skill in the art would be someone with a</p> <p>24 bachelor's degree in computer science or related</p>	<p>1 from the perspective of one of ordinary skill in</p> <p>2 the art at the time of the '761 patent</p> <p>3 invention?</p> <p>4 A. Yes, I did.</p> <p>5 Q. So let's turn to the provisional</p> <p>6 application.</p> <p>7 A. Okay.</p> <p>8 Q. You can maybe show that up on the</p> <p>9 screen here. Do you -- this is PTX 3. Do you</p> <p>10 recognize that document?</p> <p>11 A. I do.</p> <p>12 Q. And on the face of it, do you see</p> <p>13 where the inventors are listed?</p> <p>14 A. Yes, I do. Michael McKibben and</p> <p>15 Jeff Lamb.</p> <p>16 Q. And are those the same inventors</p> <p>17 listed on the '761 patent?</p> <p>18 A. Yes, they are.</p> <p>19 Q. Now, if we turn to the face of the</p> <p>20 '761 patent, maybe we can enlarge for the jury</p> <p>21 where the inventors are listed as well as --</p> <p>22 yes, all of that information.</p> <p>23 Thank you.</p> <p>24 And do you see where the inventors</p>
Page 1741	Page 1743
<p>1 field, and/or perhaps several years of</p> <p>2 experience.</p> <p>3 Q. And would someone with let's say</p> <p>4 Master's degree in computer science fit within</p> <p>5 the scope of one of ordinary skill in the art?</p> <p>6 A. Sure. I think so.</p> <p>7 I mean, it's increasingly common</p> <p>8 for developers in industrial settings to have</p> <p>9 bachelor's degree. So I don't think that would</p> <p>10 be unusual.</p> <p>11 Q. And as you get more advanced in</p> <p>12 degrees, is it typical to specialize in a</p> <p>13 certain area?</p> <p>14 A. Yeah. I think by the time someone</p> <p>15 is studying for Ph.D., the things that the</p> <p>16 person is studying for are extremely narrow and</p> <p>17 aren't typically all that helpful in real world</p> <p>18 in building things like web applications.</p> <p>19 So I think a Bachelor's degree or</p> <p>20 higher would be -- people in that category would</p> <p>21 be fairly equivalent when it comes to building</p> <p>22 applications like this.</p> <p>23 Q. Did you do all your analysis for</p> <p>24 the opinions that you're going to provide today</p>	<p>1 are listed on the '761 patent?</p> <p>2 A. I do. Yes.</p> <p>3 Q. Does the '761 patent identify the</p> <p>4 provisional application on the cover?</p> <p>5 A. Yeah. I believe that's down on</p> <p>6 Line 60 provisional application, which is the</p> <p>7 line that you're referring to.</p> <p>8 Q. And based on your review of the</p> <p>9 provisional application, does it disclose all of</p> <p>10 the asserted elements or all of the elements of</p> <p>11 the asserted claims of the '761 patent?</p> <p>12 A. Yes. In my opinion, it discloses</p> <p>13 all of the elements of all the claims.</p> <p>14 Q. Is it based on anything other than</p> <p>15 it's just a review of the provisional</p> <p>16 application?</p> <p>17 A. Yes. Actually, I have two things</p> <p>18 that I did to sort of answer that question. One</p> <p>19 was to review the provisional application.</p> <p>20 And based upon that, I reached the</p> <p>21 opinion that it discloses everything that the</p> <p>22 '761 patent does. So in a way that allows</p> <p>23 someone to make and use the invention. But to</p> <p>24 test that, I took another step and I identified</p>

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<p>1 someone who is sort of ordinary skill in the art 2 that was a fellow named Marcello Caltaldo, who's 3 a post-doc in my research lab. 4 And I gave him the provisional 5 application and asked him to, you know, build a 6 web application that, you know, that embodies 7 this technology. 8 Q. And was he able to do that? 9 A. Yes, he was. And he provided -- 10 there's another document here that has been 11 added into evidence. 12 Q. Sure. I believe that is PTX 1125. 13 That's provided in the binders. 14 A. Okay. 15 Q. If we can show that on the screen, 16 is this what you're referring to Dr. Caltaldo 17 had provided? 18 A. Yes, that's it. That's what he 19 provided to me as a result of my request. 20 Q. And we're just looking at the 21 front page. Are there more pages behind that? 22 A. Yes, there's actually seven or 23 eight, six or seven more pages of source code. 24 That's -- the document here consists of source</p>	<p>1 that was the only thing that he had used in 2 producing this document. 3 Q. If we turn to the second page of 4 Exhibits 1125 and we see this code. 5 A. Mm-hmm. 6 Q. Just generally, what is this kind 7 of code? Can you just walk us through it and 8 explain what's included in 1125? 9 A. So what we're looking at here is 10 the first -- it's two main parts. 11 The first part, as you can see up 12 at the top, is called WebApp. So what this code 13 is doing is kind of setting up a collection of 14 workspaces and showing a relationship among 15 them. 16 It has a functionality that would 17 allow a user to select from menus to select, you 18 know, a particular web or collection of 19 workspaces to select a website, which is 20 another way of creating a collection of 21 workspaces in sort of a workflow arrangement. 22 And so select a particular 23 workspace within that. So that's kind of what 24 the first part does here. It allows the user to</p>
<p>Page 1745</p> <p>1 code like this. 2 Q. And if we could turn back to the 3 front page. Okay. Can you explain what this 4 is, especially in connection with the reference 5 to a generic application skeleton? 6 A. Yes, that does sound rather odd, 7 doesn't it? The idea is that is to create sort 8 of just kind of a simple application that 9 embodies this technology. 10 So something that would allow you 11 to -- that would provide context that would 12 associate applications and data with those 13 contexts would allow a user, you know, to move 14 from one context or work space to another, to 15 track those movements. So to basically, you 16 know, do the things that the provisional 17 application described. 18 Q. Is your understanding that all 19 Marcella Caltaldo had used was the provisional 20 application in building this particular 21 application? 22 A. Yes. That's all I provided to 23 him. 24 And I asked him later and he said</p>	<p>Page 1747</p> <p>1 construct something like that. 2 Then if we move ahead, there's a 3 second part where there's the word board at the 4 top Class: Board. And I think it's on Page 6 a 5 little farther. 6 No. It's back. There we go. 7 And what this is doing is, you 8 know, setting up a workspace. And so we see 9 here that it has associated with it data items. 10 So that would be -- you know, could be any sort 11 of data, photos, documents, whatever. 12 Applications are associated with 13 it and users are associated with the workspace. 14 And also, if we scroll further down, we can see 15 that you could access the boards of the 16 workspaces that are part of the workflow. 17 And as we go on, we'll see that it 18 also -- I think it's on the next page. Makes 19 available to -- yeah, at the top here. 20 Q. And just for the record, you're 21 referring to Page 7 of this document? 22 A. Oh, I'm sorry. Actually I think 23 it begins on the previous page, but rather than 24 worrying about it, let me just describe how you</p>

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<p>1 do it.</p> <p>2 This is showing you how --</p> <p>3 different workspace functionalities in the</p> <p>4 WebApp are provided.</p> <p>5 But it also shows that as a user</p> <p>6 moves from one workspace to another, it</p> <p>7 continues to make all of the items from the</p> <p>8 previous workspace available to that user. And</p> <p>9 if the user moves to another workspace and</p> <p>10 accesses some of that the data or applications,</p> <p>11 then it updates metadata reflecting that move</p> <p>12 from one workspace to another.</p> <p>13 Q. When you are using the word</p> <p>14 workspace, can you just explain what you mean by</p> <p>15 that?</p> <p>16 A. So workspace on my tutorial, if</p> <p>17 you recall, I described the workspace kind of</p> <p>18 like an analogy of somebody working on the desk</p> <p>19 They have a calendar, stapler, whatever the</p> <p>20 things that are that you need, the tools, you</p> <p>21 know, to do work collected on one place. A</p> <p>22 workspace is like that, you know, but on the</p> <p>23 screen.</p> <p>24 So you have the things that you</p>	<p>1 skilled in the art, you could just say, for</p> <p>2 example, this is classic French cuisine and that</p> <p>3 communicates a great deal of information to</p> <p>4 someone about how to go about making this</p> <p>5 recipe.</p> <p>6 Q. In your opinion, does it matter</p> <p>7 whether the provisional is shorter in length</p> <p>8 than the actual issued patent which is the '761</p> <p>9 patent?</p> <p>10 A. No. Source code is a very sort of</p> <p>11 dense way of conveying information. The</p> <p>12 diagrams take up, you know, much more space,</p> <p>13 unfortunately, and so I think there's 20 some</p> <p>14 diagrams.</p> <p>15 So you just kind of expect that</p> <p>16 the '761 patent with many diagrams would be much</p> <p>17 longer.</p> <p>18 Q. Okay. So let's dive into the</p> <p>19 patent now, so let's take a look at Claims 1, 4</p> <p>20 and 7 --</p> <p>21 A. All right.</p> <p>22 Q. -- once we have it up here on the</p> <p>23 screen. Let's see if we can shorthand some of</p> <p>24 the claim language, so when we take a look at</p>
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<p>1 need to do something. You have applications.</p> <p>2 You have all kinds of data documents you could</p> <p>3 -- pictures you can upload.</p> <p>4 You have all that kind of in one</p> <p>5 place. And so that's what's associated with</p> <p>6 that are, you know, those types of data, things</p> <p>7 that you've uploaded and the applications that</p> <p>8 you use and your identity.</p> <p>9 So that's basically what a</p> <p>10 workspace is.</p> <p>11 Q. I noticed that in the provisional,</p> <p>12 you have text and code and then the issued</p> <p>13 patent has diagrams.</p> <p>14 A. Right.</p> <p>15 Q. What provides more detail for</p> <p>16 someone like yourself to make and build the</p> <p>17 invention of the '761 patent?</p> <p>18 A. Well, the diagrams are helpful,</p> <p>19 but the code is actually much more helpful for</p> <p>20 one skilled in the art. If I could use an</p> <p>21 analogy, it's as if you have a cookbook where</p> <p>22 you have some recipes and a bunch of pictures of</p> <p>23 sauteing and whipping up egg whites and so on.</p> <p>24 And those pictures are helpful, but for someone</p>	<p>1 Claim 1 and after the computer-implemented</p> <p>2 network-based system that facilitates management</p> <p>3 of data, we have the next paragraph that starts</p> <p>4 a computer-implemented context component of the</p> <p>5 network-based system.</p> <p>6 And it continues all the way down</p> <p>7 past a couple commas and ends with the user</p> <p>8 defined data and metadata stored on a storage</p> <p>9 component of the network-based system. And do</p> <p>10 you see that?</p> <p>11 A. Yes, I do.</p> <p>12 Q. Can I call that the context</p> <p>13 component of Claim 1? Are we talking about the</p> <p>14 same thing?</p> <p>15 A. Yes. Okay.</p> <p>16 Q. And then if we turn to the next</p> <p>17 element, which starts a computer-implemented</p> <p>18 tracking component and it continues all the way</p> <p>19 through the end of the claim or the -- yes, the</p> <p>20 end of the claim where it says wherein the user</p> <p>21 accesses the data from the second context.</p> <p>22 You'll understand when I say</p> <p>23 tracking component of Claim 1, I'm referring to</p> <p>24 all of that.</p>

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<p>1 A. Okay. Good.</p> <p>2 Q. Could you just generally and</p> <p>3 briefly describe what your understanding of what</p> <p>4 Claim 1 covers?</p> <p>5 A. All right. So what you called the</p> <p>6 context component, we have to go back to the</p> <p>7 claim construction order to understand what's</p> <p>8 meant by context here.</p> <p>9 And the claim construction order</p> <p>10 says that a context is environment. So an</p> <p>11 environment is, you know, what I've been calling</p> <p>12 a workspace. It is a place that has -- you</p> <p>13 know, lets a user do some work, contains the</p> <p>14 things that the user needs to do something.</p> <p>15 So what the first element is</p> <p>16 saying is that the '761 invention has a context</p> <p>17 component, so it has that kind of a workspace.</p> <p>18 And one of the things that it does is to use</p> <p>19 that context data to sort of update metadata</p> <p>20 every time you use or upload something to your</p> <p>21 workspace.</p> <p>22 So by uploading something, the</p> <p>23 context component will attach some -- will use</p> <p>24 that context information to update your</p>	<p>1 a few examples of that. Does that sound right?</p> <p>2 A. Yes.</p> <p>3 Q. Okay. So if we take a look at the</p> <p>4 summary of the invention here, I believe it's</p> <p>5 Paragraph 16.</p> <p>6 Would you please explain what this</p> <p>7 tells you and how it relates to the claims of</p> <p>8 the '761 patent?</p> <p>9 A. Okay. As you can see, it says</p> <p>10 that the tool automatically stores contextual</p> <p>11 information relating to an item of communication</p> <p>12 and utilizes that contextual -- I believe the</p> <p>13 words information is missing from performance of</p> <p>14 communication tasks.</p> <p>15 So that tells me that it's storing</p> <p>16 this contextual information and using it later.</p> <p>17 So it's stored in some permanent kind of form.</p> <p>18 Q. And is there anything in the code</p> <p>19 that's also helpful with respect to the context</p> <p>20 component element of Claim 1?</p> <p>21 A. I think there are a couple of</p> <p>22 things that are helpful.</p> <p>23 Q. If you turn to the first page of</p> <p>24 the code, I think it will --</p>
Page 1753	Page 1755
<p>1 metadata.</p> <p>2 So the second element is a</p> <p>3 tracking component. Again, this sort of keeps</p> <p>4 track of a user moving from one workspace to</p> <p>5 another, if you will.</p> <p>6 And what this element says that</p> <p>7 when a user works -- moves from one workspace to</p> <p>8 another, and then accesses from the second</p> <p>9 workspace, accesses data that was uploaded into</p> <p>10 the first workspace, it updates the metadata</p> <p>11 with that tracking information about that</p> <p>12 action.</p> <p>13 Q. Why don't we turn to the</p> <p>14 provisional application PTX 3.</p> <p>15 A. Okay.</p> <p>16 Q. And see where these elements are</p> <p>17 described. Now, does the entire provisional</p> <p>18 application inform your opinion that each of the</p> <p>19 elements of the asserted claims are disclosed in</p> <p>20 the provisional?</p> <p>21 A. Yes. Reading this as a whole, it</p> <p>22 -- well, it's responsible for my opinion that it</p> <p>23 does disclose all the elements.</p> <p>24 Q. So right now we'll just go through</p>	<p>1 A. Right. All right.</p> <p>2 So if you look at these import</p> <p>3 statements, these import statements represent</p> <p>4 taking code that's, you know, common code class</p> <p>5 libraries, code that exists sort of outside and</p> <p>6 imports them into this application.</p> <p>7 So this is very common in most</p> <p>8 programming languages. You have certain --</p> <p>9 certain kind of sort of boiler plate codes.</p> <p>10 Things are used all the time over and over and</p> <p>11 over again.</p> <p>12 And usually you just take those</p> <p>13 common things and import them for use in your</p> <p>14 own application. Now, what's interesting is</p> <p>15 that by looking at the kinds of things that get</p> <p>16 imported here, you know, you can get a pretty</p> <p>17 good idea of some of the things that the</p> <p>18 application is doing.</p> <p>19 So if we look at the fourth and</p> <p>20 fifth lines where it says import com, you know,</p> <p>21 persist and persist.vbsf. So that tells us that</p> <p>22 there's some form of persistent storage here.</p> <p>23 And vbsf, in particular, is a</p> <p>24 middleware package that makes it easier to store</p>

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<p>1 things in a relational database when you're 2 using object-oriented language. So to sort of 3 hopefully not confuse you with the technology, 4 this is all written in object-oriented style, a 5 particular style of programming. 6 And yet, apparently they're going 7 to use a relational database to store their 8 permanent data. And the only reason you would 9 have vbsf around is because you want to do that. 10 You want to use -- store things in a relational 11 data. 12 So that's saying that there's some 13 permanent kind of storage and it's in a 14 relational database. If you look down at the 15 very last import statement, it talks about 16 session state. 17 Session state, again is a common 18 term. And session state sort of captures -- 19 remember we talked about session, that you might 20 log into your, you know, website, for example, 21 and start a session, authenticate it, then do a 22 bunch of things. And then you end the session. 23 Well, somewhere you have to store 24 this information that, Gee, this person is</p>	<p>1 about what's in a workspace in the database in 2 permanent form. 3 So this is where it is using the 4 context information to update the metadata. 5 Q. Okay. Do you need a pointer? 6 Would that be helpful? 7 A. Oh, you know what, I have one 8 right here. 9 Q. Okay. 10 A. I just forgot about it. Yeah. 11 So as I was saying, the various 12 places it talks about key, and key fields. That 13 is indicative of saving something in a 14 relational database. 15 And so what this is saying, to 16 reiterate, is that it's saying that things like 17 the users that are associated with the workspace 18 and relations of between workspaces are all 19 being stored in this permanent kind of storage 20 in a relational database. So that represents to 21 me using context information to update the 22 metadata. 23 Q. Can you give me some examples? 24 Well, so what we've just talked about, does that</p>
Page 1757	Page 1759
<p>1 logged in, and they're now on this page. And 2 they're now going to another page. 3 It's kind of temporary storage 4 kind of tracking what a user is doing in that 5 session and when the session is over. So this 6 tells you that that kind of information is going 7 to be stored and it's going to be stored in this 8 type of analogy. 9 Q. Maybe we can turn to another place 10 in the code. I believe it has the Bates Number 11 LTI 7576. 12 A. Mm-hmm. 13 Q. There's a line, add new 14 relationships. If you could blow that section 15 up. 16 Thank you. 17 A. Right. This is showing us that 18 information like -- it talks about -- see where 19 it has group key field, for example. There's 20 lots of places in here where he's talking about 21 keys. That sort of tells you that something is 22 being stored in a relational database. 23 So this is storing basically 24 relations between workspaces and information</p>	<p>1 really relate to the context component of Claim 2 1. 3 A. Yes, that relates to the context 4 component. 5 Q. Can we turn to some examples that 6 relate to the tracking component of Claim 1? 7 A. Sure. Let me get another. 8 Q. So we start with the description 9 of embodiments here in the patent. And I 10 believe Paragraph 22. 11 A. Right. 12 Q. Could you please explain here what 13 this provides to one of ordinary skill in the 14 art? 15 A. Right. So it says here towards 16 the end, as users create and change their 17 contexts, the files and applications 18 automatically follow, dynamically capturing 19 those shifts in context. 20 So this signals to me that the -- 21 when the user changes context access data from 22 other contexts, that that information is 23 recorded. 24 Q. Okay. And I believe there's one</p>

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<p>1 other place in the text, if we go to the example 2 which starts on -- well, it's on LTI 747, the 3 last paragraph. 4 If you can enlarge it. Dr. 5 Herbsleb, could you please explain what this 6 tells you? 7 A. Sure. So this is talking about 8 how the system decides what content belongs 9 where in the system. And so it says location 10 may be determined by detecting changes to 11 structure, detecting temporary location and 12 using a routing algorithm before and after the 13 change to adjust the affect of the location of 14 the affected content. 15 So what this is saying, the 16 content that is associated with the board is 17 stored in metadata. And that when using a 18 routing algorithm, which they call a webslice, 19 there's sort of dynamically associating the 20 content with each of the workspaces. And, 21 again, that the location of a content relative 22 to the workspaces is what's captured in 23 metadata. That's done by tracking information 24 that follows users from workspace to workspace.</p>	<p>1 you know, using the relational database. So 2 this is, again, illustrating how, you know, the 3 tracking component updates a workspace. 4 Q. So, in your opinion, are all the 5 elements of Claim 1 disclosed in the provisional 6 application? 7 A. I think all the elements of Claim 8 1 are disclosed here. 9 Q. And that's based on the entire 10 disclosure, not just limited to these examples; 11 is that right? 12 A. Right. So to sort of describe how 13 to look at this, the text sort of describes 14 what, you know, describes the disclosure. When 15 we look at source code what we're seeing is 16 hints about how someone would actually make and 17 use this. 18 Right. So the source code that's 19 disclosed here is not a complete implementation 20 of everything described in the text. That would 21 be much larger. 22 So what the source code is doing 23 is just disclosing enough information about how 24 this is intended to work, that one of ordinary</p>
<p>Page 1761</p> <p>1 Q. And are there places in the code 2 that we can look to that help you understand 3 that there's a tracking component of Claim 1 4 found in this provisional application? 5 A. Yes. 6 Q. Maybe we can turn to the first 7 page of the code here in PTX 3. 8 A. Well, again, this is just 9 reminding you that we have session state, which 10 is kind of a temporary storage about the 11 session, and we have up here vbsf, which is 12 storing things in a relational database. That 13 would be where metadata would be stored. It's 14 relatively permanent. 15 And then we have another location 16 in the code. 17 Q. Right. I believe it's on LTI 757. 18 I think the section that started 19 add new relationships, if you could -- sub-form 20 -- if you could blow that up. 21 Thank you. 22 A. Mm-hmm. So here it's showing 23 adding relationships between a workspace and 24 content, again, showing that that's done with,</p>	<p>Page 1763</p> <p>1 skill could then use this to actually make 2 something. 3 So it's not the case that the 4 source code is a complete implementation. It's 5 not intended as that. 6 It's just more information for 7 someone trying to make and use this invention. 8 Q. Okay. Let's turn to Claim 4 and 9 7. 10 A. Okay. 11 Q. And if we could take a look at 12 Claims 4 and 7, is it your understanding that 13 these are dependent claims on Claim 1? 14 A. Right. 15 Q. And so is it your opinion that the 16 additional element found in Claim 4 is disclosed 17 in the provisional application? 18 A. Yes, it is. The additional 19 element here is saying a little bit about what 20 the context information has to include. Right. 21 It has to include a relationship 22 between a user and at least one of the 23 application, application data and user 24 environment. So that's an addition.</p>

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<p>1 Q. Why don't you briefly describe 2 Claim 7 and then we will go to the provisional?</p>	<p>1 Q. Let's turn now to Claim 9, 11 and 2 16. And actually there we go.</p>
<p>3 A. Okay. So a claim -- what Claim 7 4 is saying that the data created in one context 5 is associated with data created in the second 6 context. That's what's new about that.</p>	<p>3 So I'm going to break these claims 4 up, so we don't have to read the entire claim 5 element every time. 6 A. Okay.</p>
<p>7 Q. Okay. All right. 8 If we could turn to PTX 3 and go 9 to LTI 743, the first paragraph.</p>	<p>7 Q. When we refer to -- well, sit 8 looking at Claim 9, we have a 9 computer-implemented method of managing data and</p>
<p>10 A. Mm-hmm.</p>	<p>10 then the first element has creating data within</p>
<p>11 Q. What does this tell you in terms 12 of as it relates to Claim 4?</p>	<p>11 a user environment. Continues on after the 12 cutoff, the data in the form of at least files 13 and documents.</p>
<p>13 A. Yeah. This -- so this is 14 basically almost the same language as Claim 4 15 here. It relates to new structures and methods 16 for creating relationships between users 17 applications and files and folders, which is 18 essentially what it said in Claim 4.</p>	<p>13 Do you see that after the comma? 14 A. Yes, I do. 15 Q. And then that will be Element 1 of 16 Claim 9.</p>
<p>19 Q. And if we could take a look at 20 where in this application we refer to Claim 7. 21 I believe we can turn to LTI 749.</p>	<p>18 The next element will start 19 dynamically associating metadata with the data. 20 And it continues on to include information 21 related to the user, the data, the application 22 and the user environment.</p>
<p>22 A. Mm-hmm.</p>	<p>22 Can I refer to that as Element 2</p>
<p>23 Q. And if you could just blow up that 24 page there. There you go.</p>	<p>23 of Claim -- 24</p>
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<p>1 A. Great. So remember this claim has 2 to do with creating associations between 3 workspaces. So the location of content may be 4 determined by detecting changes in structure, 5 detecting the temporary location to the content 6 of the boards in the routing of algorithms 7 before and after the change and adjusting the 8 location of the affected content as part of the 9 change in structure.</p>	<p>1 A. Sure. 2 Q. -- 9? 3 Okay. And if I put element one 4 and two together, would it be easier to just 5 refer to that as the context component -- 6 A. Yeah. That's very much like the 7 description of the context component in Claim 1 8 Q. -- or how would you do that? 9 So we could refer to it either way 10 and we'll be talking about the same thing when 11 we refer to Claim 9; right? 12 A. Right. 13 Q. And then the remainder of the 14 claim has this element three that starts 15 tracking movement of the user and continues on.</p>
<p>10 All of that is a lot of language. 11 That's a little bit difficult to decipher. But 12 it's basically saying that there is this routing 13 algorithm that associates different workspaces 14 by virtue of saying that they are the locations 15 for some particular content.</p>	<p>16 And then the next element, which 17 is four, starts dynamically updating the stored 18 metadata all the way through the end of the 19 claim. Do you see that? 20 A. Mm-hmm. Yes. 21 Q. And those can be elements three 22 and four of Claim 9. Is that okay? 23 A. Yes. Yes. 24 Q. And can we refer to that also as</p>
<p>16 All right. So the routing 17 algorithm creates a link between the workspace 18 and says, Here are the workspaces where this 19 content belongs.</p>	
<p>20 Q. Is it your opinion then that 21 Claims 4 and 7 are fully disclosed in the 22 provisional application?</p>	
<p>23 A. Yes. It's my opinion that they're 24 fully disclosed.</p>	

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<p>1 the tracking component of Claim 9?</p> <p>2 A. Yes. I believe that those</p> <p>3 together describe the tracking component.</p> <p>4 Q. How is Claim 9 different than</p> <p>5 Claim 1?</p> <p>6 A. Well, Claim 9 adds a few new</p> <p>7 things. So it introduces language of user</p> <p>8 environment instead of context means the same</p> <p>9 thing.</p> <p>10 It talks about web-based computing</p> <p>11 platform. That's one of the major differences</p> <p>12 is that this requires something that's web based</p> <p>13 and is a platform for user interaction.</p> <p>14 So that's the main difference in</p> <p>15 the context component. And I think that's the</p> <p>16 same down here, just a web-based kind of big</p> <p>17 difference between this and Claim 1.</p> <p>18 Q. And it continues throughout Claim</p> <p>19 9, this web based --</p> <p>20 A. Down to Claim 9. So web based</p> <p>21 here in part of the description is the tracking</p> <p>22 component as well.</p> <p>23 Q. Is it your opinion that all the</p> <p>24 elements of Claim 9 are disclosed in the</p>	<p>1 Q. And then it goes on to 37?</p> <p>2 A. Right. If we look at where it</p> <p>3 starts, let's see, at the bottom public form,</p> <p>4 get form on 746. So you see discussion here of</p> <p>5 forms.</p> <p>6 You see discussion of, on the next</p> <p>7 page, of sub-forms and pages, concrete pages and</p> <p>8 so on.</p> <p>9 This is all language that</p> <p>10 describes creating web pages. So by form, they</p> <p>11 mean this form. Form is an area within a web</p> <p>12 page. So the codes here reveal that this is, in</p> <p>13 fact, a web-based system.</p> <p>14 Q. Why don't we turn to then Claims</p> <p>15 11 and 16. Is it your understanding that Claims</p> <p>16 11 and 16 are dependent on Claim 9?</p> <p>17 A. Yes. That's my understanding.</p> <p>18 Q. What is the addition that's added</p> <p>19 to Claim 11 and then 16?</p> <p>20 A. So Claim 9 adds indexing the</p> <p>21 content to user environment. So with that one,</p> <p>22 more than one user to user access environment.</p> <p>23 Q. And how about Claim 16?</p> <p>24 A. So Claim 16 talks mainly -- the</p>
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<p>1 provisional application?</p> <p>2 A. Yes, that's my opinion. They're</p> <p>3 all disclosed.</p> <p>4 Q. Okay. Let's take a look at the</p> <p>5 provisional application. It's PTX 3.</p> <p>6 And well, for all the reasons</p> <p>7 you've already testified about, does that</p> <p>8 support your opinion that all the elements of</p> <p>9 Claim 9 are fully disclosed in the provisional?</p> <p>10 A. Right. So the discussion we had</p> <p>11 before about the context component and the</p> <p>12 tracking component that all, you know, applies</p> <p>13 here.</p> <p>14 The thing that is the additional</p> <p>15 element for Claim 9, that it's web based.</p> <p>16 Q. Okay.</p> <p>17 A. So we need to look for something</p> <p>18 new to support that.</p> <p>19 Q. Can we turn to the code at L11</p> <p>20 756?</p> <p>21 A. 756?</p> <p>22 Q. Six. Yes.</p> <p>23 A. That's 46. Fifty-six.</p> <p>24 There we go.</p>	<p>1 addition is this, that you can access this from</p> <p>2 a portable wireless device.</p> <p>3 Q. And do you have an opinion as to</p> <p>4 whether or not Claims 11 and 16 are fully</p> <p>5 disclosed in the provisional application?</p> <p>6 A. Yes. I think they are fully</p> <p>7 disclosed.</p> <p>8 Q. Okay. Let's take a look at the</p> <p>9 provisional PTX 3. If we can take a look at L11</p> <p>10 747. I believe, Paragraph 22.</p> <p>11 A. So --</p> <p>12 Q. And can you explain how this</p> <p>13 relates to your opinion with respect to Claim</p> <p>14 11?</p> <p>15 A. Okay. So this sort of shows that</p> <p>16 multiple users are intended to be able to access</p> <p>17 files. So they create changes in context files</p> <p>18 and applications, automatically following</p> <p>19 dynamically capturing those shifts in context.</p> <p>20 So, you know, users are supposed</p> <p>21 to be able to access their files from multiple</p> <p>22 context or environments, which is part of Claim</p> <p>23 11. So I think we can continue on to the next</p> <p>24 reference relevant to Claim 11, which -- is so I</p>

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<p>1 was thinking again of the code where it talks 2 about the codes that we looked at before that it 3 talks about keys. I'll find it here in a 4 second.</p> <p>5 So, for example, on LTI 758, the 6 top half of the page. So, again, this just kind 7 of shows this discussion of these key and key 8 fields and so on that the data are intended to 9 be stored. See the keys and it's in a 10 relational database.</p> <p>11 And if you had any sort of a 12 sizeable relational database, you would prefer 13 index for that. Index is -- I think of a little 14 -- by the index of the back of the book that's 15 sort of for each major entry, it tells you where 16 that word can be found.</p> <p>17 So this is just referring to an 18 index that the computer can use to locate 19 content. So it creates basically an index.</p> <p>20 And if you're using a relational 21 database and storing lots and lots of 22 information, you would naturally need an index 23 to find it. Going through, going through every 24 item and order would be way too slow.</p>	<p>1 And if we go to LTI 746, the 2 preceding page, Paragraph 17, we see once again 3 that integrates two or more different 4 communication applications such as telephony. 5 So clearly they had telephony in mind as one of 6 the things, you know, associated with this 7 workspace.</p> <p>8 Well, in 2002, it was, you know, 9 universally possible to access your stored phone 10 call or your voice mail, you know, through a 11 cell phone. I mean, it just wouldn't make sense 12 in this time period to have workspace, and that 13 included your phone calls and your voice mail 14 and would not let you access it from a cell 15 phone.</p> <p>16 Of course you would build it so 17 you can access it from a cell phone. So that 18 is, in my view, accessing information or it's 19 accessing the user workspace from a verbal 20 wireless device, which is your cell phone.</p> <p>21 Q. Is it your opinion that the 22 provisional application fully disclosed each and 23 every element of Claims 9, 11 and 16? 24 A. Yes. It's my opinion it discloses</p>
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<p>1 Q. Okay. So let's turn to Claim 16 2 which has the other element of a portable 3 wireless device.</p> <p>4 A. Okay.</p> <p>5 Q. In the provisional application, 6 can you give us an example of where a 7 provisional application, one of ordinary skill 8 in the art would understand that that is 9 disclosed in the provisional application? 10 A. Sure. I think we go to, 11 Q. PTX 3, please. 12 A. I think we go to LTI 747. 13 Q. You said 747? 14 A. I believe so. Yes. 15 Q. Okay. 16 A. That's one of the places we want 17 to look. So here's how I was thinking about 18 this, that this describes the kinds of data that 19 would be associated with user workspace. 20 And among things listed we have 21 phone calls, for example. So phone calls are, 22 according to this invention, intended to be 23 accessed or intended to be, you know, part of 24 the user workspace.</p>	<p>1 every element of those claims. 2 Q. Okay. We're going to keep moving 3 along. Let's go to Claim 21 here. 4 A. All right. 5 Q. So if we take a look at Claim 21, 6 this is broken up into five different elements. 7 You see the first element will be creating data? 8 A. Mm-hmm. 9 Q. It continues on of a web-based 10 computing platform using an application. So you 11 will understand when I refer to that as element 12 one? 13 A. Correct. 14 Q. Okay. The next element will start 15 dynamically associating metadata and continues 16 on to the end where it says into the user 17 workspace. 18 Do you see that? 19 A. Yes. 20 Q. That will be element two. 21 The next element is tracking user 22 of -- the movement of the user. It ends with 23 the web-based computing platform. You'll 24 understand that as element 3?</p>

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<p>1 A. Right.</p> <p>2 Q. And the next element is</p> <p>3 dynamically associating the data and continues</p> <p>4 on through and says and data from the second</p> <p>5 user workspace. And do you see that?</p> <p>6 A. Mm-hmm.</p> <p>7 Q. That will be Claim 4 or element</p> <p>8 four of Claim 21.</p> <p>9 And finally, the last element</p> <p>10 which is indexing the data, and it ends with</p> <p>11 from a corresponding plurality of different user</p> <p>12 workspaces; right?</p> <p>13 So I'll refer to that as element</p> <p>14 five.</p> <p>15 A. Okay.</p> <p>16 Q. Can you explain how Claim 21 is</p> <p>17 different than the claims we've already talked</p> <p>18 about?</p> <p>19 A. Well, Claim 21 is again very</p> <p>20 similar, although it talks about a</p> <p>21 computer-readable medium for storing</p> <p>22 instructions. But the elements of the claim are</p> <p>23 very similar to what we've seen before. It does</p> <p>24 again mention indexing down at the end.</p>	<p>1 through everything to see if it's there. You</p> <p>2 would just naturally do this.</p> <p>3 Q. And for the record, are you</p> <p>4 referring to what has LTI 758 at the bottom</p> <p>5 there?</p> <p>6 A. Yes. Yes, that's what I'm</p> <p>7 referring to.</p> <p>8 Q. Okay. We're in the last set of</p> <p>9 claims. Let's look at Claim 23, 25, 31 and 32.</p> <p>10 A. Okay.</p> <p>11 Q. And as soon as we have that up.</p> <p>12 Can you generally describe what Claim 23</p> <p>13 discloses and how it's different than what we've</p> <p>14 already talked about?</p> <p>15 A. Well, so what claim -- so we're</p> <p>16 looking at 23. Okay.</p> <p>17 So this is now</p> <p>18 computer-implemented system. This is again, you</p> <p>19 know, basically describing a context component,</p> <p>20 but it says now it's on a web-based server,</p> <p>21 okay, which is a little bit different</p> <p>22 terminology than has been used so far.</p> <p>23 And it also talked about assigning</p> <p>24 one or more applications to the first user</p>
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<p>1 It describes a context component.</p> <p>2 It describes a tracking component.</p> <p>3 So, you know, for the reasons that</p> <p>4 I've described before, these are disclosed in</p> <p>5 the provisional application for exactly the same</p> <p>6 citations and uses.</p> <p>7 Q. With respect to indexing the</p> <p>8 data, --</p> <p>9 A. Mm-hmm.</p> <p>10 Q. -- that particular element, is</p> <p>11 there a place that we can look to in the</p> <p>12 provisional application in the code that might</p> <p>13 be helpful that informs your opinion that all</p> <p>14 the elements of Claim 21 are, in fact, disclosed</p> <p>15 in the provisional?</p> <p>16 A. Yeah. I think I would point us</p> <p>17 back to the same place we looked at before in</p> <p>18 terms of when we looked at indexing, when we see</p> <p>19 that relational database is being used to store</p> <p>20 the data and to store the metadata. And it just</p> <p>21 would not be sensible to do that any way except,</p> <p>22 you know, by indexing.</p> <p>23 That's just almost essential,</p> <p>24 otherwise it would take forever to sort of go</p>	<p>1 workspace and capturing context associated with</p> <p>2 the user interaction while in that workspace.</p> <p>3 So that's a little bit different than what we</p> <p>4 see.</p> <p>5 The second element describes</p> <p>6 tracking change information, right, which is a</p> <p>7 little bit different associated with a change in</p> <p>8 access of the user from the first workspace to</p> <p>9 the second user workspace and dynamically</p> <p>10 storing the change on the storage component as</p> <p>11 part of the metadata, wherein the user accesses</p> <p>12 the data from the second user workspace.</p> <p>13 So this describes slightly</p> <p>14 differently, but this is very similar to the</p> <p>15 tracking component that we've looked at already.</p> <p>16 Q. Okay. So we can refer to Claim</p> <p>17 23, the two elements. The first element being</p> <p>18 the context component that would be the entirety</p> <p>19 of the element and the second element being the</p> <p>20 tracking component, meaning the remainder of the</p> <p>21 claim; is that fair?</p> <p>22 A. Yes, that makes sense.</p> <p>23 Q. Okay. Could you provide an</p> <p>24 example in the provisional application where it</p>

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<p>1 informs your opinion that all the elements of 2 Claim 23 are disclosed in the provisional 3 application? 4 If you can turn to PTX 3, I think 5 it starts LTI 747. Paragraph 23, if we could 6 enlarge that. 7 A. Mm-hmm. So here they're using the 8 board to mean workspace in this claim. It's the 9 same example workspace, same exact thing as a 10 workspace, collection of data and functionality 11 related to a user defined topic. 12 So this is sort of showing that 13 the application functionality is related to a 14 board. So data functionality is related to the 15 boards. 16 If you look down at the bottom, 17 the data application may be grouped in a board 18 based on the identity of the tag (data and 19 application. So if application can be grouped 20 inside of a board there, it obviously referred 21 to inside of a board, which is what the claim 22 requires. 23 Q. Is it your opinion that all the 24 elements of Claim 23 are disclosed in the</p>	<p>1 facilitates many-to-many functionality, which 2 means more than one user being able to access 3 more than one data file via the metadata. 4 So that's the, you know, new parts 5 that have been introduced? 6 Q. Is it your opinion that in reading 7 the entire provisional application, that all the 8 elements of Claim 25, 31 and 32 are fully 9 disclosed? 10 A. Yes. It's my opinion that all of 11 them have been fully disclosed. 12 Q. Can we take a look at the 13 provisional application, which is PTX 3 and can 14 you provide a few examples where these 15 additional examples from Claim 25, 31 and 32 are 16 covered? 17 A. Sure. 747, Paragraph 22, if you 18 can blow that up, please. Thank you. 19 Yeah. So the Claim 25 says there 20 has to be -- a context component has to capture 21 relationship data associated with a relationship 22 between the first user workspace and at least 23 one other user workspace. So as users create 24 and change their context files and applications</p>
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<p>1 provisional application? 2 A. Yes, it's my opinion. 3 Q. If we can take a look now at the 4 dependent claims, which are 25, 31 and 32. 5 Could you briefly explain what the differences 6 are or what the additions are to Claim 25, 31 7 and 32? 8 A. All right. So Claim 23, the 9 context component, which is the thing that we 10 have been talking about before captures 11 relationship data associated with the 12 relationship between the first user workspace 13 and at least one user workspace. So they are 14 saying that has to be a component by what's 15 captured by the context component. 16 So it's being a little more 17 specific about that. 18 So Claim 31 introduces the idea 19 that the metadata is stored in at least one of a 20 relational or object storage methodology. 21 That's something new there. 22 And so Claim 32 is saying once 23 again that storing the metadata in the storage 24 component in association with the data</p>	<p>1 automatically follow dynamically capturing those 2 shifts in context. 3 So a shift in context is the 4 movement from one workspace to another capturing 5 the relationship between those workspaces. So 6 that I think pretty well discloses Claim 25. 7 Q. Are there other places as well in 8 this provisional application that would disclose 9 that element? 10 A. Sure. 11 Q. Maybe we could turn to the next 12 page and if we can look at the last paragraph. 13 What does this tell you? 14 A. Mm-hmm. So this is saying that if 15 you have a collection of workspaces, which has 16 -- they mean hereby webs, the content is 17 associated with a routing algorithm referred to 18 here as a webslice. 19 So, in other words, using this, 20 this is a relationship between workspaces and 21 content. So the webslice directs where the 22 content goes. It knows which workspaces the 23 content is associated with that creates a 24 connection, a relationship between those</p>

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1 workspaces because they share the same content.	1 intention is to create relationships between
2 Q. Okay. Why don't we turn to Claim	2 more than one user and more than one file which
3 31.	3 is what the claim says.
4 And let's look at it actually in	4 Q. Based on your understanding, is it
5 the actual provisional itself for the additional	5 your understanding that the provisional
6 element of Claim 31.	6 application meets all the requirements such that
7 Can we go to PTX 3, please? LFI 7	7 one can claim priority to the provisional
8 -- yeah, the first page of the code there.	8 application for the asserted claims of the '761
9 Thank you.	9 patent?
10 Could you please explain what we	10 A. Yes, that is my opinion.
11 have here and how that relates to Claim 31?	11 Q. Is it your opinion that one of
12 A. Sure. So I think I mentioned	12 ordinary skill in the art would be able to take
13 earlier if you see this import statement for	13 the provisional application and make and use the
14 vbsf, that does indicate an intention to store	14 invention of the asserted claims of the '761
15 data in a relational database. So it makes it	15 patent?
16 pretty clear that that's the technology that's	16 A. Yes, it is. It is my opinion that
17 used for storing the storage.	17 using both the text and the code, one could --
18 Q. In the code of the provisional	18 one of ordinary skill in the art could do that.
19 application, there are other references to vbsf;	19 Q. An is that opinion based on your
20 isn't that right?	20 review of the provisional application and the
21 A. Right. There are a number of	21 '761 patent as well as the work that was done by
22 places where in the comments it refers to vbsf	22 Mr. Marcello Calhaldo?
23 as, you know, where something's being stored,	23 A. Yes. Those are the two bases.
24 which is, you know, a further indication that	24 One is my own review. The other
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1 that's what is supposed to be happening there.	1 is actually handing it to a person of ordinary
2 Q. Okay. If we could maybe turn to	2 skill in the art and saying, Please make one of
3 LFI 757. I think there might be another example	3 these, and he made one. So I assumed that one
4 of that that we can look at towards the bottom.	4 could do that.
5 A. Yeah. These are a couple of	5 Q. And just to make sure I didn't
6 examples that these particular collections get	6 miss any claim, I want to make sure that we go
7 relationship collection. These are stored and	7 that. It is your opinion that each and every
8 retrieved from a relational database.	8 element of the asserted claims we've talked
9 Q. Okay. Very good.	9 about for all the reasons we've discussed today
10 We're going to add on 32. Let's	10 is, in fact, disclosed in the provisional
11 take a look to see where that last element of	11 application?
12 Claim 32 is disclosed in the provisional, an	12 A. It is my opinion each and every
13 example of that. So maybe we can turn to	13 element of every claim is disclosed.
14 Paragraph 1 under the Field of Invention of the	14 Q. Okay. Let's turn to now the prior
15 provisional application PTX Number 3.	15 arts references.
16 Thank you. Can you please explain	16 Did you have a chance to review
17 whether or not this is an example of how that	17 Dr. Greenberg's report?
18 last element of Claim 32 is disclosed?	18 A. I did. I reviewed his report.
19 A. So management storage	19 Q. And do you understand that he's
20 electronically creating a relationship between	20 asserting certain references as prior art to the
21 user applications files and folders. So users	21 asserted claims of the '761 patent?
22 name more than one file, means more than one.	22 A. Right. I do understand that.
23 mean, that's what the many to many means.	23 Q. Okay. What is your understanding
24 So here we're seeing that the	24 of what constitutes prior art?

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<p>1 Q. And does Hubert also disclose the 2 computer-implemented tracking component? 3 A. Yes, it does, in much the same 4 same way that I said before. Remember the bee 5 with its pollen. 6 There's a track component, that 7 processing part of the system that tracks the 8 change information associated with a user moving 9 between these user workspaces. 10 Q. And so what is your opinion 11 regarding Claim 23 vis-a-vis the prior art 12 Hubert patent? 13 A. That Hubert discloses each and 14 every element of Claim 23. 15 Q. Do you have an opinion on Claim 16 25? 17 A. Let's take a look. So here we're 18 talking about a relationship capturing a 19 relationship between the first user workspace 20 and at least one other user workspace. And I've 21 actually addressed this before. 22 But remember that bee with the 23 pollen. This is essentially -- it is capturing 24 their relationship, in this case, in the</p>	<p>1 A. That Hubert discloses Claim 31. 2 Q. And finally, do you have an 3 opinion regarding Claim 32? 4 A. Yes, I do. 5 Q. And what is that? 6 A. That Hubert discloses Claim 32. 7 Q. And why is that? 8 A. So this goes back to the 9 many-to-many functionality. And again, Hubert 10 was all about how can people access information 11 about these documents? 12 And this is -- you know, goes to 13 the heart of the Hubert system. It's all about 14 multiple people accessing information. 15 He even uses the example of people 16 trying to access ratings that people may give on 17 documents. So it's all about finding what's 18 happened. 19 Q. And so what is your opinion 20 regarding Claim 32 vis-a-vis the prior art 21 Hubert patent? 22 A. That Hubert discloses what's in 23 Claim 32. 24 Q. Could you please pull back up the</p>
Page 1560	Page 1562
<p>1 meta-document itself. 2 Q. And so what is your opinion 3 regarding Claim 25? 4 A. That Hubert discloses Claim 25. 5 Q. Only two more. So what about 6 Claim 31, do you have an opinion? 7 A. Sure. So here it says the storage 8 component stores the data and the metadata 9 according to at least one of a relational and an 10 object storage methodology. 11 Q. And does Hubert disclose that? 12 A. Yes, he does. 13 Q. Where does he do that? 14 A. I have a call out here. Here we 15 see emerging technology such as RDF metadata and 16 DOM, document object model, will readily enable 17 implementation of meta-documents. 18 I should mention that RDF is a 19 standard that's developed for the web. So 20 again, it's, you know, another argument about 21 all this being web-based platform, web-based 22 system. 23 Q. So what is your opinion regarding 24 Claim 31?</p>	<p>1 front page of the '761 patent? And again, show 2 exactly that. 3 A. There's also that reference on the 4 bottom left and one on the very bottom left. 5 Q. It's Pickett. I think he created 6 a new page for us. So Dr. Greenberg, do you see 7 the Hubert patent cited here? 8 A. No, I do not. 9 Q. So just to wrap up, Dr. Greenberg, 10 what is your opinion regarding the Hubert prior 11 art patent vis-a-vis the asserted claims of the 12 '761 patent? 13 A. Hubert discloses each and every 14 element of the asserted claim except in Claim 15 16. And I think I'll speak about that shortly. 16 Q. I think right now. So Dr. Greenberg, 17 we've been talking about references containing each 18 and every element. Is there a word for that in 19 patent law? 20 A. Yes. That's called anticipation. 21 Q. And your opinion, what is your 22 opinion regarding anticipation of all the claims 23 that we've been talking about and the reference 24 that we have been talking about?</p>

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<p>1 A. Well, what I've talked about was 2 three references: Swartz, iManage and Hubert. 3 And that each one of them by itself anticipates 4 or discloses what's in the -- what's being 5 asserted with the exception of Claim 16, which 6 only Hubert or see -- sorry, which only iManage 7 discloses.</p>	<p>1 someone even think potentially to pull different 2 ideas from one reference or another? 3 A. Well, there's several reasons why 4 you want to look at these references together. 5 Well, the simple -- the simplest one is that two 6 of them are from Xerox. Like Xerox are the 7 assignees of them.</p>
<p>8 Q. Is there another way besides 9 anticipation for prior art references to 10 invalidate patents?</p>	<p>8 They're theirs. And Xerox is in 9 the business of document management. 10 iManage is a -- I guess would be a 11 competitor at the time. They do document 12 management. So it's the same stuff. They're in 13 the same business. So that's one of the 14 reasons.</p>
<p>11 A. Yes, there is.</p>	<p>15 The other reason is that they all 16 deal with the same thing. As I've mentioned, 17 they're all about, you know, what is a person 18 doing in a certain context? Can we capture 19 that? 20 Can we store that? Can we track 21 what they do when they move between context? 22 Can we capture and store that as well?</p>
<p>12 Q. And what is that?</p>	<p>23 Can we revise that at a later 24 time? Can we access that? Can a person review</p>
<p>13 A. So the other way is through what's 14 called obviousness.</p>	
<p>15 Q. And what does obviousness mean?</p>	
<p>16 A. So obviousness has a -- there's a 17 few different ways to do obviousness. One is if 18 it's obvious to one of normal skill in the art, 19 a person would know, hey, this is how you do 20 things. This would be, you know, pretty 21 natural, pretty straight forward. To do that 22 would be one way.</p>	
<p>23 The other way is by combining 24 references. That is, instead of using a single</p>	
Page 1564	Page 1566
<p>1 reference to say that everything's there, you 2 can actually use two or more references together 3 to actually show that the ideas have been out 4 there.</p>	<p>1 what has happened to all these documents, all 2 this information across these contexts? 3 So that's another reason it would 4 be obvious to combine in these three references.</p>
<p>5 Q. And do you have an opinion 6 regarding each of the asserted claims and 7 whether or not they are obvious in light of 8 prior art?</p>	<p>5 Q. Let's talk about Claim 16. Can we 6 put Claim 16 on the board, please?</p>
<p>9 A. Yes, I do.</p>	<p>7 So what does Claim 16 add?</p>
<p>10 Q. And what is that opinion?</p>	<p>8 A. So Claim 16 essentially says we 9 can access the user environment via portable 10 wireless device.</p>
<p>11 A. So --</p>	<p>11 Q. Do you have an opinion as to 12 whether or not Claim 16 would be obvious to 13 someone reading the Swartz patent?</p>
<p>12 MR. ANDRE: Objection, Your Honor. 13 Outside the scope of his expert report.</p>	<p>14 A. Yes, I do. Well, there's two ways 15 it can be obvious.</p>
<p>14 THE COURT: The objection is 15 noted.</p>	<p>16 So, first of all, if -- for one 17 skilled in the art, so this is -- so think back. 18 We're talking about around Swartz, the late '90s 19 or any time actually during the time of this.</p>
<p>16 THE WITNESS: Okay. So my opinion 17 is that we can -- that if there's any perceived 18 weakness in my arguments, which I don't believe 19 there are about the Swartz patent, about the 20 iManage Reference Manual, about the Hubert 21 patent, we can combine all three of those 22 together to actually show that all the ideas are 23 collectively in those three prior art pieces.</p>	<p>20 We're talking about a wireless 21 laptop amongst other things, be a wireless 22 laptop, a PDA, those type of things. You know, 23 to actually say that, Gee, I can access a user 24 environment, not only by a computer that's wired</p>
<p>24 Q. And can you explain: Why would</p>	

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<p>1 in, but by a wireless computer.</p> <p>2 Well, not only would that have</p> <p>3 been obvious to a computer professional, but if</p> <p>4 you had an end user who was just using their</p> <p>5 wireless computer at the time, they would just</p> <p>6 do that as a matter of consequence of using a</p> <p>7 wireless computer.</p> <p>8 There's virtually nothing added by</p> <p>9 this claim that wasn't known at the time.</p> <p>10 That's --</p> <p>11 Q. So do you have an opinion as to</p> <p>12 whether or not the Swartz patent alone would</p> <p>13 render Claim 16 obvious?</p> <p>14 A. Well, yes.</p> <p>15 Q. And do you have an opinion whether</p> <p>16 the Hubert reference alone would render the</p> <p>17 Swartz would render the Claim 16 of the '761</p> <p>18 patent obvious?</p> <p>19 A. Yes.</p> <p>20 Q. And again, why?</p> <p>21 A. For exactly the same reason. We</p> <p>22 saw Hubert -- actually saw Hubert because this</p> <p>23 would be obvious to one skilled in the art.</p> <p>24 Somebody would read Hubert and this just</p>	<p>1 assistant. So back in that time, we have</p> <p>2 wireless computers, but you know there's also</p> <p>3 PDA, essentially these little hand-helds.</p> <p>4 And he says that the PDA engine is</p> <p>5 configured to exchange data with a remote</p> <p>6 computer via the wireless telephone engine. So</p> <p>7 essentially he's saying, Gee, we can -- we can</p> <p>8 access things wirelessly and we do things that</p> <p>9 way.</p> <p>10 So this is -- again, this is</p> <p>11 something that's common to all of us today. It</p> <p>12 was certainly common. It was certainly also</p> <p>13 common that except in the context of a PDA. So</p> <p>14 if we take Ausems and combine it with any one of</p> <p>15 those other three references, we would have that</p> <p>16 information.</p> <p>17 Q. And so do you have an opinion as</p> <p>18 to whether or not a combination of the teachings</p> <p>19 of Swartz and the teachings of Ausems would</p> <p>20 render Claim 16 obvious?</p> <p>21 A. Yes, I do.</p> <p>22 Q. And what is that opinion?</p> <p>23 A. That they do render it -- sorry.</p> <p>24 Say the words again.</p>
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<p>1 wouldn't add anything. People just know that,</p> <p>2 yeah, you can access it via wireless device.</p> <p>3 Q. You mentioned there was another</p> <p>4 way that Claim 16 would be obvious in view of</p> <p>5 Swartz.</p> <p>6 A. Yes. And this goes back to</p> <p>7 combining references.</p> <p>8 So there's another patent by</p> <p>9 Ausems, which actually discloses a portable --</p> <p>10 well, exactly this concept. And maybe if we can</p> <p>11 bring that up.</p> <p>12 So here we have a patent by</p> <p>13 Ausems. And if we look at the date that's sort</p> <p>14 of below.</p> <p>15 Okay. So here's the filing date.</p> <p>16 It was filed in February 19th of 1999.</p> <p>17 And there's a couple lines in here</p> <p>18 that are worth noting. And maybe we can just</p> <p>19 bring that up and highlight them.</p> <p>20 I believe it's in the Summary of</p> <p>21 the Invention. Right.</p> <p>22 So here he's talking about -- he's</p> <p>23 talking about a wireless telephone engine,</p> <p>24 smart-card engine and a personal digital</p>	<p>1 Q. Would the combination of the</p> <p>2 Swartz teachings and the teachings of Ausems</p> <p>3 together render Claim 16 obvious?</p> <p>4 A. Yes. Yes, it would.</p> <p>5 Q. Do you have an opinion as to</p> <p>6 whether or not the combination of the Hubert</p> <p>7 patent and the Ausems patent would render Claim</p> <p>8 16 obvious?</p> <p>9 A. Yes, I do, and that would be</p> <p>10 rendered obvious.</p> <p>11 Q. Do you also have an opinion as to</p> <p>12 whether or not combining Ausems with iManage</p> <p>13 would render Claim 16 obvious?</p> <p>14 A. Yes, I do, and it would render it</p> <p>15 obvious.</p> <p>16 Q. And just because I'm not sure my</p> <p>17 record is completely clean, what is your opinion</p> <p>18 regarding whether or not Claim 16 would be</p> <p>19 obvious in view of Swartz by itself with the</p> <p>20 knowledge of one of ordinary skill in the art at</p> <p>21 the time?</p> <p>22 A. That it would be obvious as well.</p> <p>23 Q. And the same question for Hubert?</p> <p>24 A. It would be obvious. And as I</p>

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1 said he -- yeah, it would be obvious.	1 Dr. Greenberg with some water, please?
2 Q. So can we go back to the summary	2 MS. KEEFE: Absolutely.
3 slide?	3 MR. ANDRE: Your Honor, should I
4 Oh, sorry. Go back to the -- you	4 begin now or should we --
5 were right. Ken was right.	5 THE COURT: Yeah. Let's begin
6 Go back to the one with the	6 now, but we'll stop at 4:30.
7 references cited that you had up just a second	7 CROSS-EXAMINATION
8 ago. The front page of the patent. Just the	8 BY MR. ANDRE:
9 front page of the '761 and the References Cited	9 Q. Good afternoon Dr. Greenberg. My
10 portion, please.	10 name is Paul Andre. I'll be asking you a few
11 And Dr. Greenberg, do you see the	11 questions this afternoon. Okay?
12 Ausems patent cited here?	12 A. Absolutely.
13 A. No, I do not.	13 Q. All right. You've demonstrated to
14 Q. And finally, the summary slide,	14 the jury four references here today; correct?
15 please.	15 A. That's correct.
16 Dr. Greenberg, just once more, for	16 Q. And all those references were
17 the record, please, what is your opinion	17 given to you by counsel for Facebook; correct?
18 regarding the Swartz patent?	18 A. They were given to me for
19 A. Okay. So as written here, my	19 analysis. Correct.
20 opinion is that Swartz discloses each element of	20 Q. And your understanding of Claim 1,
21 claims of the asserted Claims 1, 4, 7, 9, 11,	21 for example, is that Claim 1 has three separate
22 21, 23, 25, 31 and 32.	22 elements; correct? You have the context
23 Q. And what is your opinion regarding	23 component, the tracking or the tracking
24 the iManage Reference Manual?	24 component and then the wherein clause is a
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1 A. That it also discloses each and	1 separate element; correct?
2 every -- each and every element of the claims of	2 A. Well, there's two elements there.
3 the same set of claims plus Claim 16.	3 The second element has the two parts to it
4 Q. And what is your opinion regarding	4 separated by a comma.
5 the Hubert patent?	5 Q. And in your analysis, you separate
6 A. That it discloses each element of	6 those out as two separate elements, the part
7 all the claims of 1, 4, 7, 9, 11, 21, 23, 25, 31	7 two; right?
8 and 32.	8 A. You're talking about in my claim
9 Q. And what is your opinion regarding	9 chart.
10 possible combinations of Swartz, iManage and	10 Q. Yes.
11 Hubert?	11 A. My claim chart -- for ease of
12 A. That it would render all those	12 understanding, I actually break out the part of
13 asserted claims obvious.	13 the -- the second element. I take the first
14 Q. And what is your opinion regarding	14 part up to the comma and then the part after the
15 the possible combination of Swartz, or iManage	15 comma.
16 or Hubert with the Ausems patent?	16 Q. So you treat them as two separate
17 A. That it would render Claim 16 as	17 elements essentially; right?
18 obvious.	18 A. Well, they're not separate
19 MS. KEEFE: Thank you very much,	19 elements. They're the same element. Just for
20 Doctor.	20 ease of comparison, I've just listed them
21 THE WITNESS: Thanks.	21 separately in my document.
22 THE COURT: Cross-examination.	22 Q. And in fact, can you go to Exhibit
23 THE WITNESS: Is there water?	23 1105, PTX 1105? This was a document that we had
24 THE COURT: Can you provide	24 claims written in your claim chart where you had

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1 computer-implemented context component, tracking	1 Q. You can continue. I'm sorry.
2 component, and then the wherein clause; correct?	2 A. Well, you switched the slide on
3 A. That's correct.	3 me.
4 Q. And that's your handwriting here	4 Q. Go back. I'm sorry.
5 on the side, isn't it, where you have the	5 A. So there's a comma there and it
6 preamble one, element, two, three; correct?	6 says wherein. So it's -- so this is -- you
7 A. Well, that's not really correct.	7 know, it's part of the second element.
8 If you notice, I have a one next to the first	8 Q. And that makes it a natural break
9 element and I wrote two, three next to that	9 and then you treat that as a separate step in
10 brace that actually collects both of them	10 the claim; correct?
11 together.	11 A. No, it's associated with the
12 Q. Fair enough. Fair enough.	12 second element. It's -- it just -- there's just
13 But you're doing this as a	13 a comma there.
14 three-step claim; correct?	14 As I said for ease of analysis, I
15 A. I think you are misconstruing what	15 -- you know, when I was doing my claim chart
16 I did. So these claims are really dense, like	16 that I said, Here's things that match the first
17 you've heard me read it out.	17 part of that claim element. And here's things
18 There's a lot of stuff in there.	18 that match the second part of the claim element.
19 And what I did for the analysis, I essentially	19 They're not -- they're not
20 said, Here's things in Claim 1. Sorry. In the	20 completely separate. They're part of the same
21 first element of Claim 1.	21 thing. That's why I put a brace around there.
22 And I --	22 Q. Then I guess my question is: Do
23 Q. Okay. We heard how you	23 you believe that the metadata is updated when or
24 interpreted it. I get that.	24 in which the user accesses the data from the
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1 A. Okay.	1 second context?
2 Q. My question is --	2 A. Well, the word is not in which,
3 MS. KEEFE: Objection, Your Honor.	3 It's wherein.
4 Interrupting the witness.	4 So what that claim -- what that
5 MR. ANDRE: He was answering a	5 element is stating is that, you know, it says
6 question I didn't ask.	6 wherein, as a consequence, these are accessing
7 THE COURT: You can continue.	7 the data from the second context.
8 Overruled.	8 So --
9 MR. ANDRE: Thank you.	9 Q. I'm sorry. Where did you see as a
10 BY MR. ANDRE:	10 consequence?
11 Q. You're treating this as separate	11 A. As a consequence.
12 from this; correct?	12 Q. Where is that?
13 In other words, the updating the	13 A. It's wherein. You said in which.
14 metadata right here, the stored metadata is not	14 Q. That's the definition of wherein;
15 related to accessing it from the second context;	15 correct, in which?
16 correct, in your analysis?	16 A. Well, wherein is -- well, wherein
17 A. Well, that's -- I never say that	17 when I'm reading this says here is things that
18 in my analysis. There's a comma there.	18 happened, and as a consequence, the user can
19 You know, there's a natural --	19 access the data. So that's wherein the user
20 there's a natural break. All right.	20 accesses the data from the second context.
21 You want me to continue.	21 Q. That's your interpretation of
22 Q. Go ahead. I'm sorry.	22 wherein?
23 A. And it says -- oops. You switched	23 A. That's my interpretation. Yes.
24 the slide on me.	24 Q. And that's what I am trying to

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1 ask.	1 A. That's what it looks like.
2 A. Yeah.	2 Q. And because the Patent Office on
3 Q. So your interpretation is wherein	3 the claim wanted the claims written this way,
4 means as a consequence, you can do this?	4 wouldn't a reasonable interpretation be that the
5 A. Yes.	5 dynamically updating happens in which user
6 Q. It doesn't mean in which or during	6 accesses data from the second context?
7 which; correct?	7 MS. KEEFE: Objection.
8 A. It means -- well, let me see this.	8 THE COURT: Hold on.
9 Well, so when I say it has a consequence, it	9 MS. KEEFE: Objection, Your Honor,
10 could be during or after, right, it says	10 Goes to issues we discussed before.
11 wherein. So --	11 THE COURT: Sustained.
12 Q. I want to make sure I get your	12 BY MR. ANDRE:
13 understanding. Now, you have looked at the	13 Q. If you go to the last page of the
14 prosecution history in this case; correct?	14 examiner's amendment, you see Page 683?
15 A. Yes, I have.	15 A. Min-hmm.
16 Q. Okay.	16 Q. And you see the examiner's name
17 A. It's been quite awhile now.	17 here?
18 Q. Okay. And if you go to PTX 2, and	18 A. I do.
19 you go to Bates Number 668. Dr. Greenberg, this	19 Q. Diane Mizrahi?
20 is the Notice of Allowance of the '761 patent;	20 A. Yes.
21 correct?	21 Q. Go to PTX 1 and go up here to this
22 A. It looks like it.	22 column here.
23 Q. If you go to the next page, you'll	23 Now, Ms. Mizrahi cited certain
24 see that the examiner of the '761 patent put in	24 exhibits here, certain references against the
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1 an amendment. Do you see that?	1 '761 patent; correct?
2 A. I see it.	2 A. That's correct.
3 Q. Okay. Basically saying that	3 Q. And you saw the fact that like the
4 changes and additions being unacceptable, the	4 Swartz reference was not listed there; right?
5 applicant can appeal whatever. But this is the	5 A. That's correct.
6 basis for allowance; correct?	6 Q. Now, the implication from you
7 A. I'm not sure what you mean.	7 pointing that out is that Ms. Mizrahi or Mizrah
8 Q. Well, that's okay. It may be more	8 -- I'm probably butchering her name here -- she
9 if a legal question.	9 was not aware of Swartz here and didn't put it
10 A. Yeah.	10 here; right? That is the implication?
11 Q. Any way the examiner is going to	11 MS. KEEFE: Objection?
12 amend the claims correct?	12 THE WITNESS: Well, what I said --
13 A. Okay.	13 THE COURT: Hold on.
14 Q. All right. So go to the next	14 MS. KEEFE: Objection, Your Honor.
15 page.	15 THE COURT: Sustained.
16 And the examiner here put in	16 BY MR. ANDRE:
17 language that talks about dynamically updating	17 Q. You're aware, of course, that the
18 the stored metadata wherein the user accesses	18 examiner was aware of the Swartz patent;
19 the data from the second context; correct?	19 correct?
20 A. I see that. Yes.	20 MS. KEEFE: Objection, Your Honor.
21 Q. And the examiner got rid of the	21 THE COURT: Sustained. Move on,
22 term and automatically updating the stored	22 if you have something else you can do in two
23 metadata. Based on the change, just by itself,	23 minutes.
24 she put those two elements in; correct?	24 BY MR. ANDRE:

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<p>1 Q. Go to DTX 919. Blow this up right 2 here. 3 This is the Swartz patent; 4 correct? 5 A. That's correct. 6 Q. Is not Ms. Mizrahi an examiner of 7 this? 8 MS. KEEFE: Objection, Your Honor. 9 Move to strike! 10 THE COURT: Sustained. 11 MR. ANDRE: Your Honor, it's on 12 the face of the patent. 13 THE COURT: It's stricken. Let's 14 move on. 15 MR. ANDRE: Your Honor, this would 16 be a good time to stop before I get into the 17 references and substance. 18 THE COURT: All right. That 19 sounds right. 20 Ladies and gentlemen of the jury, 21 we've come to the end of -- sorry. Okay. All 22 right. 23 First things first. Thank you for 24 your service this week.</p>	<p>1 (Jury leaving the courtroom at 2 4:30 p.m.) 3 THE COURT: Doctor, you can step 4 down. The rest of you may be seated. 5 We're going to discuss jury 6 instructions and special verdict form. I 7 suppose it would may be helpful to me and maybe 8 all to us if we briefly assess where we are, so 9 I can have in mind when I'm likely to be 10 instructing the jury as I consider some of these 11 issues. 12 Mr. Rhodes, you're on your feet 13 first, so why don't you give me your sense. 14 MR. RHODES: And I apologize, Your 15 Honor, for trying to raise this at a break with 16 my zeal. I am just - my concern is really 17 simply about where we're going to be sort of 18 early Monday afternoon. 19 It looks like most of the morning 20 -- I don't know how long it will take Your Honor 21 to manually read them in. And if we assume -- I 22 think both Paul and I are relatively brief, but 23 if we assume that we're each in combination 24 going to take three hours or so for the two</p>
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<p>1 I'll remind you that -- first of 2 all remind you, don't come here tomorrow. 3 You're not due back until Monday morning in time 4 to start at nine o'clock. 5 Over the weekend, don't do any 6 deliberating, any discussion about the case. 7 Don't do any research about the case. 8 Don't look at any media about the 9 case if there is any. Don't get on Facebook. 10 And what I've just been notified 11 is that there are several other trials on Monday 12 that are going to be going on in the building, 13 and so our Court security has requested that all 14 of you, being veterans at this point, that you 15 use our private entrance on Monday, which is on 16 the 8th street side of the building. 17 You might want to find it on your 18 way out today, so you know on Monday. And 19 hopefully it will be a little easier for you to 20 get in for, because there may be quite a crowd 21 on Monday. 22 And with that, I will excuse you 23 all for the week. 24 THE CLERK: All rise.</p>	<p>1 arguments plus his rebuttal piece, I'm just 2 concerned about where that leaves us in terms of 3 how deep into Monday you want to go. That's all 4 I wanted to raise with you before. 5 THE COURT: Right. 6 MR. RHODES: I can't say I have 7 any particularly good idea. 8 THE COURT: Okay. Right. 9 MR. RHODES: I don't see I have 10 any particularly good idea -- 11 THE COURT: And my sense of 12 roughly -- I'm not the official timekeeper, but 13 we are timing everything, so there is an outer 14 limit, not that you have to use it all. 15 My understanding is together the 16 parties have about seven-and-a-half hours left. 17 We've been getting in five-and-a-half hours of 18 jury time each day, which suggests to me that if 19 you're going to use all the time -- plus it's 20 going to take me some time to read the 21 instructions -- I suggest we may not be able to 22 get the case to the jury Monday. If you're not 23 going to use all the time, then we have a shot. 24 Any sense on that point?</p>

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<p>1 MR. ANDRE: Your Honor, I don't 2 think that I'm going to have too long with their 3 expert relatively speaking, and our expert is 4 probably a couple hours. We don't know if we 5 could get it closed on Monday or Tuesday morning 6 at this point. 7 THE COURT: Right. 8 MR. RHODES: The only thing I 9 would ask Your Honor to think about as you're 10 thinking about the timing, what happens, for 11 example, if Mr. Andre finishes his closing at 12 3:30, and where does that leave me? I think it 13 would be very unfair to split it. 14 Like I said, I didn't have a 15 particularly good idea what to suggest to you 16 either. 17 THE COURT: And are both parties 18 still of the view that it's preferable for me to 19 instruct the jury prior to the closings? 20 MR. ANDRE: Yes, Your Honor. 21 MR. RHODES: I share that view. 22 THE COURT: Well, we're just going 23 to have to see, I guess, at the moment. 24 All I ask, say, is I'm open</p>	<p>1 going to go beyond the total of the remaining 2 seven-and-a-half hours for argument plus 3 evidence. 4 Let's turn to the instructions and 5 special verdict forms, and I'm obviously going 6 to give both sides some time. 7 Let me start with Leader. 8 I do now have the official time, 9 I might as well tell you. According to my 10 deputy, Leader has used up eleven hours and 11 fourteen minutes, and Facebook has used up 12 eleven hours and eleven minutes. We're running 13 close, but Leader is a few minutes ahead. 14 Mr. Andre, or whoever wants to 15 speak for Leader. 16 MR. ANDRE: Your Honor, I'm not 17 sure what you want to address first. We 18 provided a special verdict form. I think it's 19 pretty standard in the district here, ones we've 20 seen from recent personal experience and also 21 experiences of others. It's straightforward. 22 THE COURT: One thing we found 23 curious on your special verdict form, Mr. Andre, 24 was it did not appear to be asking the jury to</p>
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<p>1 certainly to the possibility of possibly ending 2 early on Monday and just starting fresh up with 3 the all the closings on Tuesday so as to avoid 4 any potential prejudice of splitting any 5 argument in the middle. 6 One thing I would welcome the 7 parties's views on, even though it is abstract, 8 is if I'm instructing first, what is your 9 feeling about possibly Monday ends with me 10 reading the instructions and then we only have 11 closings on Tuesday morning? 12 Mr. Andre. 13 MR. ANDRE: That's acceptable with 14 us, Your Honor. 15 MR. RHODES: I would be okay with 16 that. I wouldn't want to have the scenario of 17 twenty minutes left, and I do twenty minutes, 18 and it stops. 19 Either that, or we split them. I 20 like that idea better than the other one. 21 THE COURT: All right. 22 Well, again we'll deal it with on 23 Monday when we see where we are, and the only 24 thing I can tell you for sure is you're not</p>	<p>1 consider several of the defenses on validity. 2 Was that intentional, or did I misread it? 3 MR. ANDRE: That should have been 4 two. Anticipation and obviousness were the only 5 two defenses raised during the trial. 6 THE COURT: I see. So you intend 7 for the jury to understand what the on-sale bar? 8 MR. ANDRE: It's an anticipatiou 9 defense. If you want us to split that out, we 10 can do that. 11 THE COURT: I think we will split 12 it out. 13 MR. ANDRE: That's fine. We 14 should have put them has a single anticipation, 15 on-sale combination. 16 THE COURT: At this point I'm not 17 giving you any direction as to what to do. I 18 may give you some direction over the next few 19 minutes, but right now I'm not directing 20 anything on the verdict form. That was my 21 question there. 22 MR. ANDRE: As far as the jury 23 instruction, Ms. Kobiarka will be leading the 24 charge. I'll defer to her.</p>

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<p>1 THE COURT: Let me hear from 2 Facebook on the verdict form before we dive into 3 the jury instructions. 4 MR. WEINSTEIN: Your Honor, 5 there's a couple of differences between the two 6 verdict forms that I wanted to point out for you 7 and give you our thoughts on the significance of 8 these differences. 9 One of the differences is that we 10 put in an element-by-element series of special 11 interrogatories with respect to the doctrine of 12 equivalence issue. We did that following 13 Dr. Vigna's testimony, so after Dr. Vigna's 14 testimony, it seems to us that a special 15 interrogatory regarding the specific claim 16 elements might be helpful. 17 This procedure has been adopted 18 and approved by the federal court in the Warner 19 Jenkinson case. There wasn't a place on the 20 verdict form to put authority. That's at 520 21 U.S. 17 at page thirty-eight, where the Supreme 22 Court says the special verdict and/or 23 interrogatories on each claim element would be 24 very useful in facilitating review, uniformity,</p>	<p>1 the basis of it, is and that's why ours does not 2 include that interrogatory, and theirs 3 discusses. 4 The same is true with respect to 5 number three. 6 Number five, with the prior art, 7 one, Your Honor already mentioned there's no 8 discussion of the on-sale bar or public use 9 defense. There's no separation between the 10 three different prior art references, that that 11 would be something that would provide a little 12 more clarity to make the verdict more useful. 13 We also think one of the 14 differences we think there should be in light of 15 the testimony regarding the priority date 16 issues, we think there should be an 17 interrogatory on whether or not the provisional 18 application supports the issue claims. That has 19 been a litigated issue that we think it would be 20 helpful to have a specialized interrogatory on 21 that. 22 And finally, Your Honor, our jury 23 verdict form includes an explicit series of 24 special verdict interrogatories on the question</p>
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<p>1 and possibly post-verdict judgments. 2 As a matter of law, the idea is 3 it's going to provide clarity on which elements, 4 if any, the jury would find on the doctrine of 5 equivalents. That's a difference I wanted to 6 explain to Your Honor. 7 On question number two of Leader's 8 special verdict form, there's a discussion of 9 inducement, and this is something that's going 10 to come out in the jury instructions as well. 11 There's a conflating of the three very distinct 12 standards of infringement that were seen in this 13 case, which is direct infringement, infringement 14 by direction or control -- which is direct 15 infringement -- and inducement. 16 The inducement theory requires 17 that they show that some third party has 18 performed each and every element of the claim. 19 That is, we have somehow induced that activity, 20 and I don't think the trial record has shown 21 that someone other than Facebook has performed 22 each and every element of the claim. I don't 23 think they're making that argument. 24 On number two, I'm not sure what</p>	<p>1 of direction and control, and Your Honor has 2 heard testimony regarding whether Facebook can 3 control or has control over its users. That 4 goes to that issue, and that's going to be 5 important in the context of the bifurcated 6 trial. 7 THE COURT: On element-by-element 8 table, the case you cited was that a patent 9 case? 10 MR. WEINSTEIN: Yes, Your Honor, 11 that's the Warner Jenkinson Supreme Court case 12 on doctrine of equivalents. I left out Komar 13 Communications. That's 156 Federal Third 1182 14 at 1188, footnote one, and that's from the 15 federal circuit, 1998. 16 THE COURT: I would certainly have 17 a great deal of faith and confidence in the 18 jury, but it would be challenging, as we've seen 19 in court, to require them to go element by 20 element, claim by claim. 21 Of course they may do that in 22 their deliberations, and we won't know. What do 23 you say to the concern that this may just be too 24 daunting a task or might frighten them perhaps?</p>

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<p>1 MR. WEINSTEIN: I have two. This 2 is an analysis they'll have to go through 3 anyway. 4 To the extent it's a daunting 5 process, it's a convenience of the fact they're 6 serving eleven claims, some of which they take 7 an entire whiteboard. That's not a daunting 8 task of our choosing. It's something they did 9 by asserting eleven claims in this litigation. 10 THE COURT: Anything else on the 11 verdict form? 12 MR. WEINSTEIN: No, Your Honor, 13 that's it. 14 THE COURT: Mr. Andre. 15 MR. ANDRE: I apologize, Your 16 Honor. I didn't have their verdict form. I 17 just got handed it, and it's a doozy. 18 I think Facebook stipulates to 19 infringement. The jury cannot find it with this 20 jury form, it's so daunting, and it's one-sided 21 that -- infringement is impossible to find. 22 The same standard is not held to 23 validity. They don't do element-by-element of 24 prior art or on sale. It's obviously trying to</p>	<p>1 THE COURT: Okay. Let's move on 2 to the jury instructions at this point. 3 I'll hear from Leader first on 4 these. 5 MS. KOBIALKA: I'm not sure 6 exactly how you want to proceed with it. 7 THE COURT: I'm not sure either. 8 You've all thrown a lot at me. 9 Why don't you start. If you seem 10 to be spending too long on one I think is easy, 11 I'll let you know and move you on. 12 MS. KOBIALKA: Okay. And I think 13 we divided some of this up amongst us. 14 Depending on the issue, I can start with the 15 first one that's disputed and work through it. 16 THE COURT: Why don't we go 17 through all the ones you're yourself personally 18 covering, and we'll turn it over to the 19 colleague that's addressing the rest, and then 20 I'll turn it over to Facebook. 21 MR. RHODES: Since I'm not going 22 to have a voice, may I excuse myself for a 23 minute? 24 THE COURT: You may.</p>
Page 1596	Page 1598
<p>1 get some very prejudicial form into the hands of 2 the jury. 3 THE COURT: How about an 4 interrogatory on control or direction? What's 5 your view of that? 6 MR. ANDRE: Your Honor, it comes 7 under the direct infringement, and you ask every 8 possible question there is that you could put 9 out there, you would be reading the instructions 10 and asking check this one and check this one. 11 The verdict form is supposed to 12 reflect the fact that the jury did listen to and 13 appreciate the actual instructions Your Honor is 14 going to read to them and apply analysis and 15 give the final result of the analysis on the 16 form itself. 17 It's not meant for them to go 18 through and have a worksheet to figure out how 19 to cover the deliberations and make it nearly 20 impossible to decipher what we're trying to ask 21 them to come to a decision on. 22 With the direction and control, I 23 don't think it's necessary to add another layer 24 of complication to it.</p>	<p>1 MS. KOBIALKA: I believe the first 2 dispute in the instruction is 1.3, and that 3 starts on page three. I'm hoping this is an 4 easy one. 5 THE COURT: That's an easy one. 6 You can move on. 7 MS. KOBIALKA: The next one is 8 1.9, and that relates to the deposition 9 testimony. 10 THE COURT: Deposition testimony. 11 MR. KOBIALKA: Correct. That 12 starts on page fourteen. The real difference 13 between our two instructions is that Facebook is 14 attempting to add a fair bit to just the 15 standard jury instruction, where it's basically 16 raising questions specifically directed at 17 Mr. Lamb, and this is frankly something that's 18 appropriate for closing argument but not 19 something that needs to be instructed to the 20 jury, so we object to the language proposed. 21 THE COURT: Did they actually 22 depose Mr. Lamb again after the errata sheet 23 went in? 24 MS. KOBIALKA: They moved and</p>

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<p>1 withdrew the morning of the hearing. They never 2 followed up with that.</p> <p>3 In early drafts of the pretrial 4 order, it indicated they were going to take 5 Mr. Lamb's deposition when he appeared at trial 6 and then they removed that issue.</p> <p>7 THE COURT: I'm not indicating 8 that I'm agreeing with you, but that is an 9 easier one, so let's move on.</p> <p>10 MS. KOBIALKA: On the burden of 11 proof, we just followed the jury instruction and 12 added in the names of the parties.</p> <p>13 THE COURT: Tell me where you are, 14 please.</p> <p>15 MS. KOBIALKA: 1.10, page twenty, 16 and so the dispute here is actually they did not 17 want to articulate who had the burden of proof 18 with respect to what issue. It was fine when 19 they had their claims in of inequitable conduct 20 and everything else, but once the claims got 21 bifurcated, they removed it and said we don't 22 want to say infringement is preponderance and 23 invalidity is clear and convincing.</p> <p>24 THE COURT: Okay. You can move</p>	<p>1 So then the next is 2.3. I'm not 2 sure why this is in dispute again, but they 3 don't like our inducing and contributory 4 infringement theory in the case. That was that.</p> <p>5 The next dispute is 3.2. I'm 6 hoping this is another easy one. We're in 7 agreement for the most part. They're having 8 problems with the language Leader proposed. Not 9 brackets.</p> <p>10 It's standard language. I believe 11 it comes from the model jury instructions. The 12 only thing we added at the end was the last two 13 sentences to clarify we have three different 14 claims -- the system claim, computer-readable 15 claim, and method claim -- so there wouldn't be 16 confusion.</p> <p>17 THE COURT: That's going to take 18 us into one of the more difficult areas, the 19 direction and control issues. Are you here to 20 talk about those too? If not, that's fine.</p> <p>21 MS. KOBIALKA: I'd have to look at 22 it. I'm trying to remember.</p> <p>23 THE COURT: Let's move on then to 24 what you have next.</p>
Page 1600	Page 1602
<p>1 on.</p> <p>2 MS. KOBIALKA: The next dispute 3 is 2.2, and this is just -- it's entitled the 4 parties' contentions.</p> <p>5 The dispute here is that they 6 don't believe we should have the right to be 7 able to assert inducing infringement and 8 contributory infringement in the case. 9 Otherwise, I think we're in agreement with 10 regard to that particular --</p> <p>11 THE COURT: Do you understand that 12 dispute to some extent to be whether or not you 13 provided adequate and timely disclosure of those 14 allegations and those theories? I'm trying to 15 understand.</p> <p>16 Obviously you have alleged it at 17 trial, and I'm trying to understand the basis of 18 their belief that it's not in the case, which I 19 can direct to them, but if you have an 20 understanding of their position --</p> <p>21 MS. KOBIALKA: This might be based 22 on their motion for summary judgment, but it 23 would be best to ask them. I didn't get very 24 far.</p>	<p>1 MS. KOBIALKA: The next dispute, 2 which once again should be straightforward, is 3 3.3.</p> <p>4 We followed the model instruction. 5 Facebook wants to have the instruction include a 6 chart of the claims. We tried to compromise and 7 say this is claim one, independent, and these 8 other claims depend on it, but you can't really 9 read the chart to the jury.</p> <p>10 THE COURT: It will be awkward, 11 but I think I can do it.</p> <p>12 MS. KOBIALKA: We wrote the 13 language in our instructions.</p> <p>14 THE COURT: I think I'm going to 15 read the language and the chart.</p> <p>16 MS. KOBIALKA: The next one is 3.5 17 on page forty-six.</p> <p>18 THE COURT: They've put in a new 19 3.4 today. I don't know if you've seen it.</p> <p>20 MR. ANDRE: One moment, sir, I 21 just got handed it.</p> <p>22 THE COURT: Sure.</p> <p>23 MR. ANDRE: Your Honor, I've just 24 been handed the note. They just want the Court</p>

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<p>1 in construe the new term "wherein" means in 2 which, not when. I'm not sure what the basis is 3 that is. 4 Obviously their expert testified 5 it doesn't mean in which. I don't mind. The 6 definition of the term means in which, but I 7 don't think not when. You never give a claim 8 interpretation the negative sense. This is what 9 it means, and everything else is what it doesn't 10 mean. We don't object to the term wherein 11 meaning in which. 12 THE COURT: I think they also 13 added that last paragraph about prosecution 14 history. 15 MR. ANDRE: I think that's -- can 16 I confer? I read it, and I think it's 17 self-apparent, but let me make sure I'm not 18 missing something. 19 THE COURT: Okay. 20 MR. ANDRE: Your Honor, we don't 21 think it's necessary. We think it's obviously 22 an attempt to undermine the evidence we put in 23 with our prosecution history for various other 24 purposes. We would object to it.</p>	<p>1 if you introduced a step and then you referred 2 back to that step to say it had performed a 3 sequential step, then they would have to be read 4 in order. Otherwise, for the method claimed, 5 you can perform it in different orders. 6 THE COURT: Even when the Court 7 construes the dynamically language with having a 8 timing element? 9 MR. HANNAH: The timing element is 10 a technical. It's not a proceeding event in the 11 claim. It is a proceeding event that's 12 happening. 13 This is a computer program that 14 interacts with a user when a user uploads data. 15 That could be the event. When you put a -- it's 16 functional language. That's what dynamically 17 means. From the claim construction order, that 18 seems to be -- 19 THE COURT: I see your point. 20 Ms. Kobialka, let's try to finish 21 up whatever you have. 22 MS. KOBIALKA: Okay. The next 23 jury instruction in this is the same issue, so 24 this is 3.6 on the inducing.</p>
Page 1604	Page 1606
<p>1 THE COURT: Okay. Ms. Kobialka, 2 do you have others? 3 MS. KOBIALKA: I know I do, 4 3.5 was the next one. This is 5 "comprising." 6 This language -- this is a 7 standard jury instruction that we have, and 8 Facebook just doesn't believe it's necessary, 9 but in cases where you have the word 10 "comprising" in the claims, just so there's no 11 confusion, this is an instruction that's given. 12 THE COURT: I'm inclined to do 13 some form of comprising, but address the issue 14 that Facebook raises in page forty-nine about 15 these claims being sequential. I'm not clear 16 why that is a problem for the comprising 17 language you proposed, but do you see any issue 18 with me addressing the sequential nature of the 19 terms? 20 You may want to pass the baton. 21 MR. HANNAH: This issue came up in 22 the other case, but this is contrary to the law. 23 The law says that unless there's a direct 24 relationship between the steps -- for instance,</p>	<p>1 THE COURT: That just follows. 2 MS. KOBIALKA: A lot of them are 3 like that. They have that particular issue, 4 Now, the next one is on direct 5 literal infringement, and this goes to all their 6 arguments about direction. 3.7, direction and 7 control, and they just dispute whether or not 8 there is direction and control, which is a 9 factual issue. That's the center of the dispute 10 itself. 11 We have put all the different 12 types of direct, literal infringement in this 13 claim, and I think probably no one else is going 14 to address in the other cases. 15 To the extent we need to get into 16 it, this is one of the issues that I don't know 17 if you want further briefing on it. It's a fact 18 that the jury is supposed to determine, and the 19 question is what law do they need to be 20 instructed in. 21 THE COURT: What do you think of 22 the view that there's an issue of fact that's 23 almost logically prior? That is -- I forget 24 what the fantasy sports case is called -- that</p>

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1 maybe we need to ask the jury as a factual
 2 matter, is this the type of software computer
 3 system that's like fantasy sports, in which case
 4 to assess direction and control, there's things
 5 you can consider along the lines of what Leader
 6 suggests. If as a jury you find as a factual
 7 matter this program worked more like the one in
 8 Muniauction, you're limited to direction and
 9 control in terms of liability and contractual
 10 relations.
 11 Do you have thought to approaching
 12 it that way?
 13 MS. KOBIALKA: I think it's going
 14 to be incredibly confusing.
 15 THE COURT: You're right about
 16 that.
 17 MS. KOBIALKA: And now we're
 18 starting to parse out a claim in a manner that
 19 goes to their specific defenses. If you're
 20 going to do it for one, you have to do it for
 21 the other.
 22 They are definitely issues we want
 23 instruction on with respect to the references
 24 and things like that. Once we start going down

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1 this path, it's problematic.
 2 I think when it comes to
 3 instructing the jury, we need to provide them
 4 with the law, and they can make the
 5 determination. There's nothing in the cases
 6 that say you need to specifically drop that
 7 specific question on the verdict form itself.
 8 THE COURT: Okay. Already I
 9 should tell you I have a goal of getting us out
 10 of here at 5:30, so as much as I enjoy this --
 11 MR. RHODES: You had such
 12 credibility.
 13 THE COURT: I apologize.
 14 MS. KOBIALKA: Let me see if I can
 15 move through.
 16 The next disputed one is 3.8(a).
 17 We have a dispute about what has to prove what
 18 and that is really what the issue is that's on
 19 page seventy, so largely the jury instruction
 20 which follows the model is in there, but they're
 21 asserting that Leader has the burden of showing
 22 that proposed hypothetical claim.
 23 THE COURT: I'm not going to ask
 24 for an advisory verdict on ensnarement, so I

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1 think this is going to drop out.
 2 MS. KOBIALKA: And that would
 3 include the vitiation?
 4 THE COURT: I think so.
 5 MS. KOBIALKA: That was the extent
 6 of that one.
 7 So the next one is 3.8(b), and
 8 they just wanted another instruction on indirect
 9 infringement, sort of reemphasizing all the
 10 elements.
 11 Our objection to this was this was
 12 already covered in the previous jury
 13 instruction, and no need to go over that again.
 14 The next one is 3.9, and this is
 15 on page eighty-one. Goes to active inducement.
 16 THE COURT: Same issue.
 17 MS. KOBIALKA: It is. There's
 18 some dispute about how many times do they get to
 19 emphasize within these jury instructions that
 20 somebody else must directly infringe a claim.
 21 It's fair game if you got it once, but second,
 22 third, fourth time, it's too much.
 23 THE COURT: I will endeavor to be
 24 fair with respect to that.

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1 MS. KOBIALKA: I think that's all.
 2 Contributory infringement.
 3 Mr. Andre was going address that.
 4 MR. ANDRE: I was?
 5 MS. KOBIALKA: You were.
 6 THE COURT: Is there anything else
 7 that you wanted to address that you think is
 8 particularly important?
 9 MS. KOBIALKA: I think another big
 10 one that was in dispute was the 4.2, and this
 11 one starts on ninety-eight.
 12 THE COURT: This is about prior
 13 art, and now I think we now know it's much more
 14 limited prior art that's part of the case.
 15 MS. KOBIALKA: Right. So what
 16 issues come into play for purposes of conception
 17 the effective filing date?
 18 THE COURT: We'll hear from
 19 Facebook on that, and I'll try to reserve you a
 20 minute or two to respond if need be.
 21 MS. KOBIALKA: So I think that
 22 also delves into some of the ones thereafter
 23 related.
 24 4.4, the invention date conception

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<p>1 and reduction to practice. They're all centered 2 around similar disputes about how to get the 3 right language in, and part of this goes to 4 whether or not the provisional discloses enough 5 of the invention so we get that priority date. 6 THE COURT: I think I understand 7 those issues. 8 MS. KOBIALKA: Okay. So then we 9 should have put chapters in this thing. 10 Then the next dispute was 4.5 that 11 I was going to address. They have inherency 12 instruction that they would like. This is on 13 page 128. 14 Inherency has not been an issue 15 that any expert has opined on. We kept going 16 back and forth. Why are we giving an 17 instruction on inherency if there isn't any 18 evidence to it? So they didn't want to strike 19 it. That is the core of that dispute. 20 THE COURT: Just being mindful of 21 the time, I'm going direct you to one issue that 22 would be helpful to me and then let's move to 23 Mr. Andre, to his issue. 24 And level of ordinary skill and</p>	<p>1 Let's hear from Mr. Andre, and 2 then I want to give Facebook some time. 3 MR. ANDRE: Your Honor, on the 4 contributory infringement, it's a pretty 5 standard instruction. I don't see anything 6 extraordinary about the points, puts out the 7 elements as set forth, looks like Facebook wants 8 to insert the statute into the instruction to 9 some degree, and I don't think that's necessary 10 or appropriate at this point. 11 I don't see the big issue here 12 because the Thrasher case has come out and 13 determined that any type of contributory 14 infringement to the patent requires a product in 15 the stream of commerce, and then you have three 16 elements set for most part. 17 THE COURT: Let me turn it over to 18 Facebook at this point. Feel free to address 19 any of the issues that have been raised or 20 others if you think there are others that are 21 important, and basically we have up to 22 twenty minutes because I do want to leave the 23 last five minutes to hear from Leader. 24 MR. WEINSTEIN: There's only two</p>
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<p>1 whether I need an instruction directing the jury 2 as a functional matter that they're supposed to 3 determine that. What is your position? 4 MS. KOBIALKA: That there does 5 need to be an instruction, and the jury makes 6 that determination, what constitutes one of 7 ordinary skill in the art. 8 THE COURT: Facebook is of the 9 view that the Court has determined what a person 10 of ordinary skill in the art is. Do you have an 11 idea what that is? 12 MS. KOBIALKA: I think they're of 13 the view that you're supposed to decide that and 14 tell the jury what that is. I know there were 15 issues about on-sale bar and public use. There 16 were elements missing. Mr. Rovner was going to 17 address that. I don't want to shortchange him 18 on that. He's been preparing. 19 THE COURT: Mr. Rovner. Is he 20 here? 21 MR. ANDRE: He stepped back, Your 22 Honor. 23 THE COURT: We'll come back to him 24 if I need to.</p>	<p>1 issues to address. The most critical ones on 2 jury instruction, 3,4. 3 Your Honor, I'd like to hand up a 4 portion of some of the transcript from the trial 5 to illustrate why we need an instruction that 6 "wherein" does not mean when. 7 THE COURT: You've already cited 8 pretty extensively in your support, which we 9 looked at, so in the spirit of compromise, 10 construing at this late moment the term 11 "wherein" to mean in which, which has been 12 agreed to by Leader, is not satisfactory to you? 13 MR. WEINSTEIN: It isn't, Your 14 Honor. The problem with in which, Your Honor, 15 they're going to make the exact, same argument 16 what I heard today, is they think this is a 17 factual issue to go to the jury. 18 When I read the '02 Micro case 19 last night, I was haunted how similar that case 20 is to this. There was a claim term only if like 21 there. This case, they presented witnesses and 22 cross-examined witnesses on what do you think 23 this term means. 24 What ultimately came down and the</p>

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<p>1 Court decided, he was going to send it to the 2 jury. The federal circuit said when the parties 3 present a fundamental dispute regarding the 4 scope of a claim term, it is the Court's duty to 5 resolve it.</p> <p>6 The fundamental dispute is 7 regarding does "wherein" mean what, or does the 8 claim require a dynamic element, which means you 9 look to the preceding claim element? That's a 10 dispute Your Honor needs to resolve as a matter 11 of law.</p> <p>12 THE COURT: Help me, though, why I 13 haven't resolve it by construing "wherein" to 14 mean in which, and you all make your arguments 15 or don't. You're stuck with the Court's claim 16 construction as a matter of law. The jury is 17 told they have to follow my claim construction. 18 How is that any different than all the other 19 claim construction issues?</p> <p>20 MR. WEINSTEIN: Ultimately let's 21 say the construction comes in in which you can 22 say at which point. There's lots of different 23 definitions. Ultimately wherein is a connector 24 between two clauses.</p>	<p>1 THE COURT: And your paragraph on 2 prosecution history that you propose, that does 3 not take care of your problem if I were to keep 4 that in as well as your wherein construction?</p> <p>5 MR. WEINSTEIN: The wherein 6 construction would not do it. The prosecution 7 history would help, but ultimately, Your Honor 8 has to decide whether or not the claims are 9 satisfied with dynamically updating the metadata 10 when user accesses.</p> <p>11 If that issue is not resolved, 12 ultimately instituting "wherein" as some 13 connector is not going to stop the arguments 14 from being made that are legal in nature.</p> <p>15 THE COURT: If I were to add line 16 five, which claims which would I put the term 17 "wherein" means in which. Perhaps, not when, 18 in which claims, what number claims, would I 19 write in?</p> <p>20 MR. WEINSTEIN: Your Honor, the 21 claims that have the wherein clause are one, 22 nine, and four also, and --</p> <p>23 MR. HANNAH: All the dependent 24 claims have wherein as well.</p>
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<p>1 The question is, does it connote a 2 temporal sequence like something happens when 3 the user accesses the data from the second 4 context? That's the argument.</p> <p>5 They're taking the update of 6 method to metadata can happen when the user 7 accesses data. That's a claim construction 8 question. We think it's been resolved by Judge 9 Farnau's order.</p> <p>10 THE COURT: Where is it resolved 11 in his order?</p> <p>12 MR. WEINSTEIN: It's resolved in 13 his order.</p> <p>14 THE COURT: Why do I even need to 15 define wherein if dynamically has done it?</p> <p>16 MR. WEINSTEIN: The only reason we 17 need to define it, Leader is making these 18 arguments. They're putting prosecution history 19 evidence before witnesses and arguing the 20 meaning of claim terms, which is the exclusive 21 province of Your Honor. There's going to be 22 arguments in closing as to what ultimately the 23 legal implication of wherein is. That's 24 something that should not go to the jury.</p>	<p>1 MR. WEINSTEIN: I don't think 2 that's right, but I know seven has wherein in 3 it.</p> <p>4 The claims where it really matters 5 is one, nine, and twenty-three.</p> <p>6 Twenty-one, very interestingly, 7 Your Honor doesn't use the word "wherein." It 8 uses the term "such that," and that is something 9 that we agreed to, is to construe "wherein" to 10 mean "such that," which is consistent with 11 what's in claim twenty-one. That's another 12 synonym that we think is clearer.</p> <p>13 THE COURT: Okay. Certainly this 14 is an important issue. I agree with that, but I 15 assume there's probably another you want to 16 address.</p> <p>17 MR. WEINSTEIN: On Mr. Lamb's 18 testimony, the only thing we wanted was to say 19 two points.</p> <p>20 One is, a written correction to 21 the deposition does not erase the witness's 22 prior answer, and the jury is free to consider 23 the changes in any way they see fit, the same 24 way they would judge any issue of credibility.</p>

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<p>1 We don't think what happened in 2 discovery is particularly relevant. The reason 3 we proposed it, if you recall, as doing the 4 read-back of Mr. Lamb, one of the proposals was 5 let's not present the testimony in the original 6 form, just the modified testimony. Both need to 7 come in, and the jury needs to know the 8 correction does not erase the testimony. 9 "Only comprising" claim. This is 10 again going back to the same issue about the 11 sequence of the steps in the claim. The patent 12 calls for a first context and second context. 13 That's a sequence. 14 It calls for dynamically 15 associates methodology with user-defined data in 16 the first. That's creation of the data. 17 Second claim element, creating the 18 user dynamically, means automatically responding 19 to the preceding event, moving from the first 20 context to the second context. 21 The claim requires a sequential 22 step of events. We're not arguing that because 23 Facebook has a bunch of other components, it 24 doesn't infringe. The issue is, does it have</p>	<p>1 I'm not sure the instruction is 2 necessary, but that's not a position that we've 3 been taking. 4 THE COURT: I think I have 5 trouble. I understand the argument that you're 6 making about the sequential nature, and I want 7 to know what you propose I do about that if I 8 agree with you. I don't understand the connection 9 between that and 3.5 and why you have an 10 objection to 3.5. 11 MR. WEINSTEIN: I think, Your 12 Honor, because the claims have a very specific 13 cause and effect and because there isn't really 14 an issue of comprising versus consisting. The 15 instruction doesn't need to be given. 16 This is not an issue. None of our 17 non-infringement positions hinge on. We do 18 everything in the claim, but we do these other 19 things. That's not an argument we're making. 20 THE COURT: From your perspective, 21 if I eliminate 3.5, I've addressed your concern 22 about the sequential nature of the claims? 23 MR. WEINSTEIN: The sequential 24 nature of the claims goes to the wherein clause</p>
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<p>1 all the claim elements in the claim? 2 We don't want a comprising claim 3 that's going to make them think, I don't have to 4 follow the sequence. As long as I think there's 5 something from or outside of that, I can find 6 infringement, and that's the problem with the 7 comprising claim. 8 THE COURT: Tell me again the 9 number of the comprising claim or what page it's 10 on in your joint summation. 11 So am I correct that your 12 objection is to the statements in 3.5, proposed 13 3.5, along the lines that if you find that 14 Facebook is practicing all the steps, the fact 15 that Facebook might include additional steps 16 would not avoid literal infringement? Do you 17 have an objection as well to the Court saying 18 what comprising means? That is, the other 19 portions of proposed 3.5. 20 MR. WEINSTEIN: The statement that 21 you meet all the claim elements, you don't avoid 22 infringement because you have other stuff, we 23 don't have a problem with that part of the 24 instructions. That's not controversial.</p>	<p>1 that's addressed in 3.4. This problem goes to 2 an a number of instructions. 3 THE COURT: Does it come up in 4 other places, or is there some language you 5 proposed elsewhere that I didn't figure out the 6 connection? If you think of that, let me know. 7 MR. WEINSTEIN: And, Your Honor, 8 on the indirect and contributory instructions, I 9 think ultimately the question comes, who is the 10 third party who is directly infringing? In 11 other words, who is the third party, not 12 Facebook, who is performing each and every 13 element of the claims? 14 I don't think there's been an 15 identification of the third party, let alone a 16 showing that a third party performs each claim 17 step. The apparent purpose of these 18 instructions appears to be to, sort of, muddle 19 what they are required to prove with regard to 20 direction and control, and I'll note that in a 21 minute with respect to the evidence proffered 22 and the issues in the case and the fact that 23 they haven't identified a third party direct 24 infringer.</p>

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<p>1 Their theory is it is all 2 happening on Facebook's back, and the user does 3 something under the direction and control of 4 Facebook. There's no instance in their theory 5 in which someone other than Facebook is doing 6 all the claim elements. 7 It's a confusing instruction given 8 the central issue of direction and control, 9 which I'll address. 10 We briefed the legal standard for 11 direction and control. The question is, should 12 Your Honor instruct on what it means to have 13 direction and control, and ultimately, Your 14 Honor, I think you have to. 15 What they want is you have to find 16 control or direction, and what they'll argue in 17 closing is they're directing it because they 18 have instructions on your website or they like 19 it when people log on to their site. 20 Ultimately, the Muniuction and 21 other cases we identified, they're a number of 22 cases that say here's what direction and control 23 is not. In Muniuction, direction and control 24 is not providing access to a system, controlling</p>	<p>1 instructing, or facilitating the other party's 2 participation in the electronic auction process? 3 That was the instruction they 4 gave, and the Federal circuit says none of the 5 questions identified by the jury instruction are 6 left to whether Thompson satisfies the direction 7 and control standard. That's 532 Federal Third 8 1318 at 1330. So I guess the point here Your, 9 Honor, is this is not a fantasy. It's not a 10 fantasy football case, Your Honor. This is a 11 Muniuction case. 12 It came eight years after all the 13 cases dealing with websites and whether or not 14 the website operator or the server operator is 15 liable for the actions of the users in the 16 context of a direct infringement claim that 17 falls under the rubric of the Muniuction 18 decision. 19 I think the other 20 distinction is in the fantasy case and some of 21 the other cases they've cited, including Judge 22 Farnan's cases, those claims didn't require a 23 step where the user is actually performing one 24 of the claim elements. They were -- they were</p>
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<p>1 access to a web site, and instructing users on 2 its use. 3 As a matter of law, Your Honor, 4 that is not direction and control, so I think 5 the jury should be told that. 6 THE COURT: I denied a motion for 7 summary judgment on Muniuction. If I give the 8 instruction you proposed, isn't that granting 9 your summary judgment motion? 10 MR. WEINSTEIN: I don't know what 11 the basis of your summary judgment motion was. 12 THE COURT: I haven't explained 13 it. 14 MR. WEINSTEIN: If it was legal or 15 factual, Your Honor may have found there was a 16 factual issue on direction and control, but your 17 denial could have been based on that if jury has 18 to be instructed on what is direction and 19 control and what is not direction and control. 20 This came up in the Muniuction 21 case. That was a case about a jury instruction. 22 What the district Court instructed in that case 23 was, he asked the jury to consider the following 24 question: Is there one party teaching,</p>	<p>1 more involving where you had an actual server 2 that was doing something and maybe something 3 gets pushed out, but you're not actually -- 4 there's no actual distinct party in that sense, 5 legally distinct party that's performing the 6 other steps 7 And in this case, we 8 have a third-party end user who's performing at 9 least one, perhaps two steps of each claim 10 depending on the claim. And we have Facebook 11 providing allegedly the other elements. So they 12 are third infringement implicated end users and 13 the server. 14 Now, the reason this 15 is such an important issue, Your Honor, is 16 something that I alluded to earlier. This is a 17 bifurcated trial. The difference is in 18 implications of whether or not there's direction 19 and control are huge for a second phase trial. 20 I'll give you an example. Let's 21 say, for example, that the jury comes back and 22 says, Okay. Well, I think there was 23 infringement here, because I saw Mr. Wang say on 24 the screen that he uses Facebook, you know, in</p>

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<p>1 his cubicle when he does things.</p> <p>2 I mean, just to be clear, I don't</p> <p>3 think there's any evidence of infringement, but</p> <p>4 let's assume that they find that. Under their</p> <p>5 jury verdict form, which is essentially a black</p> <p>6 box form, they check yes.</p> <p>7 So now the jury says, Well, we</p> <p>8 don't think it was direction and control, but we</p> <p>9 think there was -- you know, James Wang used it</p> <p>10 So the answer to infringement is yes, because</p> <p>11 somebody infringed it somewhere.</p> <p>12 Now we have to go to a second</p> <p>13 trial. We bring our JMOL motion and say, Okay.</p> <p>14 We don't think there was, but the bottom line is</p> <p>15 if the jury concludes that there was no</p> <p>16 direction and control of third-party Facebook</p> <p>17 end users, there shouldn't be a second phase of</p> <p>18 this trial. And our jury verdict form will make</p> <p>19 sure that happens.</p> <p>20 Under their jury verdict form,</p> <p>21 we're going to be guessing as to what the jury</p> <p>22 actually concluded. And that, I think, is</p> <p>23 unfair.</p> <p>24 This wasn't a problem before Your</p>	<p>1 You know, we're okay with just</p> <p>2 having the jury consider that fact as they</p> <p>3 normally would. So I just wanted to clarify</p> <p>4 that point, Your Honor.</p> <p>5 THE COURT: Thank you. What about</p> <p>6 anticipation, incorporation by reference?</p> <p>7 MR. WEINSTEIN: I think in light</p> <p>8 of the fact that the Lampin and Selger</p> <p>9 references have not been the subject of</p> <p>10 testimony, I don't think we need that</p> <p>11 instruction anymore, Your Honor.</p> <p>12 THE COURT: Okay.</p> <p>13 MR. WEINSTEIN: With respect to</p> <p>14 inherency, Your Honor, they don't think there</p> <p>15 should be an instruction on inherency. I wasn't</p> <p>16 in Court all day, but I do remember Dr.</p> <p>17 Greenberg saying, for example, with respect to</p> <p>18 the computer executable Claim 21, the preamble</p> <p>19 he was talking about how there's a server and</p> <p>20 there is -- that's inherent in the idea of a</p> <p>21 server that you have computer executable</p> <p>22 instructions and a processor.</p> <p>23 So, I mean, the fact is there</p> <p>24 certainly is inherency in his arguments. So</p>
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<p>1 Honor bifurcated the case, because we had</p> <p>2 distinct damages theories on end users versus</p> <p>3 internal. And really what it was, they have no</p> <p>4 damages theory on internal use.</p> <p>5 And their damages theory on</p> <p>6 external use, when it was all in the same case,</p> <p>7 that wasn't a problem. But Your Honor</p> <p>8 bifurcated and that's why we need that</p> <p>9 interrogatory and the instructions.</p> <p>10 Your Honor, on the obviousness</p> <p>11 issue, we were not asking whether or not the</p> <p>12 level of ordinary skill in the art should be</p> <p>13 determined by Your Honor. I think the reason</p> <p>14 for the bracketed text was the definitions of</p> <p>15 the ordinary skill in the art were relatively</p> <p>16 close that we had put it in brackets with the</p> <p>17 possibility that there might be a stipulation on</p> <p>18 it. That was the reason for the brackets.</p> <p>19 That is an issue that's not</p> <p>20 determined by Your Honor. That's one of the</p> <p>21 factors that the jury would consider is the</p> <p>22 person of ordinary skill in the art for purposes</p> <p>23 of obviousness. So it's because there is no</p> <p>24 stipulation between them.</p>	<p>1 that's something that should -- that should stay</p> <p>2 in the jury instruction. That's Instruction</p> <p>3 4.5.</p> <p>4 THE COURT: Mr. Weinstein, I just</p> <p>5 want to make sure the Doras and Hence</p> <p>6 references, are they in the case any longer?</p> <p>7 MR. WEINSTEIN: Not at this time</p> <p>8 any longer.</p> <p>9 THE COURT: Is there any chance</p> <p>10 they're still coming in?</p> <p>11 MR. WEINSTEIN: No, Your Honor.</p> <p>12 Sorry. Lawyers never want to be --</p> <p>13 THE COURT: I know you don't want</p> <p>14 to concede anything until you have it.</p> <p>15 MR. WEINSTEIN: Of course, but</p> <p>16 that time has come on this.</p> <p>17 Your Honor, with respect to one</p> <p>18 other jury instruction, 4.2, there's this issue</p> <p>19 of conception and reduction to practice, which</p> <p>20 is -- this is another issue that might not be</p> <p>21 relevant anymore in light of the fact that all</p> <p>22 of the three prior art references that Dr.</p> <p>23 Greenberg presented are undisputed prior art to</p> <p>24 the claims of the '761, patent which is to say</p>

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1 they were either filed before their invention
 2 date or they were published more than one year
 3 before their filing date for the Patent Office.
 4 So the issue of conception
 5 reduction to practice would only be relevant if
 6 they were trying to square back some of our
 7 references. And because the three references
 8 aren't subject to being a square back claim,
 9 based on the fact in evidence here, and just the
 10 fact that Swartz, for example, was published in
 11 May of 2001.
 12 So there's no way they can square
 13 behind it under any theory here. Hubert was
 14 published one year before 2002.
 15 Even if you give him the
 16 provisional filing date and even if you give
 17 them their August invention date, all those
 18 references predate it.
 19 That includes the Ausems
 20 reference, which was filed in February of '98.
 21 So all the references predate any combination of
 22 their case.
 23 THE COURT: And what about the on
 24 sale bar and the demonstrations? There's been a

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1 lot of dates.
 2 Is the jury still left with having
 3 to decide something on the provisional
 4 application?
 5 MR. WEINSTEIN: Absolutely, Your
 6 Honor. What I was talking about, reduction to
 7 practice, I don't think it relates to the third
 8 party prior art like the iManage -- the iManage,
 9 Hubert and Swartz references. With respect to
 10 -- the provisional is still very relevant to the
 11 issue of the on-sale bar.
 12 And I think, Your Honor, with
 13 respect to the other instructions, there's quite
 14 a bit of argument and briefing, unless Your
 15 Honor has other questions, I'm okay with --
 16 THE COURT: No.
 17 MR. WEINSTEIN: -- the arguments
 18 in our papers.
 19 THE COURT: No. Give me one
 20 second.
 21 No. I think you've covered all of
 22 our concerns. Thank you.
 23 MR. WEINSTEIN: Thank you, Your
 24 Honor.

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1 THE COURT: Last few minutes go to
 2 Leader.
 3 MR. ANDRE: I'd like to have Mr.
 4 Rovner argue the on-sale bar issues, to the
 5 extent there are. But there's two other issues
 6 that we probably should just make you aware of
 7 that D2 limiting instruction that Your Honor
 8 ordered. They're not included in that, I do not
 9 believe.
 10 THE COURT: They're not in here.
 11 MR. ANDRE: I don't believe --
 12 THE COURT: There was one on the
 13 Yahoo! and eBay --
 14 MR. ANDRE: Right.
 15 THE COURT: -- that was included
 16 in here. Which two are you referring to?
 17 MR. ANDRE: Do not consider what
 18 will happen after trial.
 19 THE COURT: Right.
 20 MR. ANDRE: And the other one is
 21 compare the Facebook website to the asserted
 22 claims of the patent, essentially not the
 23 product of the company.
 24 And then the stipulation that the

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1 parties agree to was a commercial success
 2 stipulation, but they have not reached agreement
 3 on that as well. So those are the -- we can get
 4 those to you as soon -- we'll keep working this
 5 weekend and hopefully get them to you --
 6 THE COURT: Right. So on all of
 7 those issues, the limiting instructions and
 8 which I think are limited to nine topics that
 9 you just mentioned.
 10 MR. ANDRE: Yeah.
 11 THE COURT: I do want to see what
 12 the parties propose, what their positions are,
 13 and let's say by noon tomorrow. We're going to
 14 follow this weekend the procedures we did last
 15 week where I send -- if it's not under seal, go
 16 ahead and do ECF. We can pull it off of ECF.
 17 But if any portion of it is under
 18 seal, email it to Mr. Golden and he'll get it to
 19 the rest of us.
 20 MR. ANDRE: Mr. Rovner will take
 21 care of the rest.
 22 THE COURT: Before you sit down,
 23 whoever wants to address it on the 3.4 on this,
 24 you know, is it enough for me to construe

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<p>1 wherein as in which and not go the extra mile 2 and say not when? 3 Mr. Weinstein, not that I don't 4 enjoy all my time with you, but I don't want to 5 sign up automatically for redoing this trial. 6 MR. ANDRE: Your Honor, the issue 7 of claim construction should have been brought 8 up a long time ago, if they want to bring it up. 9 The fact of the matter, experts 10 have been interpreting this how they've been 11 interpreting it. The expert on the stand, Dr. 12 Greenberg, has interpreted is as a consequence. 13 That's how he termed wherein. 14 Dr. Vigna determined it as in 15 which. I don't think, you know, if you say not 16 when is a negative limitation. 17 THE COURT: Let's be clear. If I 18 don't say not when, you're going to argue when 19 They're going to argue not when. 20 MR. ANDRE: Well -- 21 THE COURT: And you don't think 22 that means we're all going to get reversed the 23 minute we get to the Federal Circuit? 24 MR. ANDRE: Well, I'm not going to</p>	<p>1 it's not -- 2 THE COURT: Right. 3 MR. ANDRE: -- as a consequence. 4 THE COURT: I understand your 5 point. Okay. 6 Let's start over, Mr. Rovner. 7 MR. ROVNER: In my minute, Your 8 Honor, let me just address -- 9 THE COURT: It's the minute, 10 though, of the day. 11 MR. ROVNER: The minute. The last 12 minute. 13 THE COURT: The one we have all 14 been waiting for. 15 MR. ROVNER: I'm sure. I want to 16 deal with instructions 4.6 through 4.8. 17 4.6 and 4.7, Facebook doesn't 18 state the standard, the clear and convincing 19 standard. They do state in 4.8 now that we are 20 bringing them out in the jury instruction. 21 I think it's important that -- I 22 am sorry -- in the verdict form, we need to put 23 the standard in the instructions themselves. We 24 have them in 4.6, 4.7 and 4.8 I think where they</p>
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<p>1 argue when. I'm arguing which. 2 That's been our position 3 throughout this entire case. It is in which. 4 That's the dictionary's definition of the word. 5 So we think, as Mr. Hannah said, 6 the dynamically is a functional language, not 7 pure grammatical and temporal in that way. So 8 we're very confident that that's not going to be 9 an issue. 10 But if they start arguing, you 11 know, not thereafter, or as a consequence or 12 something along those lines like they had been, 13 their other expert, Dr. Kearns, did the same 14 thing. I asked him, I said, You mean 15 thereafter? 16 He said, Yeah, afterwards. So 17 everybody has had a different definition. If 18 you want to give a proper definition, give the 19 proper definition. 20 If you want to interpret, say what 21 it's not, we should also put some other things 22 what it's not as well as what your experts have 23 proposed. If you want to say it's not when, 24 then it should not say it's not thereafter or</p>	<p>1 belong. 2 Your Honor pointed out something 3 that is the key point, certainly with respect to 4 4.6. And it's prevalent throughout, you know, 5 the three of them that it's the issue of the 6 effective filing date. 7 We -- in our instruction, we tell 8 the jury that that's something that they need to 9 decide and that's the effective filing date is 10 going to govern their findings. And we believe 11 that our instruction sets that out. 12 I don't believe that Facebook's 13 does. It basically assumes what they want it to 14 assume. 15 The other thing in 4.6 is that 16 we're talking about the experimental use and we 17 describe that in our instruction. It does not 18 get put forward in Facebook's description. 19 Also, in 4.6, they resort to the 20 totality of circumstances test, which has been 21 rejected in the Invitrogen case. 22 In 4.7, again, it's clear and 23 convincing standard. The other thing, the 4.7 24 is the on-sale bar instruction.</p>

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1 We believe, and it's, you know,	1 quickly, though hopefully not too quickly for
2 Judge Farnan in the Honeywell case in December	2 the court reporter, but you can't see the
3 set the same standard that it has to meet each	3 expression on her face.
4 of the claim limitations. We say that	4 So all I can promise you is I'll
5 specifically in our instruction and we think	5 get you the jury instructions before you begin
6 that it belongs.	6 your closings. If I have them sooner than that,
7 The other two issues with 4.7,	7 I'll get them to you.
8 4.7, all of a sudden in Facebook's instruction,	8 But I can't promise you as to when
9 proposed instruction, they start talking about	9 I will have them. And we will be in recess
10 public policy. Now, we could talk about public	10 until nine o'clock on Monday morning. Have a
11 policy in every instruction. It doesn't -- it	11 nice weekend.
12 doesn't belong in 4.7, for sure.	12
13 And the other thing is secrecy	13
14 versus non-secrecy. In terms of an on-sale bar,	14
15 it's really not relevant to the on-sale bar	15
16 issue. We're not claiming that the offers for	16
17 sale pre -- whether they're confidential or not.	17
18 They are not. They more relate to public use,	18
19 not the on sale.	19
20 THE COURT: I thought it was you	20
21 guys that showed the NDAs today.	21
22 MR. ROVNER: But not for the on	22
23 sale. Whether it's on sale or not is not --	23
24 that wasn't an issue. They're raising the issue	24
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1 and basically flagging it. And I don't believe	1 State of Delaware)
2 that belongs in 4.7.	2)
3 In 4.8, let me get there. The	3 New Castle County)
4 problem -- the biggest problem with Facebook's	4
5 instruction is that right in the very first	5
6 sentence, it says that, We're contending that	6
7 our offers for sale weren't offers because they	7
8 were experimental. We're not saying that.	8
9 What we're saying is they're not	9
10 offers for sale for other reasons as well.	10
11 That's assuming that you have -- you take	11
12 Facebook's instruction. You're assuming the	12
13 first step.	13
14 THE COURT: Right.	14
15 MR. ROVNER: And the other thing	15
16 is, again, it's the filing date issue, and	16
17 that's something that really does -- the jury	17
18 needs to consider.	18
19 THE COURT: Okay. Great.	19
20 MR. ROVNER: That's it in a	20
21 nutshell.	21
22 THE COURT: Thank you. Thank you	22
23 very much.	23
24 I appreciate everyone speaking	24
	1 State of Delaware) 2) 3 New Castle County) 4 5 CERTIFICATE OF REPORTER 6 7 I, Heather M. Triozzi, Registered 8 Professional Reporter, Certified Shorthand Reporter, 9 and Notary Public, do hereby certify that the 10 foregoing record, Pages 1274 to 1642 inclusive, is a 11 true and accurate transcript of my stenographic notes 12 taken on July 23, 2010, in the above-captioned 13 manner. 14 15 IN WITNESS WHEREOF, I have hereunto set my 16 hand and seal this 23rd day of July, 2010, at 17 Wilmington. 18 19 20 21 Heather M. Triozzi, RPR, CSR 22 Cert. No. 184-PS 23 24

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, } Trial Day 6
INC., }
 }
 } Plaintiff, }
 } C.A. No. 08-862-JJE-LPS
v. }
 }
FACEBOOK, INC., a }
Delaware corporation, }
 }
 } Defendant. }

Monday, July 26, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANGERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
BY: JAMES HANNAH, ESQ.

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<p>1 APPEARANCES CONTINUED: 2 3 4 BLANK ROME, LLP BY: STEVEN L. CAPONI, ESQ. 5 6 -and- 7 COOLEY, GODWARD, KRONISH, LLP BY: MICHAEL RHODES, ESQ. BY: HEIDI L. KEEFE, ESQ. 8 BY: MARK WEINSTEIN, ESQ. BY: JEFFREY NORBERG, ESQ. 9 10 Counsel for Defendant 11 12 13 14 15 16 17 18 19 20 21 22 23 24</p>	<p>1 in re-exam in part as a result of the PTO's 2 finding that Swartz was not considered during 3 prosecution of the '761. 4 And further, I have ruled and I 5 adhere to these rulings that the fact of the 6 re-exam and whether there's similarities between 7 the prior art relied on by Facebook in this 8 case, and the prior art considered by the PTO 9 during prosecution of the '761 patent are not 10 relevant to this trial. 11 Therefore, this is not a matter on 12 which the jury should be permitted to draw what 13 might otherwise seems to be reasonable 14 inferences that the examiner considered Swartz 15 since she was also the examiner of Swartz. 16 But, however, I'm not going to 17 permit the parties to get into the re-examine. 18 We're not going to open up the door and get into 19 how many patents Ms. Mizrahi may have examined 20 or what else she was doing. 21 Instead there's going to be no 22 more questioning that relates in any way to what 23 the PTO considered or did not consider. 24 I'm denying the motion for a</p>
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<p>1 THE CLERK: All rise. 2 THE COURT: Good morning, 3 everyone. 4 (Everyone said, Good morning.) 5 THE CLERK: Please be seated. 6 THE COURT: Welcome to week two. 7 All right. 8 Let's begin with developments over 9 the weekend. I have seen and reviewed and am 10 prepared to rule on Facebook's motion for a 11 mistrial, which asks in the alternative for a 12 limiting instruction. All of which arises from 13 Leader's questioning of Professor Greenberg last 14 Friday afternoon as to whether the '761 examiner 15 considered the Swartz patent. 16 Excuse me. I ran in too quickly. 17 Such questioning by Mr. Andre was 18 inappropriate due to my in limine ruling. By 19 contrast, on direct, Facebook stayed 20 appropriately within the narrow scope of my 21 ruling, elicited only disputed evidence that 22 Swartz is not mentioned on the face of the '761 23 patent. 24 It is also true that the '761 is</p>	<p>1 mistrial because I think while there was 2 prejudice to Facebook, I think it is curable in 3 other ways short of the extraordinary remedy of 4 a mistrial, and in particular through jury 5 instructions and special interrogatories. 6 Leader, of course, claims that 7 it's prejudiced by Facebook's narrow questioning 8 of Greenberg about whether Swartz is listed on 9 the face of the '761 patent, but I absolutely 10 reject Leader's position. Again, as I said, 11 Facebook's questioning was entirely consistent 12 with my prior rulings. 13 Leader did not object during the 14 examination of -- well, even prior Leader, did 15 not object to Facebook giving the jury binder to 16 the jury which contained the Swartz patent. 17 Leader did not object to Facebook displaying the 18 Swartz patent for the jury. 19 Leader did not object to Facebook 20 blowing up the portion of the -- I'm sorry, the 21 Swartz patent that evidently shows the Swartz 22 examiner's name. 23 Leader did not object to 24 Facebook's questions, objections which I would</p>

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<p>1 have overridden since the questions were 2 consistent with my ruling, but nonetheless 3 Leader did not object. 4 Leader did not seek permission to 5 question Professor Greenberg in the way it did 6 on cross. And Leader did not ask the Court to 7 reconsider or modify its prior rulings. 8 So with all this, I will be 9 granting the alternative relief sought by 10 Facebook of a jury instruction. In fact, what I 11 think might be fairly characterized as a 12 somewhat harsh jury instruction, but one that I 13 think is fully warranted by what Leader did 14 during the cross-examination of Professor 15 Greenberg. 16 It will not, however, be in the 17 specific language proposed by Facebook as that 18 would I think improperly introduce ideas going 19 to the re-exam and other matters going to the 20 jury that simply don't have any place in the 21 trial. 22 Here is what you will see as a 23 portion of the final jury instructions. It will 24 be added at 4.2 and you'll see it when we get</p>	<p>1 you. 2 You'll also see in the final 3 instructions that at Section 1.3 I guess it is, 4 there was an additional paragraph that was in 5 dispute with respect to evidence defined, I'm 6 going to include the extra paragraph that 7 Facebook wanted that said essentially ignoring 8 comments of counsel or things that I told you 9 are stricken. 10 And there will also on the verdict 11 form be special separate interrogatories with 12 respect to each published prior art reference 13 asking the jury whether each one anticipates the 14 '761, so we'll know whether the Swartz patent 15 had any impact on the jury's finding. 16 That's my ruling on the pending 17 motion. A couple of procedural things. We're 18 allowing the jury to order lunch in today. We 19 thought that would be a nice thing to do for 20 them. And what we'll do is whatever time we 21 finish the evidence today, we'll call it a day 22 and send the jury home and then we'll just start 23 fresh in the morning with me reading 24 instructions, and then with all the argument</p>
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<p>1 all the instructions to you later today. 2 And now I'm reading from the 3 instruction. During Leader's cross-examination 4 of Facebook's expert, Professor Greenberg, 5 Leader's counsel made statements implying that 6 the U.S. Patent Office examiner who worked on 7 the '761 patent, Diane Mizrahi, was aware of and 8 considered the Swartz patent. I instruct you 9 not to draw such a connection. 10 Because of patent office 11 procedures, it would not be reasonable for you 12 to draw the inference that the examiner, 13 Ms. Mizrahi, was aware of and considered the 14 Swartz patent during prosecution of the '761 15 patent. 16 With respect to Facebook's 17 contentions that the '761 patent is invalid due 18 to anticipation or obviousness due to prior art, 19 the only relevant comparisons are between the 20 claims of the '761 patent and the disclosures of 21 the prior art references. What the PTO or the 22 examiner of the '761 patent considered or did 23 not consider is not relevant to your 24 determination and should not be considered by</p>	<p>1 that's left to do. And so that means we'll get 2 the final jury instructions and the verdict form 3 to you sometime later today depending on what 4 time we finish today. 5 With that, let me ask Leader if 6 there is anything we need to discuss before we 7 bring the jury in. 8 MR. ANDRE: Thank you, Your Honor. 9 First of all, I would like to pose 10 an objection to Your Honor's ruling, of course. 11 THE COURT: Okay. 12 MR. ANDRE: One easy matter. We 13 had an exhibit earlier that's PTX 1058. We 14 would like to move that into evidence. I 15 believe it's without objection. It was noted in 16 the examination of Mr. McKibben. 17 MR. RHOADES: No objection. 18 THE COURT: Okay. It's admitted. 19 MR. ANDRE: And there is other 20 exhibits that were put in by the defendants in 21 binders that we would like to have the Court 22 staff remove after the jury goes home today. 23 They were not admitted into evidence and were 24 not referred to. Those are DTX 740, DTX 1051,</p>

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<p>1 DTX 1095, DTX 1213, DTX 1317, and PTX 789. 2 Those are in the jury binders. We would like to 3 have those removed. 4 MR. RHOADES: I agree, Your Honor. 5 THE COURT: By agreement. Okay. 6 That will be done when the jury is not watching. 7 MR. ANDRE: These are the easy 8 issues, Your Honor. A much more serious 9 implication now than just this morning 10 Facebook's counsel instructed us that they wanted 11 to switch out an exhibit that Dr. Greenberg has 12 testified to. It's the iManage manual. We 13 received this document under a confidentiality 14 designation from a subpoena Autonomy. 15 We believe it's a confidential 16 document. They said they have a copy of it 17 without the confidentiality stamp and they want 18 to substitute it out. 19 We have never been informed that 20 this is a public document at all. In fact, up 21 until probably a few minutes ago, we believe it 22 was a confidential document. How this document 23 came into the case was Facebook subpoenaed a 24 Autonomy, Autonomy produced documents in them</p>	<p>1 logie for me. This goes to whether it's a basis 2 for invalidating the patent whether it's 3 publicly available or not. 4 MR. ANDRE: Prior art has to be 5 publicly available. We don't think this is 6 publicly available. 7 We have not been able to find it. 8 We have never seen a publicly available copy. 9 The only copy that was ever produced in this 10 case was marked confidential pursuant to the 11 Court's protective order. 12 They're going to substitute out -- 13 we'd like to examine the witness along these 14 lines. We think it's appropriate because the 15 witness -- the exhibit that's in his binder 16 that's in front of the jury, his entire 17 testimony does have the confidential stamp on 18 every single page. 19 THE COURT: So you want to be able 20 to -- put aside for a moment whether we're 21 switching out the document or not, you want to 22 explore with him and would have, but for events 23 this morning, planned today to explore with him 24 whether he knows if the document's publicly</p>
Page 1653	Page 1655
<p>1 disks and when they were producing them to us, 2 they had a taker saying they should be treated 3 confidential under the protective order. 4 We saw the objections that 5 Autonomy lodged saying it was confidential 6 information, so we have been going under the 7 impression this entire case it's a confidential 8 document. 9 They produced a copy. According 10 to counsel, we haven't seen it because we don't 11 have the report here, in their expert's report 12 they didn't have the confidential stamp on it. 13 THE COURT: Did not. 14 MR. ANDRE: Did not. But their 15 expert report which only was done in prior art, 16 did have a highly confidential label in the 17 entire report. So it's our belief, as we sit 18 here today and the testimony that was provided 19 to the jury, that he's been testifying on a 20 confidential document. And this is not a 21 publicly available document. We cannot find it 22 on the internet. We have not been able to get a 23 copy of this document anywhere. 24 THE COURT: Just draw out the</p>	<p>1 available or not? 2 MR. ANDRE: Yeah. It was a 3 document that was provided from counsel to 4 him -- 5 THE COURT: Right. 6 MR. ANDRE: -- marked confidential, 7 at least the ones he's been testifying to. So 8 we don't believe this is a proper piece of prior 9 art, and I think this is a much more serious 10 issue than the moving of the exhibits in. 11 I'm sorry to bring it to Your 12 Honor first thing this morning. We didn't 13 learn -- this entire case we have been under the 14 impression that this is a confidential document. 15 This is the first this morning that we have 16 learned it was anything otherwise. 17 THE COURT: Let me hear what they 18 have to say. 19 MS. KEEFE: I'm surprised to hear 20 this, Your Honor. In fact, the iManage DeskSue 21 Reference Manual was produced originally when 22 Autonomie first sent it under an abundance of 23 caution. Go ahead and mark every(h)ing 24 confidential.</p>

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<p>1 So we did. We then asked Autonomie 2 if this is a, you know, public document. They 3 said, Yes. And they sent us another copy that 4 was only Bates labeled AUT 0020001 through the 5 remainder. It's in the exhibit binder at 925E. 6 It was attached to to Dr. 7 Greenberg's report with no confidentiality 8 designations whatsoever. 9 It was produced to opposing 10 counsel with -- along with a copy of the 11 re-examination materials with no confidentiality 12 designation whatsoever. 13 Publicly filed with the U.S. PTO. 14 It's been used in this case with no 15 confidentiality designations whatsoever. 16 And I was surprised when the one 17 that went up on the screen was the old one that 18 had the confidentiality designation, because it 19 has never been used in this case. So I just 20 wanted to swap it out. 21 THE COURT: And that's what 22 happened this morning was he -- 23 MS. KEEFE: I simply asked Mr. 24 Andre, given the fact that the actual copy that</p>	<p>1 in the expert report that was produced by 2 Autonomie with no designation and it was given to 3 the Patent Office is 925E. 4 THE COURT: And your proposal is 5 to just switch them out without the jury ever 6 hearing anything about it and also to preclude 7 Mr. Andre from questioning the professor if he 8 knows if the document is publicly available. 9 MS. KEEFE: That was my proposal, 10 but you know because Mr. Greenberg -- obviously 11 he knows that the one that he has had no 12 confidentiality designation on it. But I am not 13 sure he has personal information, you know, 14 beyond that. 15 But if they want to question him, 16 I'll simply ask him if the one that is attached 17 to his report was labeled confidential. He'll 18 say no. 19 Then I'll offer to move this in 20 and that will be the public document. It seems 21 like much ado about nothing. 22 THE COURT: Mr. Andre. 23 MR. ANDRE: Your Honor, it's not 24 much ado about nothing. When Facebook was</p>
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<p>1 was used in Mr. Greenberg's report and that went 2 to the Patent Office did not have the 3 designation, could I please replace it since 4 this is clearly a public document. He then 5 tells me that he wants to do something else with 6 it. 7 That's where we are. And it's in 8 the binders at 925E with no designation on it. 9 And this is the exhibit. And I 10 was just going to change it. Ask Your Honor to 11 change it. 12 THE COURT: So the jury right now 13 has a binder that includes two versions of 14 iManage? 15 MS. KEEFE: Right now it only 16 includes the old version, the very first 17 version. 18 THE COURT: The first one is the 19 one that's confidential? 20 MS. KEEFE: 925E, the number that 21 is in the binders right now is 1010. 1010 has a 22 confidentiality designation. It's an artifact. 23 It's old. 24 The one that was used in the case</p>	<p>1 subpoenaed, Autonomie lodged objections to the 2 subpoena. On category two, request number two, 3 he asked for a copy of each user manual or user 4 guides. 5 Autonomie rejected -- responded and 6 objected to it stating that the request for the 7 production of confidential commercial and 8 information are trade secrets not within the 9 permissible scope of discovery. So they put an 10 objection in as being confidential information. 11 When we received the actual 12 production from Facebook after they received it 13 from Autonomie, the correspondence to Mr. Haiman 14 from Ms. Keefe stated also included documents 15 containing Bates labels AUT 0001815 through AUT 16 0053887, which was received from Autonomie, Inc. 17 In response to Facebook's subpoena, please be 18 advised that per nonparty Autonomie's request, 19 the documents Bates numbered AUT 0001815 through 20 AUT 0053887 are to be treated as confidential 21 under the stipulated protective order. 22 Your Honor -- could you put up 23 1010? DTX 1010. DTX, not PTX. 24 If you placed the confidential</p>

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<p>1 stamp here is a little off line with the Bates 2 number. I don't know if this designation was 3 added by Facebook counsel or Autonomie. I don't 4 know. 5 Autonomie may have produced them 6 with just the Bates numbers and the confidential 7 label that was added pursuant to their 8 instructions under the protective order. I 9 don't know. 10 I don't know how that confidential 11 stamp got there, but we have always treated this 12 document pursuant to the correspondence we 13 received as confidential. 14 THE COURT: But confidential for 15 purposes of litigation is different from -- I 16 mean, so it may be overly designated under the 17 Court's protective order, but the factual matter 18 that is important to the jury is whether or not 19 it was ever publicly available at the relevant 20 time. Right? 21 MR. ANDRE: Right. 22 THE COURT: And you don't know 23 whether it was or it wasn't, I take it. 24 MR. ANDRE: Only thing we know is</p>	<p>1 iManage by, you know, depriving Facebook of a 2 chance to on redirect put before the jury a 3 version of the document that apparently was 4 publicly available. 5 And the jury will just have to 6 weigh the competing arguments in evidence they 7 get as to whether it was available or not. And 8 we have a special interrogatory that will tell 9 us whether -- specifically whether the jury 10 thought the iManage software anticipated, not 11 the software the manual anticipated '761. So 12 that's my ruling. 13 MR. ANDRE: Your Honor, with 14 respect to that, there is not one without a 15 confidential stamp not on the exhibit list. The 16 exhibit Ms. Keefe told you about is actually the 17 reexamination documents, it's the reexamination 18 request and all that that's attached to it. So 19 there is not a copy of just this manual by 20 itself on the current exhibit list. 21 THE COURT: Ms. Keefe. 22 MS. KEEFE: That's not true, Your 23 Honor. Behind Tab 925E is a copy simply of the 24 reference itself.</p>
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<p>1 we can't find it. We can't get it. 2 When I assume that they gave it to 3 the people who bought their software, but I 4 don't know if there was a confidentiality 5 provision provided for that. The fact of the 6 matter is Facebook put this in evidence. They 7 put it in the jury binders. They put this 8 exhibit, in. 9 And that's a defense we have to 10 this exhibit. This is not a confidential 11 document. 12 THE COURT: Okay. Well, certainly 13 trickier than the ones you started with. 14 I think in fairness, you know, 15 weighing the circumstances on both sides, I 16 think that the jury -- I'm not going to take 17 away your ability to question Professor 18 Greenberg. Elicit whatever you can from him on 19 whether the document was confidential or not 20 confidential in terms of was it publicly 21 available or not. 22 But I'm also not going to do, what 23 would amount, I think, to granting summary 24 judgment to you on the weight, if any, of the</p>	<p>1 THE COURT: And there is no 2 reference to re-examine or anything? 3 MS. KEEFE: None. 4 THE COURT: It's an identical 5 document to the manual sent without the 6 confidential stamp on it? 7 MS. KEEFE: Exactly. 8 THE COURT: I'm accepting 9 counsel's representation to that fact. 10 MR. ANDRE: Your Honor, to the 11 extent I questioned Dr. Greenberg, I would like 12 to be able to use the Autonomie documents and the 13 correspondence to get his understanding of this 14 document whether it's confidential or not, if 15 that's acceptable. I don't have to have a lot 16 of objections. 17 THE COURT: Right. I don't want 18 to have a lot of objections, either. Ms. Keefe, 19 come forward. 20 MS. KEEFE: Your Honor, I would 21 object. Those were litigation documents between 22 attorneys talking about a protective order. It 23 would be hearsay. And it's nothing that 24 Mr. Greenberg has ever looked at or considered.</p>

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<p>1 He was handed a copy of the 2 document and asked to compare it. That's what 3 is in his report. The implication that he 4 understands what was happening with two lawyers 5 talking about a protective order as Your Honor 6 noted that may have been overly cautious based 7 on litigation is prejudicial and hearsay. 8 THE COURT: All right. Again, I'm 9 going to overrule the blanket objection. I'm 10 going to allow Mr. Andre a little bit of leeway. 11 We don't know whether Professor 12 Greenberg is going to have anything at all to 13 say about whether this document was confidential 14 or not confidential. And feel free to object 15 question by question and we'll just have to see 16 how it comes out. 17 MS. KEEFE: Thank you, Your Honor. 18 THE COURT: Anything else, 19 Mr. Andre? 20 MR. ANDRE: No, Your Honor. 21 THE COURT: No. 22 And anything from Facebook? 23 MR. RHOADES: No, Your Honor. 24 THE COURT: Okay. All right.</p>	<p>1 Q. Just so we can kind of catch up to 2 where we left off on Friday, let's go over a few 3 things and make sure we're all on the same page. 4 Okay? 5 A. Sure. 6 Q. You were talking about prior art 7 in this case; correct? 8 A. That's correct. 9 Q. And in something -- in order for 10 something to be prior art, it has to be 11 published before a certain critical date; is 12 that correct? 13 A. That's correct. 14 Q. And the critical date you're 15 referring to in this case is the December 10th, 16 2003 date of when the patent was filed; is that 17 correct? 18 A. I would have to check the dates, 19 but it's -- my understanding is the year before 20 the filing of the patent and a year before the 21 filing of the provisional are two dates that are 22 often considered. 23 Q. Okay. Now, you testified to three 24 separate documents as a basis for your opinion</p>
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<p>1 Let's bring in the jury. 2 THE CLERK: All rise. 3 (Jury entering the courtroom at 4 9:28 a.m.) 5 THE CLERK: Please be seated. 6 THE COURT: Good morning, ladies 7 and gentlemen of the jury. Welcome back. I 8 hope you had a nice weekend. I hope you were 9 able to get into the building okay. I saw quite 10 a crowd on the other side of the building. I 11 was hoping you were able to all avoid that. 12 We're going to pick up with the 13 testimony of Professor Greenberg. 14 Professor, please come back to the 15 stand. 16 Good morning, Professor. 17 THE WITNESS: Good morning. 18 MR. ANDRE: May it please the 19 Court, may I begin? 20 THE COURT: I'm sorry, you may 21 begin, yes. 22 BY MR. ANDRE: 23 Q. Good morning, Professor Greenberg. 24 A. Good morning.</p>	<p>1 regarding anticipation; correct? 2 A. Three separate documents, yes, and 3 plus obviousness. 4 Q. That was for obviousness? 5 A. That's correct. 6 Q. And one of those documents was the 7 DTX 1010; correct? 8 A. Sorry, that's -- 9 Q. I'm sorry, that's the iMunage 10 manual; correct? 11 A. Yes, that's correct. 12 Q. Now, could you put DTX 1010 on the 13 screen. Thank you. 14 Now, you testified that you 15 received these documents from Facebook's 16 counsel; correct? 17 A. That's correct. 18 Q. And the numbers -- I lost my faser 19 pointer, sorry. 20 The numbers are down here on the 21 bottom of the document. Are you familiar with 22 what those numbers are called? 23 A. Sorry. 24 Q. Do you know what these numbers are</p>

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1 called at the bottom?	1 A. Yes.
2 A. That is the Bates number.	2 MS. KEEFE: Objection, Your Honor.
3 Q. Bates number, right. You have	3 402.
4 done this before, you have been an expert in a	4 THE COURT: I will override the
5 few cases before; right?	5 objection. I don't know, we'll see if the
6 A. Just a few cases, yes.	6 professor has an answer.
7 Q. And when company's produce	7 A. I just can't recall what was
8 documents to other companies in litigation, they	8 presented on Friday. If you're representing to
9 put Bates numbers on documents; right?	9 me that this was the one presented to the jury
10 A. I'm actually not -- I don't know	10 on Friday, I'll accept that, but I really didn't
11 who actually puts them on, I just know that they	11 look at the bottom of the page there. I was
12 are numbered.	12 looking at the top.
13 Q. Okay. And are you aware that a	13 Q. And if the iManage manual is
14 company called Autonomy is the company that owns	14 confidential, if it is, in fact, a confidential
15 the iManage product at this point?	15 document, would your opinion change about its
16 A. No, I'm not aware of that.	16 relevance in this case?
17 Q. Now, you notice that the iManage	17 A. Well, I don't really know what
18 manual is marked confidential. Do you see that?	18 iManage itself means by confidential, so I can't
19 A. I see that on that page, yes.	19 really tell you.
20 Q. And you understand what it means	20 Q. You signed the undertaking in this
21 when something is marked confidential in a	21 case for the protective order; correct?
22 litigation; correct?	22 A. Correct.
23 A. I'm just looking at my copy here.	23 Q. And you understand that
24 Q. I understand. I understand your	24 confidential documents in this case are not
Page 1669	Page 1671
1 company is not marked confidential.	1 public documents; correct?
2 A. No, it's not marked confidential,	2 A. Fair enough.
3 so the copy that I have that was given to me was	3 Q. You understand that you read the
4 not marked confidential.	4 protective order, you signed it; right?
5 Q. I'm talking about the one you	5 A. What I'm not certain if it was
6 actually testified to on Friday.	6 designated legal confidential by counsel. This
7 A. Sorry. I'm not sure I understand.	7 kind of goes outside the scope of what I really
8 The copy I have is the one that I testified to.	8 know in terms of how --
9 Q. Well, Friday, this was the exhibit	9 Q. Fair enough. What I'm asking you,
10 that was shown to the jury; correct? DIX 1010	10 if this is a nonpublic document, if it was not
11 This is the one that Ms. Keefe kept referring	11 available to the public, would it change your
12 you to?	12 opinion with regard to the iManage manual?
13 A. Well, if that -- I can't recall	13 A. It depends on how iManage itself
14 what was put on the display. If that particular	14 had disclosed it, so -- and I have no knowledge
15 version with that confidential designation on	15 of that, so I can only speak to what's in the
16 the bottom was put on there, that's one thing,	16 actual document itself.
17 but I'm of course talking -- all my comments in	17 Q. Dr. Greenberg, I'm not trying to
18 my expert report are on the exhibit that I	18 trick you here.
19 actually have that I included with any report.	19 A. I know.
20 Q. And that was given to you by	20 Q. It's a real simple question.
21 counsel; correct?	21 A. I know.
22 A. Yes.	22 Q. If this is a nonpublic document,
23 Q. And they also produced this	23 if this confidential document is marked right
24 document for the jury as confidential; correct?	24 here, if this is not available to the public,

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1 hear a lot of in patent law is enabling. Do you	1 12:22 p.m.)
2 know what that means?	2 THE COURT: You can step down, and
3 A. Yes, I do.	3 the rest of you can sit.
4 Q. What does it mean to be enabled or	4 Just talk briefly about where we
5 enabling technology?	5 are.
6 A. It mean that is -- this	6 You're free to go.
7 description has to be enough that somebody of	7 THE WITNESS: What time?
8 ordinary skill in the art could go and build it.	8 THE COURT: Talk to your attorneys
9 It doesn't have to say everything, but it should	9 about that.
10 be rich enough that you can say, here's what it	10 I've been advised that a new
11 says, and you can do something about it.	11 declaration of the special verdict form has been
12 Q. And in your opinion, was the text	12 filed as I directed, so I'll start taking a look
13 and code in the back of the provisional	13 at this, and I figure we would have our prayer
14 application enabling technology?	14 conference after we finish testimony today,
15 A. It was enabling in the sense that	15 which I'm guessing will be 4:30, but if it were
16 I understood enough to determine it's about	16 all wrapped up before then, we would go to the
17 creating boards and setting the relationships	17 prayer conference.
18 between those boards. In that sense, it's	18 Any questions or needs to be
19 enabling.	19 addressed?
20 But it's not a full specification.	20 MR. ANDRE: No, thank you, Your
21 There's a lot of stuff missing, such as in those	21 Honor.
22 import files. I could tell from the code in the	22 THE COURT: Mr. Rhodes?
23 description that it matches the description I	23 MR. RHODES: No, thank you, Your
24 told you, but in terms of enabling what's in the	24 Honor.
Page 1444	Page 1446
1 761 patent, I would say it's not.	1 THE COURT: We'll see you back at
2 Q. So the -- in your -- in your	2 1:30 then.
3 opinion, did the disclosure from the provisional	3 THE CLERK: All rise.
4 application, including the code at the back,	4 (A recess was taken at 12:23 p.m.)
5 enable one of skill in the art to build or	5 THE CLERK: All rise. Court's now
6 understand what was in the claims of the 761?	6 in session.
7 A. No.	7 THE COURT: Let's bring the jury
8 Q. In your opinion, does the	8 in.
9 provisional patent application disclose each and	9 MS. KEEFE: I have the special
10 every element fully of the asserted claims of	10 verdict form, just to hand up physical copies.
11 the 761 patent?	11 THE COURT: Okay. That's fine.
12 A. No, they do not.	12 You can do that as we're bringing
13 MS. KEEFE: This is a good place	13 the jury in. Thank you.
14 for a break, Your Honor, or we can go to the	14 THE CLERK: All rise.
15 next topic.	15 (Jury entering the courtroom at
16 THE COURT: I know the next topic	16 1:50 p.m.)
17 will take more than six minutes.	17 THE CLERK: Please be seated.
18 MS. KEEFE: I promise it will.	18 THE COURT: Good afternoon, ladies
19 THE COURT: Based on that promise,	19 and gentlemen. Welcome back.
20 we'll start our lunch a little early today and	20 And let me apologize. I had some
21 have the jurors back in time to start again at	21 other matters come up. I wish this was the only
22 1:30.	22 case I was dealing with, but I actually have a
23 THE CLERK: All rise.	23 few others.
24 (The jury exited the courtroom at	24 And there was some other urgent

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1 things I had to take care of and I apologize for
 2 keeping you waiting. And welcome back and let
 3 me keep you waiting no longer.
 4 Ms. Keefe.
 5 MS. KEEFE: Dr. Greenberg.
 6 Go ahead and put up the summary
 7 slide.
 8 BY MS. KEEFE:
 9 Q. Good afternoon, Dr. Greenberg.
 10 A. Hi.
 11 Q. So before lunch, I think we were
 12 talking about your first opinion; is that
 13 correct?
 14 A. That's correct.
 15 Q. And what was your first opinion,
 16 again?
 17 A. So just to summarize, the
 18 provisional patent application does not disclose
 19 every element of each asserted claim of the '761
 20 patent.
 21 Q. Thank you.
 22 I'd like for us now to move on to
 23 your second opinion. Now, before we dive into
 24 that, I think one of the terms that we keep

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1 hearing is prior art.
 2 What is prior art?
 3 A. Well, prior art is essentially
 4 stuff that's been -- that's been created before
 5 the critical date. So it could be publications.
 6 It could be systems or other things like that.
 7 Essentially anything that
 8 discloses ideas and inventions.
 9 Q. And what are the names of the four
 10 things that you have here next to the bullets?
 11 A. Do I have to recite the numbers
 12 or?
 13 Q. No, just the names is fine.
 14 A. So Swartz was the inventor of the
 15 first patent. And the iManage is actually a
 16 system, and it's a reference manual that I've
 17 been using to base my opinion on.
 18 Hubert is an invention of a
 19 European patent. And Ausen is the inventor of
 20 the U.S. patent.
 21 Q. Can you please turn in your binder
 22 to PTX 0919.
 23 A. I see it.
 24 Q. You see it? And what is that?

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1 A. That's the Swartz patent that I've
 2 used.
 3 MS. KEEFE: Your Honor, at this
 4 time, I'd like to move the Swartz patent into
 5 evidence.
 6 MR. ANDRE: No objection.
 7 THE COURT: It's admitted.
 8 BY MS. KEEFE:
 9 Q. Dr. Greenberg, you've stated that
 10 you have an opinion on the Swartz patent and
 11 how -- as to how it relates to the asserted
 12 claims of the patent in this case.
 13 What is that opinion?
 14 A. So my opinion is that Swartz
 15 essentially discloses all of the ideas or
 16 inventions in the -- in each one of the elements
 17 of the asserted claims of the '761 patent.
 18 Q. Now, I noticed you essentially
 19 disclose everything, every single one. I'm
 20 sorry.
 21 A. Yes. It discloses every single
 22 one.
 23 Q. Can you explain what are the dates
 24 that we're seeing here on the screen?

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1 A. So the bottom date is the date
 2 that this patent was filed, which we see is June
 3 29th, 1998, which is quite a long time before
 4 the '761 patent. And in fact, the patent was
 5 actually granted by the Patent Office and
 6 obviously very publicly available on May 2nd,
 7 2001, which is also well before the date of both
 8 the provisional and the '761 application
 9 filings.
 10 Q. Have you read and studied the
 11 Swartz patent?
 12 A. Oh, yes.
 13 Q. And what is the Swartz patent
 14 about?
 15 A. So I actually have a -- maybe
 16 there's a graphic that I could use to just kind
 17 of give a high-level view of it. It's power
 18 point.
 19 Q. Do you have the --
 20 A. No.
 21 Q. You mean the animation that you
 22 worked on?
 23 A. No. It's -- oh, sorry. I believe
 24 it's Figure 1.

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<p>1 Q. Figure 1. Okay.</p> <p>2 A. Yeah.</p> <p>3 Q. Can we find Figure 1 of the Swartz</p> <p>4 patent?</p> <p>5 A. Yeah. So this is kind of an</p> <p>6 abstract figure, but essentially Swartz was</p> <p>7 really interested in or really concerned about</p> <p>8 what happened when people would be using a</p> <p>9 variety of systems in a fairly serious process.</p> <p>10 So he was looking, for example,</p> <p>11 and this is his example of what are all the</p> <p>12 things that people do when they're developing a</p> <p>13 drug, and eventually they're going to file it to</p> <p>14 a regulatory agency for approval.</p> <p>15 And the problems of the time was</p> <p>16 that people would be using a variety of systems</p> <p>17 to do all the work. So these systems are</p> <p>18 essentially the context and environments where</p> <p>19 they do their work.</p> <p>20 So, for example, those bottom</p> <p>21 three bubbles are EDMS. That would be</p> <p>22 enterprise document management system.</p> <p>23 They may use that. Then they may</p> <p>24 use an imaging management system to manage all</p>	<p>1 so on.</p> <p>2 So his concept was to trying to</p> <p>3 integrate the systems by this thing called</p> <p>4 knowledge integration, which would monitor what</p> <p>5 people could do within a particular context or</p> <p>6 system, track as they move between them,</p> <p>7 essentially, to use Swartz's term, to create a</p> <p>8 knowledge path of all the things they did across</p> <p>9 the systems.</p> <p>10 That's the big picture view of</p> <p>11 what Swartz was looking at.</p> <p>12 Q. What words in the patent itself</p> <p>13 led you to the this?</p> <p>14 A. There are words very similar in</p> <p>15 the 761 patent talks about context tracking,</p> <p>16 metadata. I think that will come up -- I</p> <p>17 prepared other slides to look at later.</p> <p>18 Q. What are we looking at here?</p> <p>19 A. So this is an example from the</p> <p>20 Swartz patent, and we can see some -- in fact,</p> <p>21 we can see some of the words he uses here.</p> <p>22 He says, "Such a system also</p> <p>23 preferably captures metadata associated</p> <p>24 with the information shared, stored, and</p>
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<p>1 the images they produce and an enterprise</p> <p>2 workflow system.</p> <p>3 And the problem that existed was</p> <p>4 that as people would be doing their work through</p> <p>5 this, essentially their information would be</p> <p>6 fragmented and not captured.</p> <p>7 So what he -- what his invention</p> <p>8 essentially --</p> <p>9 Q. Could you give us an example of</p> <p>10 that? You said people using these systems, our</p> <p>11 work could be fragmented.</p> <p>12 A. Sure. So, for example, if</p> <p>13 somebody is developing a drug, there's lots of</p> <p>14 documentation and other things that happen with</p> <p>15 that, so if they're doing a little bit on one</p> <p>16 system and moving over to another system or</p> <p>17 another different environment or context, then</p> <p>18 essentially that all this stuff they do is</p> <p>19 separate.</p> <p>20 And as part of a -- when you're in</p> <p>21 the business of doing things like drug</p> <p>22 regulatory approval, you need to be able to</p> <p>23 track all the stuff that happens along the way:</p> <p>24 When your ideas were created, the documents, and</p>	<p>1 accessed by the users of the data so as</p> <p>2 to characterize the context in which the</p> <p>3 information is being used."</p> <p>4 The context is the things they're</p> <p>5 doing within the system and also going between</p> <p>6 systems.</p> <p>7 Q. Now, can this system be used to</p> <p>8 change the data itself, like the document about</p> <p>9 the drug?</p> <p>10 A. Of course. This is all an</p> <p>11 evolutionary thing. As people are doing the</p> <p>12 work, they're creating things, changing things,</p> <p>13 adding to things, and all the usual stuff I</p> <p>14 would expect.</p> <p>15 Q. Are there other portions of the</p> <p>16 specification that led you to believe that</p> <p>17 Swartz has invented this idea first?</p> <p>18 A. Oh, yes. I believe I've</p> <p>19 identified some other places. Maybe we could</p> <p>20 bring that up.</p> <p>21 This is kind of a high-level view</p> <p>22 of the concept that I stated previously. So on</p> <p>23 the left and right here, we are actually seeing</p> <p>24 two different systems that he was talking about.</p>

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<p>1 Doesn't really matter what they are. 2 For this example, we see a 3 customer-data analysis application that somebody 4 could be working in that context, then they 5 could be moving to customer document application 6 in the middle, that data docket software. 7 That's what Swartz calls the 8 knowledge integration part. This is what's 9 monitoring what people are doing in the left and 10 right context, tracking as they move between 11 them, and storing that as metadata, which is 12 what we saw in the previous excerpt. 13 Q. How does the text of the patent 14 describe this data docket software? 15 A. Very similarly. In fact, this is 16 something I identified within the patent, so 17 here's the data docket phase. We see that up on 18 top, and that's the thing in the middle. That's 19 watching what's going on. 20 We see words in it like point 21 number C generation of an audit trail to 22 represent the flow of data an audit trail is all 23 these things that happened with that data as 24 people use it over time.</p>	<p>1 Q. Is there a figure in the patent 2 that describes more detail about the information 3 that's being gathered? 4 A. Yes, and I've identified that, so 5 this is, kind of, a portion of the figure -- I 6 don't remember the figure number. 7 Q. Five? 8 A. Sounds about right. 9 -- where we see -- and again it's 10 kind of abstract. We see at the top this thing 11 called the knowledge repository, and this is the 12 stuff that the system is keeping track of. 13 If we look at the left, we see the 14 top three things, and maybe we can highlight 15 those where it says record of transactions. It 16 keeps a record of the transactions. It keeps a 17 record of the context information from users and 18 their applications, and it has this information, 19 metadata catalog, so we see the metadata is 20 there as well. 21 More importantly than that, if you 22 look at the bottom of the picture, there's a 23 hubble that says "knowledge integration," and 24 below that, vertical text called "knowledge</p>
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<p>1 Q. What's another way of thinking 2 about an audit trail in terms of the language in 3 the patent? 4 A. It's tracking context information 5 across everything that happens. We see 6 burgeoning after analysis data. We're capturing 7 data as well and all the data as it changes over 8 time. 9 We see number eight -- we see 10 using stored context information to provide 11 access to the historical information about how a 12 report was created. This is like, if you think 13 about capturing context, we're talking about how 14 a person would create a report, who actually did 15 the work, when it was completed, as well as 16 other things. 17 So he talks about this as 18 historical information. So when Swartz is 19 talking about capturing the stuff, he's not 20 talking about capturing a little bit about what 21 they're doing. He's talking about a flow of 22 events that captures what happens over a course 23 of time, all the decisions made, and that's 24 referred to later as a knowledge pattern.</p>	<p>1 path." And this is the aspect of the system 2 that says, let's capture this as a sequence of 3 events that occurs as people do their work over 4 time. 5 We're not just talking about 6 within a system, here's what people are doing, 7 but also as they flow from system to system to 8 system, and this is the essence of tracking 9 movement. 10 Q. And did you find other quotations 11 in the patent that also describe this figure? 12 A. Yes, I've identified some. Let's 13 take a look at this quote. 14 Q. Where are we here? 15 A. We're in either column five or 16 six. It's hidden away. 17 Q. Is it fair to say column six, line 18 seventeen? 19 A. Sounds right. 20 This is in the Swartz patent. 21 Let's look at what we says here, and as used 22 herein, the term knowledge integration 23 middleware represents -- and that's that thing 24 at the bottom.</p>

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<p>1 If you remember, that has -- the 2 knowledge path represents any software used to 3 assist in the integration of disparate 4 information sources and the corresponding 5 applications for the purpose of recording 6 distributing and activating knowledge, knowledge 7 application, knowledge services. 8 And I think the next line is 9 really a good one to match to the 761 patent 10 because he says "more specifically, knowledge 11 integration middleware is preferably employed to 12 identify and hereby identified --" he says, 13 including tracking monitoring as well as 14 analyzing. 15 Here we're monitoring what people 16 do in the system. We're tracking what they do 17 in between the systems in the context, and he 18 uses that word, the context, in which 19 information is employed so as to enable the user 20 of such context in the management knowledge. 21 We're seeing wording that's 22 similar to the 761 patent. 23 Q. Are there other paragraphs in the 24 Swartz patent that also --</p>	<p>1 Q. Did you prepare some graphics to 2 show how the Swartz patent could operate? 3 A. Yes. So this is -- what I've done 4 is I've taken Figure 2 and which shows the data 5 docket software and in this case two different 6 contexts or two different systems on the left and 7 right. And I've added the bottom part of Figure 8 5, which is essentially the knowledge. 9 Sorry. This is the top part of 10 Figure 5. It's essentially the knowledge 11 repository. 12 Now, if we abstract a little and 13 the data docket software, that's doing the 14 context monitoring. And the tracking is shown 15 in the middle of Figure 2A. 16 So if we abstract this a little 17 bit, we have our two contexts in this case, the 18 customer data analysis software and enterprise 19 document management system. 20 And at the bottom, if we abstract 21 that, we have our knowledge repository. This is 22 where stuff gets stored. 23 So what Swartz does, if we 24 continue on from here, is essentially we're --</p>
<p>Page 1460</p> <p>1 A. Sure, there are numerous examples. 2 Here is another one. So this is 3 again from the Swartz patent from column seven, 4 where Swartz says he's describing why this is a 5 good thing. 6 So he says some key advantages of 7 the present invention are the saving of context. 8 Again we see context comes in. That's 9 important. 10 And having the ability to 11 visualize and explore past, present, and 12 potential decisions. There's two contexts, 13 first, to visualize. We're accessing all this 14 stuff, not collecting and sticking it on a 15 computer, but it's for the people to access all 16 this information, context information, and the 17 stuff they do to explore past, present, and 18 potential decisions. 19 There we have again the concept of 20 the knowledge path. There's a flow of events 21 that happen over time as people do these things 22 both between and within the context. So that's 23 really the major thing that I wanted to point 24 out in this passage.</p>	<p>Page 1462</p> <p>1 well, this quote kind of captures it. We're 2 watching what people do as they do their work in 3 a particular system. 4 And here he says such a system 5 also preferably captures metadata associated 6 with the information shared, stored and accessed 7 by the users of the data. And again, so as to 8 characterize the context in which the 9 information is being used. 10 So this is all -- you know, 11 clearly this is what's happened. You are 12 capturing the context. There's software that 13 captures the context information and that's 14 being stored in this knowledge repository. 15 Now, if we keep on going, so this 16 is also -- now, we get to the tracking. So 17 here's another quote, which you've actually seen 18 before where it says knowledge integration 19 middleware is preferably employed to identify -- 20 and here we see the including tracking, 21 monitoring and analyzing the context in which 22 information is employed. 23 So here we have a person moving 24 across context and that's also tracking and</p>

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<p>1 captured and put in the knowledge repository. 2 If we go on. And, in fact, even 3 in the claims of Swartz, Swartz actually says 4 that his system generates this audit trail to 5 represent the flow of data. So, again, we have 6 this notion of tracking in one of the claims. 7 And in Claim 5, he actually says 8 that all this is done -- that the system 9 dynamically stores information about these 10 transactions. So this is all happening as 11 people are doing their work. 12 Q. Now, how do these features that 13 you've just described compare to the claims of 14 the '761 patent? 15 A. Well, they pretty well -- well, 16 not pretty well. They describe using Claim 1 as 17 an example. This describes what Claim 1 is 18 doing. 19 Q. Can we go through the animation 20 again and have you use the language of Claim 1? 21 A. Okay, I just want to get the 22 language of Claim 1 in front of me to see. 23 Q. Why don't you put it up on the 24 white board to the side of you, so we can have</p>	<p>1 So there we go, we're characterizing context. 2 And then it says, the context 3 component dynamically storing the context 4 information in metadata. And that's mentioned. 5 That quote also captures that. 6 We see the captures metadata and 7 so it's there. 8 Q. So Dr. Greenberg, I'm sorry. Just 9 to slow down one second. 10 A. Yeah. 11 Q. So which portions of Claim 1 are 12 you saying map to the quote that we have here on 13 the screen? 14 A. Okay. Right now I'm looking at 15 the first element of Claim 1. 16 Q. So is that computer-implemented 17 context component of the network-based system 18 for capturing context information associated 19 with user-defined data created by user 20 interaction of a user in the first context of 21 the network-based system? 22 A. That's correct. 23 Q. Okay. 24 A. And then I went on to talk about</p>
Page 1464	Page 1466
<p>1 it at both places at the same time. 2 A. Okay. That would be helpful. 3 Q. Just make sure it's clean for us. 4 So Dr. Greenberg, I'm going to have you help us 5 step through the Swartz patent and what it 6 discloses with each and every one of the 7 limitations from Claim 1. 8 A. Sure. But let's back up one more 9 step, because -- and even again remember that 10 I'm talking about the data docket software is 11 kind of watching what's going on, and the data 12 docket software actually has software that's 13 equivalent to the -- what we'll see here is a 14 context component and also the tracking 15 component. So now we can move through that. 16 Later I'll talk about it being a 17 network-based system. But here we have the data 18 docket context software is a context component 19 and it captures the context information 20 associated with the user-defined data. 21 So if we step through this, again 22 we see here at the bottom, it's talking about a 23 captured metadata associated with the 24 information. So it's characterized in context.</p>	<p>1 the context component dynamically storing the 2 context information metadata. And we see the 3 metadata over there. 4 Q. And which -- which portion of this 5 language -- seems a little obvious, but which 6 portion of this language tells you that? 7 A. Well, captures metadata associated 8 with the information shared, stored and accessed 9 by the users of the data. 10 Q. So is that just generic metadata 11 or is that a specific type of metadata? 12 A. No, this is -- well, it's very 13 specific, because it says below, so as to 14 characterize the contents. Right. 15 This is all about what are people 16 doing in a context? What exactly is happening? 17 As in this case, they're using that customer 18 data analysis software system. 19 Q. Thank you. Please go on. 20 A. Okay. Can I see the next 21 animation just to -- okay. 22 So we have in the second claim, we 23 have a computer-implemented tracking component 24 of the network-based system for tracking a</p>

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<p>1 change of the user from the first context to a 2 second context of the system and then 3 dynamically updating the stored metadata based 4 on the change. 5 Now, here in this quote, he says 6 we have this knowledge integration middleware 7 su that does some of the tracking that's 8 preferably employed to identify, including 9 tracking, monitoring and analyzing the context 10 in which information is employed. 11 Su, again, we have the tracking 12 coming into play, which is what that claim is 13 all about. And if we keep on going. 14 And here we see in the claim, it 15 generates an audit trail. And that's part of 16 the storage functionality. Right. 17 As people are doing what they're 18 doing, it's being stored. And we see that in 19 Claim 5 as well. That is the dynamically 20 stored. Right. 21 So we're dynamically storing 22 information about these transactions as people 23 are doing them. 24 Q. How do we know that it's the same</p>	<p>1 But I don't know that for sure. 2 All I know is that Xerox is, in fact, the actual 3 assignee. 4 Q. And when was this, again? 5 A. I'll have to look back on that 6 first page, but I said it was late '90s. 7 Could I just have it right in 8 front of me? 9 Q. That's okay. So when was that 10 filed again? 11 A. So he filed it in 1998, and I 12 think this is, what, five years before the '761. 13 So quite a long time before the '761 patent. 14 Q. Dr. Greenberg, what is your 15 opinion as to whether or not Swartz discloses 16 each and every element of Claim 1 of the '761 17 patent? 18 A. My opinion is that it does 19 disclose each and every element of the -- of 20 Claim 1 of the '761 patent. 21 Q. And what does that mean? 22 A. Well, what it means is 23 essentially -- well, what it means is that the 24 ideas that are presented in the '761 patent</p>
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<p>1 metadata that's being updated? 2 A. Well, this is a whole point of the 3 system. Right. 4 It's about capturing this 5 knowledge path, which I mentioned before. It's 6 about what is it that people are doing and can 7 we actually create that as a knowledge path. 8 So it's all related. It's not 9 just different stuff. It's related from what 10 happens within a context. 11 How do we track what people are 12 doing as they move from one context to the 13 other? How do we store what happens in the 14 second context? How do we store all that as 15 metadata? 16 So it presents this knowledge 17 path. 18 Q. And where was Mr. Swartz when he 19 wrote this patent? 20 A. I'm not sure where he went to. I 21 do know that the patent was assigned to -- was 22 assigned to Xerox. So I can assume that he was 23 working for Xerox at the time or he had some 24 relationship with them.</p>	<p>1 appear in the Swartz patent. So -- so and I 2 should be more specific. 3 The ideas that are present in each 4 and every element of Claim 1 are presented in 5 Swartz. Swartz actually had these ideas well 6 before that and published it. 7 Q. And do you have an opinion as to 8 whether or not that affects the validity of the 9 '761 patent, Claim 1? 10 A. Yes. My understanding of patent 11 law is that prior art essentially discloses each 12 and every element in the claim and that that 13 claim would be invalid. 14 Q. Have you also applied the 15 teachings from the Swartz patent to the other 16 claims of the '761 patent? 17 A. Yes, I have. 18 Q. And can we go through those now? 19 A. Sure. 20 Q. Put up Claim 4. 21 A. I think before that, I had 22 something that actually looked at the language 23 of Claim 1. 24 Q. Absolutely.</p>

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<p>1 A. Yeah, because I think -- I don't</p> <p>2 think I finished with Claim 1 because there's</p> <p>3 another point that I -- well.</p> <p>4 Q. Oh, no. Thank you very much.</p> <p>5 Sorry if I missed a step.</p> <p>6 A. So what I wanted to say, these are</p> <p>7 -- on the left, we see excerpts from Claim 1</p> <p>8 from the elements of Claim 1. On the right, we</p> <p>9 see language from Swartz.</p> <p>10 And I think you've seen some of</p> <p>11 this before. But I really want to stress that</p> <p>12 not only are the ideas that Swartz talks about</p> <p>13 essentially or they disclose what's in those</p> <p>14 claims, but he uses almost exactly the same</p> <p>15 language. So we have -- it's not just, oh,</p> <p>16 Here's an idea. There's debates about it.</p> <p>17 But the language in it is very,</p> <p>18 very similar language. So in the '761 patent,</p> <p>19 the element -- one of the elements talks about</p> <p>20 dynamically storing the context information and</p> <p>21 in metadata associated with the user-defined</p> <p>22 data, the user-defined data in metadata stored, and</p> <p>23 a storage component.</p> <p>24</p>	<p>1 database.</p> <p>2 On a change in Swartz, he says the</p> <p>3 recording of the data should be done</p> <p>4 automatically, electronically, with dynamic</p> <p>5 linkages to the source information, so that this</p> <p>6 is happening as things occur.</p> <p>7 I believe there's one more at the</p> <p>8 end of claim one. It says "wherein the user</p> <p>9 accesses the data from the second context," and</p> <p>10 in Swartz, Swartz says "such a system also</p> <p>11 preferably captures metadata associated</p> <p>12 with the system changed, stored, and</p> <p>13 accessed by the users of the data so as</p> <p>14 to characterize the context in which the</p> <p>15 information is being used."</p> <p>16 Very similar words. There's many</p> <p>17 ways to describe the invention. What I found</p> <p>18 compelling about Swartz is not only does he have</p> <p>19 the same ideas, the words he uses are identical</p> <p>20 to what the '761 patent had five years later.</p> <p>21 Q. Thank you. Can we move on to</p> <p>22 claim four.</p> <p>23 A. Sure, I think that's it on that.</p> <p>24 Q. Here's claim four. Are you</p>
Page 1472	Page 1474
<p>1 And we look at Swartz, and he says</p> <p>2 such a system also preferably captures metadata</p> <p>3 associated with the information shared, stored</p> <p>4 and accessed by users of the data, so as</p> <p>5 characterized the context in which information</p> <p>6 is being used.</p> <p>7 So we see the words are the same.</p> <p>8 Well, the ideas are the same and the words are</p> <p>9 the same.</p> <p>10 If we can keep on going here in</p> <p>11 the '761 patent element in the of Claim 1, we</p> <p>12 see the tracking component of a network-based</p> <p>13 system for tracking a change of the user from</p> <p>14 the first context to a second context. And you</p> <p>15 see in the quotes on the right where he talks</p> <p>16 about his knowledge integration middleware that</p> <p>17 is employed to identify.</p> <p>18 And here he talks about including</p> <p>19 tracking the context so as to enable the use of</p> <p>20 such context in the management of knowledge.</p> <p>21 So, again, we see the idea of tracking context</p> <p>22 and other things in the Swartz.</p> <p>23 Furthermore, in the '761, it talks</p> <p>24 about dynamically updating metadata on the</p>	<p>1 familiar with claim four?</p> <p>2 A. Yes.</p> <p>3 Q. And do you have an opinion as to</p> <p>4 whether or not the Swartz patent discloses as</p> <p>5 prior art the information claimed in claim four?</p> <p>6 A. Yes, they do, and my opinion is</p> <p>7 that it does disclose it.</p> <p>8 Q. Why is that?</p> <p>9 A. Well, claim four adds that the</p> <p>10 context information includes a relationship</p> <p>11 between the users and at least one of an</p> <p>12 application, application data user, and</p> <p>13 environment.</p> <p>14 I've already spoken about how</p> <p>15 Swartz defines a knowledge path. That captures</p> <p>16 everything that's going on. We showed a quote</p> <p>17 that says this is the user information and the</p> <p>18 application data. That's satisfied here.</p> <p>19 Q. What is your opinion about claim</p> <p>20 four?</p> <p>21 A. That Swartz essentially discloses</p> <p>22 what's in claim four.</p> <p>23 Q. Essentially or --</p> <p>24 A. It does. Sorry. It does disclose</p>

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<p>1 what's in claim four.</p> <p>2 Q. Do you have an opinion regarding</p> <p>3 claim seven?</p> <p>4 A. Yes, I do.</p> <p>5 Q. Is this claim seven?</p> <p>6 A. Yes.</p> <p>7 Q. What does claim seven add?</p> <p>8 A. Claim seven adds that data created</p> <p>9 in the first context is associated with data</p> <p>10 created in the second context.</p> <p>11 I addressed this with the tracking</p> <p>12 and by Swartz's use of language like "knowledge</p> <p>13 path," that essentially it's not just</p> <p>14 recapturing what happens here, and they're</p> <p>15 disconnected.</p> <p>16 He really is interested in the</p> <p>17 whole path of knowledge as a sequence over time.</p> <p>18 We already saw terms like audit trails. All</p> <p>19 these things are to take the data and relate</p> <p>20 them together across all these contexts.</p> <p>21 Q. What is your opinion regarding</p> <p>22 Swartz and claim seven?</p> <p>23 A. Swartz anticipates claim seven.</p> <p>24 Q. When you say anticipate, what do</p>	<p>1 satisfied.</p> <p>2 More generally, Swartz is</p> <p>3 describing all the stuff people are doing in a</p> <p>4 system, so that's their environment for doing</p> <p>5 their work, so that's all satisfied by Swartz.</p> <p>6 Then it says of a web-based</p> <p>7 computing platform. And this is also another</p> <p>8 difference from claim one, and I identified</p> <p>9 parts in the patent that shows Swartz discloses</p> <p>10 the web-based computing platform.</p> <p>11 Q. This one of those?</p> <p>12 A. Yes, it is. Here's an excerpt</p> <p>13 from Swartz.</p> <p>14 He says, "Knowledge management</p> <p>15 level also includes data docket web-based</p> <p>16 knowledge reporter." So clearly this is a</p> <p>17 web-based system or it has capabilities of a</p> <p>18 web-based system, so this is a web-based</p> <p>19 platform.</p> <p>20 At the bottom we see the data</p> <p>21 docket being accessed by the web browser.</p> <p>22 Clearly this is a web-based platform.</p> <p>23 Q. What about the other elements of</p> <p>24 claim nine?</p>
Page 1476	Page 1478
<p>1 you mean?</p> <p>2 A. It means it discloses the idea in</p> <p>3 claim seven.</p> <p>4 Q. Do you have an opinion as to claim</p> <p>5 nine?</p> <p>6 A. I do.</p> <p>7 Q. What is your opinion regarding</p> <p>8 claim nine?</p> <p>9 A. So claim nine is a variation of</p> <p>10 claim one. In claim one it -- so here we have</p> <p>11 -- in claim nine -- instead of --</p> <p>12 So we talk about a</p> <p>13 computer-implemented method. Now, Swartz is</p> <p>14 describing a system, so it's obviously a</p> <p>15 computer-implemented method, and it comprises</p> <p>16 computer-executable acts. We're talking about a</p> <p>17 computer system, so it does that.</p> <p>18 Creating data within a user</p> <p>19 environment. Now, this is one of the</p> <p>20 differences. In claim one, it talks about</p> <p>21 context. In claim seven, it talks about user</p> <p>22 environment. The Court has actually construed</p> <p>23 context to be the same as environment. That's</p> <p>24 how it defines it. In one sense, that's</p>	<p>1 A. So okay. So the rest of claim one</p> <p>2 is pretty well -- the rest of the first element</p> <p>3 of claim one is what we've seen before in a user</p> <p>4 interaction with the user environment or context</p> <p>5 by user using an application. The data and firm</p> <p>6 and files and documents. We talked about this.</p> <p>7 The second paragraph says</p> <p>8 "dynamically associates metadata with the data</p> <p>9 and the data and metadata stored on a storage</p> <p>10 component of the web-based computing platform.</p> <p>11 We've already seen it's web based.</p> <p>12 Q. Is it stored?</p> <p>13 A. Yes.</p> <p>14 Q. And is the metadata dynamically</p> <p>15 associated with the data?</p> <p>16 A. We -- all that before when I</p> <p>17 talked about dynamic, the bottom part says the</p> <p>18 information includes -- metadata includes the</p> <p>19 information related to the user, the data, the</p> <p>20 application, and the user environment.</p> <p>21 The third element says tracking</p> <p>22 movement of the user from the user environment</p> <p>23 of the web-based computing platform to a second</p> <p>24 user environment of the web-based computer</p>

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<p>1 platform, and we talked about that in claim one, 2 except here it's web based, and we showed that's 3 web based. 4 Finally, dynamically updating 5 stored metadata with an association of the data 6 to the application and the second user 7 environment. For this entire claim, we've 8 already covered -- we talked about dynamically 9 updated stored metadata. 10 Q. For the very last portion? 11 A. Remember that this is all about 12 users being able to review their decisions and 13 not see all the things that have happened, so 14 this is where a person can employ at least one 15 application from the data to the second 16 environment, second context in fact, at any 17 time. 18 Q. What does that mean to you? The 19 user employed one of the applications and the 20 data? 21 A. It means they can look at the data 22 at a later time. It's not just stored in the 23 system for nobody to look at it. This is 24 something for people to use and review.</p>	<p>1 content of the user environment subset of 2 plurality of users can access the content from 3 an associated plurality of user environments. 4 Q. From a plurality of user -- 5 A. Plurality of users can access the 6 content from an associated plurality of user 7 environments. 8 Q. What does that mean? 9 A. Essentially this means that the 10 content is indexed, so an index is created so 11 that one or more people can access it from one 12 or more user environments. 13 Q. Is that disclosed in the Swartz 14 patent? 15 A. Yes, it is. I believe I 16 identified the part. Here it is. 17 Here's an example. This is 18 something that's fairly familiar to most people 19 is part of searching. So the ability to 20 initiate and retrieve information that indexes 21 documents across the enterprise by accessing 22 industry standard databases and presenting the 23 results in an easy-to-use and read format. 24 Q. What is your opinion regarding</p>
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<p>1 Q. What is your opinion regarding 2 claim nine and the Swartz patent? 3 A. That claim nine anticipates the 4 761 patent. That is, it discloses each and 5 every element. 6 Sorry. Said that wrong. Swartz 7 discloses each and every element of claim nine 8 of the 761 patent. 9 Q. Thank you. 10 Do you have an opinion regarding 11 claim eleven of the 761 patent regarding the 12 Swartz reference? 13 A. Claim eleven essentially adds 14 comprising indexing contents of the user 15 environment such that a plurality of users can 16 access the content from an associate plurality 17 of user environments. 18 Q. Let's start from the -- 19 A. Okay. 20 Q. -- very beginning -- 21 A. Claim nine. 22 Q. -- claim eleven. 23 A. Sorry. Claim eleven adds the 24 method of claim nine further comprising indexing</p>	<p>1 claim eleven and the Swartz patent as it relates 2 to the 761 patent? 3 A. My opinion is that Swartz 4 anticipates or discloses claim eleven of the 761 5 patent. 6 Q. Do you have an opinion regarding 7 claim twenty-one -- 8 A. Yes, I do. 9 Q. -- of the 761 patent as it relates 10 to Swartz? 11 A. Yes, my opinion as before is that 12 Swartz discloses each and every element of claim 13 twenty-one. 14 Q. How is that? 15 A. Again there's a lot of 16 similarities between this and the previous 17 claims. I'm going to highlight the differences. 18 We're talking about a 19 computer-readable medium for storing 20 computer-executable instructions. Essentially 21 this means we have a computer program that's 22 stored somewhere. 23 And again Swartz describes a 24 computer-based system, so anyone skilled in the</p>

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<p>1 art knows that would be on a computer-readable 2 medium.</p> <p>3 And the first element, he talks 4 now about the user workspace instead of a 5 context or user environment. There's parts of 6 the patent where the 761 patent talks about a 7 user workspace as being the same as an 8 environment or context, but it's safe to say 9 that Swartz is describing a system where people 10 are working within that system, so that's their 11 using workspace, so whether or not we look at 12 the definitions, that this is what Swartz is all 13 about as well.</p> <p>14 Then he talks about a web-based 15 computing platform. We talked about that. We 16 talked about dynamically associating metadata 17 with data. We talked about everything in that 18 second element before. We talk about tracking 19 movement, and I've talked about web-based 20 computing platform.</p> <p>21 In the third element, we have 22 tracking movement from the user workspace to the 23 second user workspace of the web-based computing 24 platform. Swartz talks about tracking movement.</p>	<p>1 A. My opinion is that Swartz 2 discloses each and every element of claim 3 twenty-one of the 761 patent.</p> <p>4 Q. Do you have an opinion regarding 5 claim twenty-three?</p> <p>6 A. This is very much the same with 7 some minor differences. I know it seems 8 tedious.</p> <p>9 Here he talks about a 10 computer-implemented system, and again Swartz is 11 talking about a computer system, so it's a 12 computer-implemented system.</p> <p>13 Now he's talking about a 14 computer-implemented context component. Swartz 15 is talking about the data docket system, which 16 is software, computer-implemented context 17 component.</p> <p>18 Now, a web-based server instead of 19 a web-based platform, I believe, and we saw how 20 we can access this system via the web, so this 21 would give it the functionality of a web-based 22 server for defining, first, user work space of 23 the web-based server assigning one or more 24 applications to the first user work space</p>
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<p>1 Essentially the systems are using workspaces, 2 and it's a web-based computing platform.</p> <p>3 Then the fourth element says 4 dynamically associated with data and the 5 application of the second user workspace and the 6 metadata such that the user employed the 7 application and data from the second user 8 workspace --</p> <p>9 I remember to slow down, 10 -- and again we've seen all that 11 before. This is just done in the context of a 12 user workspace instead of environment.</p> <p>13 And the final one, he adds 14 indexing the data creating the user workspace 15 such that a plurality of different users can 16 access the data via the metadata from a 17 corresponding plurality of the different user 18 workspaces. It's just bringing what is -- I 19 think it was claim eleven that talks about 20 indexing, so I've already spoken about how 21 Swartz discloses that.</p> <p>22 Q. What is your opinion regarding 23 claim twenty-one of the 761 patent vis-a-vis 24 Swartz?</p>	<p>1 capturing context data associated with user 2 interaction of the user while in the first user 3 workspace.</p> <p>4 Essentially I've already spoken 5 about that in terms of how Swartz says we try to 6 capture everything people are doing. Within the 7 system context user workspace, this includes 8 applications and other things and then it says 9 for dynamically storing the context data as 10 metadata on a storage component of a web-based 11 server.</p> <p>12 Again I addressed all this before. 13 We talked about how it's dynamically stored. We 14 talked about how this is a web-based server, and 15 it says metadata which is dynamically associated 16 with data created in the first user workspace. 17 That's all things I mentioned before.</p> <p>18 The second element is very similar 19 to what was previously seen. You have a 20 computer-implemented tracking component, and 21 again the data docket software includes the 22 computer software, so it's computer implemented 23 and does tracking.</p> <p>24 We talked about the server aspect</p>

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<p>1 and tracking change information associated with 2 the change in access from the first user 3 workspace to a second user workspace, and we 4 talked about storage component as part of the 5 metadata and the user accessing that data from 6 the second workspace. 7 Q. What is your opinion regarding 8 twenty-three? 9 A. That Swartz discloses each and 10 every element of the twenty-three. 11 Q. Do you have an opinion regarding 12 claim twenty-five? 13 A. Sure. 14 So claim twenty-five adds on to 15 claim twenty-three where he says the context 16 component captures relationship data associated 17 with the relationship between the first user 18 workspace and at least one other workspace. 19 I spoke about this earlier when I 20 talked about the knowledge path. It's capturing 21 the relationship within a context or system or 22 user workspace and how they move to the next one 23 over the knowledge path, what happens over time. 24 Q. Do you have an opinion regarding</p>	<p>1 Q. Does Swartz disclose this? 2 A. Yes, I believe what he discloses 3 specifically is the second part of that, where 4 there's an object. 5 Can we go back to the claim. Just 6 go back one. 7 So what he disclosed specifically 8 is an object storage methodology, although 9 relational storage would be known to one skilled 10 in the art as well. 11 If we go back, we see Swartz says 12 another aspect of the present invention 13 visualizes objects and linkages maintained in 14 the integration knowledge base, so here he talks 15 about objects being maintained in the knowledge 16 base. 17 Q. Do you have an opinion regarding 18 thirty-one? 19 A. Yes. 20 Q. What is that? 21 A. That Swartz anticipates or 22 discloses the claim. 23 Q. Thirty-one? 24 A. Thirty-one.</p>
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<p>1 claim twenty-three? 2 A. Yes, that, Swartz anticipates. 3 Q. I'm sorry. Twenty-five. I said 4 it wrong. 5 With respect to claim twenty-five, 6 do you have an opinion? 7 A. Yes, Swartz anticipates or 8 discloses claim twenty-five of the 761 patent. 9 Q. Do you have an opinion regarding 10 claim thirty-one? 11 A. Sure. Claim thirty-one says 12 essentially -- takes -- I have to stop using 13 essentially. 14 Takes claim twenty-three and adds 15 that the storage component stores the data and 16 the metadata according to at least one other 17 relational and object storage methodology, so it 18 has to do at least one or the other. 19 Q. What is a relational storage 20 methodology? 21 A. Well, a relational storage method 22 is a relational database. It's a method used 23 for many decades in the industry to store data 24 on tables for later retrieval.</p>	<p>1 Q. Do you also have an opinion 2 regarding, finally, claim thirty-two? 3 A. Yes. So Claim 32 adds onto Claim 4 23 where it says storing of the metadata in the 5 storage component in association with data 6 facilitates many-to-many functionality of the 7 data via the metadata. 8 Q. What does that mean? 9 A. Well, what the Court has construed 10 is that many to many means that essentially two 11 or more people can access -- I'm trying to 12 remember what the Court's construction was. 13 Q. You used -- 14 A. Two or more people. I used the 15 Court's. Essentially it means that two or more 16 people can access two or more things in here. 17 And what we're really getting at 18 is that this isn't just a system for one person 19 to access one thing. It's for many people to 20 access many things from many different places. 21 I think that's the essence of it. 22 Now, just to remind you what Swartz is all about 23 is about this knowledge path. 24 Right. He's talked about this big</p>

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1 system where people from a whole bunch of
 2 different places can query to find out what is
 3 it that people did? What is it that they did in
 4 this context and that context? Where were
 5 decisions made? How can I understand what's
 6 happened over time?
 7 So -- so this is exactly what
 8 Swartz is about. This isn't a single user
 9 system. It's an enterprise-wide system that
 10 allows multiple people to access data from
 11 multiple places.
 12 Q. So what is your opinion regarding
 13 Claim 32?
 14 A. That Swartz anticipates Claim 32
 15 of the '761 patent.
 16 Q. Can we pull up the face page of
 17 the '761 patent, please? Can we highlight the
 18 box that's titled References Cited, please?
 19 Dr. Greenberg, do you see the
 20 Swartz patent mentioned here?
 21 A. No, I do not.
 22 Q. So just in sum, what is your
 23 opinion as it relates to how the prior art
 24 Swartz patent applies to the asserted claims of

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1 the '761 patent?
 2 A. So overall, Swartz, which was, as
 3 I said, about five years before the patent
 4 application, the '761 application discloses each
 5 and every element of the asserted claims of the
 6 '761 patent.
 7 Q. Can we go back to your summary
 8 slide, please?
 9 What is the next piece of prior
 10 art that you studied?
 11 A. The next piece of prior art is the
 12 iManage Desk Site User Reference Manual which
 13 describes the workings of the iManage 6.0
 14 system.
 15 Q. Can you pull that up, the face
 16 page of iManage, Ken?
 17 What is iManage?
 18 A. So -- well, iManage is a document
 19 management system, and I will have some
 20 disclosures in there that talk about what it is.
 21 But essentially iManage is a way for people,
 22 groups of people to manage all their documents.
 23 Q. And I apologize, this may be a
 24 little bit tedious, but we're going to have to

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1 go through this kind of just the same way we did
 2 with the last one.
 3 So when was iManage published?
 4 A. Well, if we look at the second
 5 page of the manual, it includes a date in it.
 6 So this would be the second page of the iManage
 7 Reference Manual.
 8 No. No, it's not power point.
 9 It's the reference manual itself. There.
 10 There, that's it. Oh, it is power
 11 point.
 12 So the second page actually says
 13 when this manual was last updated and we see
 14 that the date is July 26th, 2001. Again, before
 15 the filing date of -- well before the filing
 16 date of either the provisional or the '761
 17 patent.
 18 Q. Can you please turn to DTX 1010 in
 19 your binder?
 20 A. I see it.
 21 Q. And what is that document?
 22 A. That's the iManage Desk Site 6.0
 23 User Reference Manual that I used.
 24 MS. KEEFE: Your Honor, may I

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1 please move DTX 1010 into evidence?
 2 MR. ANDRE: No objection.
 3 THE COURT: It's admitted.
 4 MS. KEEFE: Thank you.
 5 BY MS. KEEFE:
 6 Q. So can you give us a little bit of
 7 a description of what iManage is and what this
 8 document describes?
 9 A. Sure. And I believe what I
 10 identified, a part of this manual that gives an
 11 overall summary of that. But iManage Desk Site
 12 if you pull out that little bit at the bottom.
 13 So this is using their own words.
 14 It's essentially a -- it's an enterprise-wide
 15 mission critical DMS or document management
 16 system.
 17 And this quote captures by, With
 18 iManage DeskSite, you can simplify the task of
 19 managing repositories of millions of documents
 20 and making them available to thousands of users.
 21 So here what we're talking
 22 about is -- this isn't like using your own
 23 personal computers where you're trying to manage
 24 your own files. This is all about how can we

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<p>1 actually create a system, a document management 2 system that will manage documents created by, 3 for example, people in your company, so we can 4 keep them in a safe and one place where all 5 those people can access all those documents. 6 And iManage, you know, in its own 7 flavor has a whole variety of functions that it 8 has. Now, I'm not going to walk through each 9 one of them, but it wants to bring your 10 attention in the last one where it says -- where 11 it tracks document usage and history because 12 that's the part of iManage that really spoke to 13 what we saw in the '761 patent. 14 Q. And so what do you -- what do you 15 understand that to mean? 16 A. Well, so in high-level terms, what 17 we're -- what iManage does, just as in Swartz, 18 it tries to track what people are actually doing 19 with their stuff as they -- you know, with one 20 or more documents as they do the work. 21 And when it says and history, it 22 means that we really want to create a record of 23 what's happening over time as people do the work 24 from different places with all these documents.</p>	<p>1 each other as a team or organization, that you 2 know what's happening to documents when and 3 where, and that you can actually go back and 4 review what's happened. 5 Q. Have you actually created some 6 graphics to help us understand how iManage 7 works? 8 A. Yes, I have. So what I'm going to 9 start with is a very -- is essentially -- well, 10 I'm going to start with what a user would see in 11 terms of the history system. 12 So remember that last thing says 13 that it tracks document use as a use and 14 history. And that is from the iManage manual. 15 Q. When you say "this", you mean the 16 box that we see here? 17 A. Yes. That window entitled history 18 - document. And I'm going to use this as a 19 context for explaining some of the inner 20 workings, because in the end this is a user 21 accessing some of the information. 22 So we see that at the top that 23 this window is referring to a particular 24 document underscored which is title 2.2.</p>
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<p>1 Q. And why would someone want to do 2 that? 3 A. Well, it's really important if 4 you're trying to figure out what happens in the 5 evolution of a document. So if you see the 6 terms above, we see create new version of 7 documents and check in and check out documents. 8 If you have people in an 9 organization working on a document, that this 10 could be like either a document for reading or 11 could be a program code, you often -- what 12 happens is that you will take a document, you 13 will check it out for your own use, so at any 14 time people know who has a copy of that 15 document. 16 You can create a new version of 17 it. And from that version, you can actually do 18 your own work and maybe somebody else will also 19 create a new version. And they'll do their own 20 work and maybe want to combine it at a later 21 time. 22 So all this is really part of how 23 do documents evolve over time? And it's real 24 important, if you're going to coordinate with</p>	<p>1 Document. And actually this references a 2 certain topic. In this case, the topic is 3 iManage Travel Policy. 4 And typically documents are 5 created with a topic in mind what we see at the 6 bottom is an example of the information that 7 iManage -- that is tracked on the histories of 8 that document. 9 So starting at the first row, we 10 see that initially we had a user whose name was 11 Bower. 12 Q. Now, where are you? Where are you 13 in the document? 14 A. The very first row right under 15 where it says -- so really it is the third line 16 of the window, the first highlighted line that's 17 highlighted in gray. Keep going. 18 Q. And just so our record is clear, 19 how do we know that we're in -- we're accessing 20 the history information of this iManage 21 document? Is there something on the bottom that 22 helps you with that? 23 A. Well, if you look at the tab on 24 the bottom right, it says History. And, in</p>

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<p>1 fact, the title bar says History.</p> <p>2 So this is the history and it's in</p> <p>3 the section of the manual titled History. So</p> <p>4 this is the History system.</p> <p>5 Q. Okay. So when you were talking</p> <p>6 about the first row, what did you want to have</p> <p>7 us know?</p> <p>8 A. Okay. So this is the -- kind of</p> <p>9 the after the fact. This is a user viewing some</p> <p>10 of the things that the system has tracked.</p> <p>11 So we see that in the first line</p> <p>12 that the system has tracked that there is a user</p> <p>13 named Bowen by their log-in name, using an</p> <p>14 application WinWord, which is likely Microsoft</p> <p>15 Word, has checked in a document at a certain</p> <p>16 time and has had that for a certain duration.</p> <p>17 That person hadn't printed out any</p> <p>18 pages from it. And it's at the location Bowen,</p> <p>19 which because it's the same as the name, I would</p> <p>20 assume is the user's computer; that they named</p> <p>21 their computer the same as their log-in name.</p> <p>22 And that the person has not added</p> <p>23 any comments. So that's kind of the very last</p> <p>24 thing that they did.</p>	<p>1 that says created from version one.</p> <p>2 And the next thing that they did</p> <p>3 is that they checked out that version from the</p> <p>4 Manage 32 system and then using WinWord or</p> <p>5 Microsoft Windows. They modified that version.</p> <p>6 So essentially -- well, what's</p> <p>7 happening is they're really -- as I would read</p> <p>8 this, they're starting with what's likely an</p> <p>9 empty document and they're adding, starting to</p> <p>10 create it.</p> <p>11 And then they -- after doing some</p> <p>12 work on it, they checked it back in. They're</p> <p>13 checking it back in from Microsoft Windows.</p> <p>14 Now, the reason we're seeing that</p> <p>15 for Microsoft Windows is that the iManage system</p> <p>16 also has parts of it that integrate with many of</p> <p>17 the standard Windows applications like Office,</p> <p>18 like Microsoft Window, Excel and those kinds of</p> <p>19 things.</p> <p>20 So what we have here is a history</p> <p>21 of what's happened to the document as people</p> <p>22 move between applications as they work over</p> <p>23 time, and also, although we see only one</p> <p>24 location here, it's also as they move across</p>
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<p>1 If you look at this list, it's</p> <p>2 kind of in reverse time order, the last -- very</p> <p>3 last thing they did at the top. Previous to</p> <p>4 that, they had -- they had that same user using</p> <p>5 WinWord, had actually modified the document.</p> <p>6 And before that --</p> <p>7 Q. And how do you know that?</p> <p>8 A. Well, because it says modified</p> <p>9 activities. The activity says modified.</p> <p>10 In fact, let me just flip the</p> <p>11 order of this. I think it will be easier to</p> <p>12 understand.</p> <p>13 Let's start with the bottom. So</p> <p>14 we -- here we see at the bottom Bowen user.</p> <p>15 Bowen using the Manage 32 system has created a</p> <p>16 new version of this document.</p> <p>17 Q. And what is a Manage 32 system?</p> <p>18 A. This would probably be an iManage</p> <p>19 document, the repository system itself.</p> <p>20 So it's a different context. They</p> <p>21 are using simply a different application.</p> <p>22 They're going to the iManage system and saying,</p> <p>23 I want to use -- I want to create a version.</p> <p>24 And, in fact, the person has added a comment</p>	<p>1 different computers or different locations. So</p> <p>2 all these define essentially context of work.</p> <p>3 Q. Have you created a graphic to</p> <p>4 demonstrate how the iManage system would work</p> <p>5 A. Yes, I have.</p> <p>6 Q. Would you please walk us through</p> <p>7 that?</p> <p>8 A. Sure. So here we have what we've</p> <p>9 seen before in that history system.</p> <p>10 We have in this case a person</p> <p>11 using Microsoft Word and that document and all</p> <p>12 the activities that happen around that really</p> <p>13 are what defines a context. So, as I mentioned,</p> <p>14 the iManage Desk Site system is actively</p> <p>15 integrated with most major Windows applications.</p> <p>16 So you can actually change Windows</p> <p>17 to interact with the iManage system that's from</p> <p>18 Page 125 of the reference manual.</p> <p>19 So we have a person comes in, if</p> <p>20 we animate. Oh, sorry. And at the bottom, we</p> <p>21 have the iManage library. And this is where</p> <p>22 things are stored.</p> <p>23 And here's a quote from Page 19 of</p> <p>24 the manual, that phrase that, What is an iManage</p>

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<p>1 library? And at the bottom, it says, Each</p> <p>2 iManage library is actually composed of these</p> <p>3 three parts a file server that stores the actual</p> <p>4 documents, a set of information tables in</p> <p>5 database that stores information about the</p> <p>6 documents, that's the metadata, and a set of</p> <p>7 index collections of the full text of documents</p> <p>8 in the library, which is used for searching.</p> <p>9 So this is -- if we animate again,</p> <p>10 that's the storage component. So all the</p> <p>11 activity that a person does in their first</p> <p>12 context -- in this case, they're using Microsoft</p> <p>13 Word creating a document -- in a certain</p> <p>14 location is captured by the iManage history</p> <p>15 system.</p> <p>16 Now, if you go on,</p> <p>17 It's stored in the library as part</p> <p>18 of that. In this case, it's part of that</p> <p>19 history record.</p> <p>20 And we actually see here some of</p> <p>21 the things that are attached to documents. And</p> <p>22 again, this is something -- some of the</p> <p>23 information captured by the system.</p> <p>24 We see that every document has a</p>	<p>1 of activity is actually captured and stored.</p> <p>2 And here's an example from Page 828 to 83.</p> <p>3 Some of the things that may be</p> <p>4 captured, things like opening a document,</p> <p>5 editing the document's profile, checking out,</p> <p>6 copying or checking in a document, whether</p> <p>7 somebody viewed it or whether somebody created</p> <p>8 new version.</p> <p>9 This is just a system sampling of</p> <p>10 the content information that can be tracked.</p> <p>11 And now if we go on, I think there's one more.</p> <p>12 The person can access that</p> <p>13 information from any time. We saw them</p> <p>14 accessing their history record from the history</p> <p>15 window. But I believe there's also means to</p> <p>16 access the document itself.</p> <p>17 Q. Are there particular features --</p> <p>18 so are the particular features of the system you</p> <p>19 just described applicable to the claims of the</p> <p>20 '761 patent?</p> <p>21 A. Well, yes.</p> <p>22 Q. Can you use Claim 1 as an example</p> <p>23 and walk us through it?</p> <p>24 A. Sure. So here's Claim 1.</p>
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<p>1 document profile record that includes things</p> <p>2 like the author of the document, the operator</p> <p>3 who or the user had entered into the library,</p> <p>4 the date it was created, the version number, the</p> <p>5 user who last edited it. So all these are being</p> <p>6 tracked by the system.</p> <p>7 Q. And what would -- is there a word</p> <p>8 in the '761 patent that would apply to what you</p> <p>9 just described?</p> <p>10 A. Yeah, so this is metadata. We're</p> <p>11 talking about capturing and storing metadata</p> <p>12 here.</p> <p>13 And now if we go on, I've shown</p> <p>14 before how the history window will track what</p> <p>15 people do across the different contexts. In</p> <p>16 this case, they move from one application</p> <p>17 setting where they're working on documents to</p> <p>18 another one.</p> <p>19 And in the manual itself on Page</p> <p>20 13, it says that one of the functions of the</p> <p>21 iManage system is to track document uses and</p> <p>22 history. So we saw that history window. This</p> <p>23 person had moved over to a different context.</p> <p>24 And if we go on. Then that kind</p>	<p>1 And we saw in the first part</p> <p>2 here -- well, first it says a</p> <p>3 computer-implemented network-based system.</p> <p>4 iManage -- first, it should say that iManage is</p> <p>5 network based and I believe I've identified a</p> <p>6 part of the manual that shows that.</p> <p>7 Do we have that? Yes, there it</p> <p>8 is.</p> <p>9 So here -- here's the way that</p> <p>10 iManage shows itself. We see a client-server</p> <p>11 relationship which is vernacular for -- for one</p> <p>12 application talking to another kind of -- sorry,</p> <p>13 one system using -- usually on a PC talking to</p> <p>14 another system called the server or the network.</p> <p>15 And we see that -- that we have</p> <p>16 all -- all these things are networked together.</p> <p>17 Essentially these little lightning bolts that</p> <p>18 says that we can access those stored across</p> <p>19 different cities or places. So the</p> <p>20 network-based system.</p> <p>21 Q. Just so the record is clear, where</p> <p>22 is this in the document?</p> <p>23 A. Well, this is Figure 1.1.</p> <p>24 Q. Thank you.</p>

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<p>1 Does the iManage documentation 2 include other elements from Claim 1? 3 A. Yes. So we then have in the first 4 element, it says the computer-implemented 5 context component. I've already described how 6 the history system can capture information that 7 happens within a certain application setting of 8 the document. That is, people are using with 9 this that setting or from particular locations. 10 We already talked about how it's 11 network based. And I've shown you how it 12 captures context information. We saw that in 13 that history window. 14 That is associated with 15 user-defined data which is the third line. When 16 the user-defined data -- in this case, the 17 documents they're working on, we saw that 18 Microsoft Word document. 19 Clearly the user is interacting in 20 a first context of a network-based system in 21 this case. iManage actually has many different 22 contexts that you could use. It talks about the 23 location the computer's using it on and the 24 things you're doing on that computer is one</p>	<p>1 A. It's very possible. So here this 2 is the section of the manual that says history 3 of document activity. This is what we're 4 talking about, the activities or metadata that 5 can be captured. 6 And it says displaying history of 7 document activity. And it says -- let me just 8 try to go to the bottom just above the bullet 9 point. The line says the types of activities 10 typically recorded in the document activity 11 record. 12 So this is of the history. Right, 13 the history system you saw are things like 14 opening and closing the document in an 15 integrated application that we saw an example of 16 that with Word, how long the document was open 17 whether the document's profile was edited, 18 changing the access rights of the document. 19 Q. What does that mean? 20 A. It means who can actually see, 21 read or edit the document usually. Printing a 22 document and how many pages were printed. 23 And this is, for example, if you 24 want to do an accounting and actually charge</p>
Page 1508	Page 1510
<p>1 possible context. 2 It talks about here's the 3 application. You're using the document. You're 4 using it in that application and the stuff 5 you're doing with in that. And that's another 6 example of a context. 7 Then if we go on, it says the 8 context component dynamically storing the 9 context information in metadata associated with 10 the user-defined data. 11 Now, we saw that in the history 12 list, the history list says here's the data. 13 That is the name of the file that we're working 14 on and here's all the activities that people are 15 doing on it. 16 Q. Is there a portion of the iManage 17 documentation that describes some of the other 18 metadata that may also be captured? 19 A. Yes. And I believe I've 20 identified that. 21 If we can bring that up. So this 22 is the part of the iManage manual and I can't 23 recall what page it's on. 24 Q. Could it be in chapter 3?</p>	<p>1 people for printing, that would be a use of 2 that. 3 Checking out, copying and/or 4 checking in the document. So that's who has 5 copies currently out. So that if I know that 6 you have a copy of a document out, maybe if 7 you're editing it, then I may not want to change 8 it, because otherwise we'll have two different 9 versions and it will enter into confusion. 10 Whether the document is viewed or 11 who's viewing it. Whether the document was 12 mailed, whether somebody created a new version 13 of the document. A computer location where the 14 activity took place. 15 Q. What does that mean? 16 A. It means essentially what computer 17 did you do all this activity from? So was this 18 from your home computer, your laptop, your 19 office computer, internet cafe? Where did you 20 do your work? 21 And finally, any comments the user 22 wanted to make about their own activities. So 23 this is a free-form field where you can put in 24 any information you want.</p>

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1 So really this captures a lot of	1 this history list is -- this history record is
2 information about what people are doing.	2 created on the fly.
3 Q. And what about the rest of the	3 As people do things, the system
4 elements of Claim 1?	4 will actually record all the events that they're
5 A. Well, let's go back to Claim 1.	5 doing. And then finally, it says, Wherein the
6 So we were -- where were we?	6 user can access the data from the second
7 Here?	7 context. And I have a slide here -- sorry, not
8 Q. I think.	8 a slide, but a part of the reference manual that
9 A. So we talked about capturing	9 I'd like to illustrate for this one.
10 context information. We're in the first	10 Yes.
11 element.	11 Q. Where are we in the document?
12 So we talked about what -- where	12 A. So we're on Chapter 3, Page 3,
13 are we? Okay.	13 Figure 3.26.
14 Q. I think we're at the part of the	14 So if we expand that. This is the
15 storage.	15 figure we've seen before, but now if you look at
16 A. So the context component	16 the very bottom, we're in the history tab. But
17 dynamically --	17 if you look over one, two, three left, we see
18 THE REPORTER: Could you please	18 something called Quick View.
19 slow down.	19 And Quick View is an ability to
20 THE WITNESS: Thanks. Keep	20 look at that document and read a read-only
21 reminding me.	21 version of that document. So here we have that
22 The context component dynamically	22 last part of that claim element where users can
23 storing the context information in metadata. We	23 access the data.
24 saw that associated with the user-defined data.	24 I should add that you can also
Page 1512	Page 1514
1 We saw that.	1 that -- iManage lets you do more. You can also
2 That's -- it's like -- that's the	2 manage the document version. And there's a tab
3 document people are using.	3 for that or even related documents or the
4 The user-defined data and metadata	4 profile of that document you can access.
5 stored on a storage component of the	5 Q. So after all of that, Dr.
6 network-based system. And early identified that	6 Greenberg, do you have an opinion regarding the
7 iManage has those storage components. In fact,	7 Swartz, the iManage publication and how it
8 that was also in that graphic that I showed up.	8 relates to Claim 1 of the '761 patent?
9 The second element talks about a	9 A. Yes, I do.
10 computer-implemented tracking component of the	10 Q. And what is that?
11 network-based system. And this is software	11 A. That the iManage reference manual
12 that's also part of the history system, because	12 discloses each and every element of Claim 1.
13 we saw how it could track what people are doing	13 Q. Do you have an opinion regarding
14 across computer locations, across applications	14 the iManage documentation vis-a-vis Claim 4 of
15 and, in fact, across many activities for	15 the '761 patent?
16 tracking a change of the user from the first	16 A. Yes, I do. So here we see -- I've
17 context to a second context.	17 mentioned this before in talking about Swartz,
18 And we saw that in the history	18 that this adds a relationship between the user
19 window where you could see the sequence of	19 and at least one of an application data and user
20 events, how people would do things in one place	20 environments is clearly disclosed in the history
21 and then they would actually do things in a	21 table.
22 different or separate context.	22 I've shown you -- we saw the user
23 We saw it. It was a network-based	23 -- we saw the application data, which is the
24 system and as well, this is dynamic, because	24 document name, user environment, things like the

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1 application they're using, and so on.
 2 Q. Do you have an opinion regarding
 3 claim four?
 4 A. Yes.
 5 Q. What is your opinion regarding
 6 claim four and the iManage reference manual?
 7 A. That the iManage reference manual
 8 discloses claim four.
 9 Q. And I'm sorry we have to go
 10 through this with such tedious, but the law makes
 11 us do it.
 12 Do you have an opinion regarding
 13 claim seven?
 14 A. Claim seven adds "where data
 15 created in the first context is associated with
 16 data created in the second context." We saw
 17 that again in the history system, where it was
 18 shown as a record of here's what happened at one
 19 step versus another versus another.
 20 So it shows a movement between
 21 these and thus the relationship.
 22 Q. What is your opinion regarding the
 23 iManage reference manual and claim seven?
 24 A. That the iManage reference manual

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1 discloses claim seven.
 2 Q. Do you have an opinion regarding
 3 claim nine?
 4 A. Claim nine.
 5 THE COURT: Let me interrupt
 6 before we go to claim nine. We'll take a break
 7 for fifteen minutes.
 8 MS. KEEFE: Thank you, Your Honor.
 9 THE CLERK: All rise.
 10 (The jury exited the courtroom at
 11 2:59 p.m.)
 12 THE COURT: Feel free to step
 13 down.
 14 Mr. Andre.
 15 MR. ANDRE: Your Honor, based on
 16 counsel representation, I had our expert fly in
 17 last night to be prepared to testify this
 18 morning, and obviously I don't think we'll be
 19 lucky to get this witness off the stand at this
 20 point, so do I have your permission to send him
 21 home?
 22 THE COURT: Ms. Keefe, how much
 23 longer do you think this will be?
 24 MS. KEEFE: It all depends on how

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1 long his cross is.
 2 THE COURT: How much time do you
 3 anticipate?
 4 MS. KEEFE: I hope to finish it by
 5 four o'clock. I think it will get faster at
 6 this point.
 7 THE COURT: We really need to have
 8 the doctor slow down.
 9 MR. ANDRE: They're going to have
 10 the rest of the claims, another reference, after
 11 this obviousness. If we get our witness up on
 12 the stand at all, it will be five or ten
 13 minutes. He flew from Pittsburgh to be here.
 14 I'd like to get him home.
 15 THE COURT: I think it's okay to
 16 let him go. We're going to start our prayer
 17 conference, so if we start a little earlier,
 18 that's fine. We'll see you at 3:15.
 19 (The proceedings reconvened at
 20 3:17 p.m.)
 21 THE CLERK: All rise. Court now
 22 in session.
 23 MR. RHODES: Your Honor, we were
 24 just talking about scheduling, and I think we

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1 can get it all done Monday. The only thing I
 2 want you to think about, if the first witness
 3 goes on and off and we go to late morning, then
 4 you instruct --
 5 THE COURT: Let's talk about this
 6 after we get through the evidence today.
 7 THE CLERK: All rise.
 8 (The jury entered the courtroom at
 9 3:18 p.m.)
 10 THE CLERK: Please be seated.
 11 THE COURT: Welcome back, and
 12 let's get started.
 13 MS. KEEFE: That's fine. Just --
 14 you don't need to put it back. Thank you,
 15 though.
 16 BY MS. KEEFE:
 17 Q. Dr. Greenberg, I think right
 18 before the break we were going to dive into the
 19 claim nine and apply it to the iManage Reference
 20 Manual.
 21 A. That's correct.
 22 Q. Do you have an opinion regarding
 23 claim nine and the iManage Reference Manual?
 24 A. Yes, I do.

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<p>1 Q. What is that opinion? 2 A. That iManage discloses each and 3 every element of claim nine. 4 Q. Why is that? 5 A. If we go through this, we see a 6 computer-implemented method of managing data 7 comprising computer-executable acts, so iManage 8 defines a computer system; therefore, it's a 9 computer-implemented method. 10 We see creating data within the 11 user environment of a web-based computing 12 platform. I believe I've identified some parts 13 of the iManage manual that show it's web based 14 if we could bring that up, so here's one part, 15 which is on -- 16 Q. Where are we in the document? 17 A. Unfortunately it's hidden by this. 18 Chapter three, page three. 19 It says "In order to send a 20 document URL link, your system must include an 21 iManage worksite web component server." So this 22 illustrates that iManage has web capabilities. 23 It's a web platform. 24 If we can go on, and there's</p>	<p>1 of claim nine? 2 A. Let's take a look. So it 3 continues in the first paragraph "via user 4 interaction with the user environment by a user 5 using an application." The data, in the form of 6 at least files and documents. 7 We've seen that before. We're not 8 talking about user environment. The Court has 9 defined the context to be the same as 10 environment. 11 Regardless of that, the iManage 12 system, all these contexts are user environments 13 where users do their work. 14 The next element says dynamically 15 associating metadata with the data, and we've 16 seen that before. We saw that in the history 17 list. 18 The data and metadata stored on a 19 storage component or a web-based computing 20 platform, which is the same as claim one, but it 21 now has web-based computing platform. 22 And we saw that the metadata 23 includes information related to the user, the 24 data, the application, and the user environment.</p>
Page 1520	Page 1522
<p>1 another one where it says here, on page 2 seventy-four, it says you can send a copy of a 3 document, a link of a document, or URL link of a 4 document through e-mail from iManage desk site. 5 The fact that you can send a URL to a document 6 also says that iManage must be web based. 7 Q. Anything else? 8 A. I believe there's one more, and 9 here it says -- in chapter six, page 10 fifty-seven, it says in the worksite box, you 11 can enter the URL for accessing the iManage 12 worksite in the base path field, and there's 13 further things that talk about sending document 14 to URL link or sending folder to URL link. 15 Q. Was there a figure that showed 16 that in the reference manual? 17 A. Yes. Well, it doesn't show this. 18 It shows another capability where we see that 19 iManage itself, in fact, has an address bar, and 20 this is where it says web URL. That's directly 21 from their lineage, so you can access things from 22 the web, so yet again shows capabilities of a 23 web-based platform. 24 Q. What about the remaining elements</p>	<p>1 And again we saw that before as part of the 2 history record as well as the documents that 3 list what iManage can do and there it all is 4 right there. 5 So if we can go on -- 6 Q. What about the remaining elements 7 of claim nine? 8 A. Back to claim nine. So now we're 9 at the third element or third paragraph, where 10 it says "tracking movement of the user from the 11 user environment of the web-based computing 12 platform to a second user environment of the 13 web-based computing platform." 14 This is all things we've seen 15 before except that it uses different words, 16 "user environment," that we addressed, 17 "web-based computing platform" that we 18 addressed, so this is all covered. 19 Q. What about the last section? 20 A. Again very similar to what we've 21 seen before. 22 "Dynamically associating the 23 stored metadata with an association of 24 the data, the application, and the</p>

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<p>1 second user environment, wherein the</p> <p>2 user employs at least one of the</p> <p>3 application and the data from the second</p> <p>4 user from the second environment."</p> <p>5 And again this is all things we've</p> <p>6 seen before. We saw that in the history record,</p> <p>7 I've shown how you can access information</p> <p>8 through these tabs on the bottom of the history</p> <p>9 window. I've shown how you dynamically update</p> <p>10 the stored metadata as part of this history</p> <p>11 record.</p> <p>12 Q. So what is your opinion regarding</p> <p>13 claim nine and how it applies to the iManage</p> <p>14 Reference Manual?</p> <p>15 A. That iManage discloses each and</p> <p>16 every element of claim nine.</p> <p>17 Q. Do you have an opinion regarding</p> <p>18 claim eleven?</p> <p>19 A. Yes, I do.</p> <p>20 Q. What is that?</p> <p>21 A. That iManage discloses claim</p> <p>22 eleven.</p> <p>23 Q. What does claim eleven add to</p> <p>24 claim nine?</p>	<p>1 Q. With that, what is your opinion</p> <p>2 regarding how the iManage Reference Manual</p> <p>3 applies to claim eleven?</p> <p>4 A. My opinion is that iManage</p> <p>5 discloses what's in claim eleven.</p> <p>6 Q. Do you have an opinion regarding</p> <p>7 claim sixteen and how it applies to the iManage</p> <p>8 Reference Manual?</p> <p>9 A. Yes, this is one we haven't seen</p> <p>10 before, at least not in my testimony. It's the</p> <p>11 method of claim nine further comprising</p> <p>12 accessing the user environment by importable</p> <p>13 wireless device.</p> <p>14 Q. What does that mean?</p> <p>15 A. Well, it essentially means can we</p> <p>16 access the -- we can access all the stuff from a</p> <p>17 wireless device such as laptop or PDA or</p> <p>18 something like that.</p> <p>19 Q. What is your opinion regarding</p> <p>20 claim sixteen?</p> <p>21 A. That iManage discloses claim</p> <p>22 sixteen.</p> <p>23 Q. How does it do that?</p> <p>24 A. I brought an identified part in</p>
Page 1524	Page 1526
<p>1 A. Claim eleven adds "further</p> <p>2 comprising indexing content to the user</p> <p>3 environment such that a plurality of</p> <p>4 users can access the content from an</p> <p>5 associated plurality of user</p> <p>6 environments."</p> <p>7 Q. Where is that in the iManage</p> <p>8 Reference Manual?</p> <p>9 A. I showed a quote previously.</p> <p>10 We'll bring it up again.</p> <p>11 When the iManage system describes</p> <p>12 itself, it describes itself as having three</p> <p>13 distinct entities: A file server, a set of</p> <p>14 information tables, or database. And these, by</p> <p>15 the way, have indexes to them and then it also</p> <p>16 says a set of index collections to the full-text</p> <p>17 documents in the library.</p> <p>18 Q. Where is this in the iManage</p> <p>19 Reference Manual?</p> <p>20 A. This is chapter one, page</p> <p>21 nineteen. If you look at the bottom, it says</p> <p>22 these three components work together to organize</p> <p>23 and index your documents, so for emphasis of</p> <p>24 that.</p>	<p>1 the reference manual that talks about iManage</p> <p>2 portable, and if we look at the first paragraph,</p> <p>3 it says a portable mode of operation allows you</p> <p>4 to take an iManage desk site document management</p> <p>5 system on the road with you, and it helps you</p> <p>6 synchronize your work with the network.</p> <p>7 So this is around the year 2000</p> <p>8 and -- sorry. 1999. I can't recall the exact</p> <p>9 date, but at that time there was a lot of stuff</p> <p>10 about what we called road warriors. These are</p> <p>11 people who would work in the office and then</p> <p>12 would take their stuff on the road and access</p> <p>13 their materials from computers elsewhere, a</p> <p>14 portable computer, or wireless laptop computer.</p> <p>15 And what iManage has in this</p> <p>16 disclosure, it says that you can take your stuff</p> <p>17 on the road with you, and you can access -- not</p> <p>18 only will we let you work disconnected, but if</p> <p>19 you're connected at any time -- and that could</p> <p>20 be through your wireless device -- you would be</p> <p>21 able to access all the information as if you</p> <p>22 were wired.</p> <p>23 Q. And where in the iManage Reference</p> <p>24 Manual are we looking at?</p>

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<p>1 A. We're on the first page of chapter 2 eight.</p>	<p>1 one of these!</p>
<p>3 Q. What is your opinion regarding 4 claim sixteen and the iManage Reference Manual?</p>	<p>2 Q. Unfortunately we have to go 3 through each one so we know that each reference 4 applies to every element.</p>
<p>5 A. That the iManage Reference Manual 6 discloses the information in claim sixteen.</p>	<p>5 A. Okay.</p>
<p>7 Q. Do you have an opinion regarding 8 claim twenty-one and how it applies to the 9 iManage Reference Manual?</p>	<p>6 Q. What about the dynamic association 7 of the data and the application with the second 8 user workspace and the metadata?</p>
<p>10 A. Yes.</p>	<p>9 A. Again we've seen that before. We 10 talked about the history record shows the data 11 and the application and the second user 12 workspace, and that's stored as metadata.</p>
<p>11 Q. What is that?</p>	<p>13 Q. What about the user employing the 14 application and data from the second user 15 workspace?</p>
<p>12 A. That the iManage discloses what 13 each and every element of claim twenty-one.</p>	<p>16 A. Again we've seen that before. We 17 saw that we have a history record people can 18 see. They can actually bring up the document, 19 and they have other means for accessing versions 20 of that document.</p>
<p>14 Q. How is that?</p>	<p>21 Q. And finally, what about the 22 iManage Reference Manual's discussion of 23 indexing the data created in the user workspace 24 such that a plurality of different users can</p>
<p>15 A. Again we see the computer-readable 16 medium for storing computer-executable 17 instructions, and this is -- again iManage 18 Reference Manual describes a computer system; 19 therefore, one skilled in the art would know it 20 would be on a computer-readable medium for 21 storing computer-executable instructions. 22 And the system manages data and 23 then it says "creating data related to user 24 interaction of a user within a user workspace of</p>	
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<p>1 a web-based computing platform." 2 We talked about all this before. 3 The only difference is that it's a user 4 workspace. iManage gives a place for people to 5 do their work, so by definition it gives them a 6 user workspace, so that's covered. 7 The second element is dynamically 8 associated metadata with the data. We saw that 9 on the history system. The data and metadata 10 stored on the web-based computing platform, and 11 again we talked about all this before. 12 The metadata includes information 13 related to the user of the user workspace to the 14 data, to the application, and to the user 15 workspace. We saw that before in the history 16 record plus the section that describes what the 17 information captured. 18 Q. How about the tracking? 19 A. So we see tracking movement of the 20 user from the user workspace to a second user 21 workspace of the web-based computing platform, 22 and again we've seen that this is just now in 23 the context of a user workspace. 24 Do I have to read each and every</p>	<p>1 access the data via the metadata from a 2 corresponding plurality of different user 3 workspaces!</p>
<p>19 A. So we see tracking movement of the 20 user from the user workspace to a second user 21 workspace of the web-based computing platform, 22 and again we've seen that this is just now in 23 the context of a user workspace. 24 Do I have to read each and every</p>	<p>4 A. Again we've seen that before in 5 the previous claim about indexes, so this is 6 covered as well. 7 Q. What is your opinion regarding 8 claim twenty-one and the iManage Reference 9 Manual? 10 A. That -- that the iManage Reference 11 Manual discloses each and every element of the 12 claim twenty-one. 13 Q. What about claim twenty-three? 14 A. Claim twenty-three talks about a 15 computer-implemented system that facilitates 16 management of data. The iManage Reference 17 Manual talked about a computer-implemented 18 system. 19 Q. Does the iManage Reference Manual 20 have a computer-implemented context component? 21 A. Yes, it does, and in this case, it 22 also says it's of a web-based server. You can 23 access things from it via the web; therefore, 24 there has to be a server as well.</p>

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<p>1 Q. Does the iManage Reference Manual 2 disclose workspaces? 3 A. Yes, it does, and we already spoke 4 about user workspaces. 5 Q. What about capturing context data 6 associated with user interaction of a user while 7 in the first user workspace? 8 A. Yes, it does, and we talked about. 9 Q. What about the rest? 10 A. All this was spoken about 11 previously. It dynamically stores the context 12 data as metadata on a storage component. 13 In this case it's on a web-based 14 server, which it is, and data is associated with 15 data created in the first user workspace. 16 Q. What about the 17 computer-implemented tracking component of the 18 web-based server for tracking change in 19 information associated with a change in access 20 of the user from the first user workspace to the 21 second user workspace? Is that in the iManage 22 Reference Manual? 23 A. Yeah, it is. 24 Q. What about the rest?</p>	<p>1 claim twenty-five? 2 A. That the iManage Reference Manual 3 discloses claim twenty-five. 4 Q. With respect to claim thirty-one, 5 do you have an opinion? 6 A. Yes, this claim says that the 7 storage component stores the data and the 8 metadata according to at least one of a 9 relational or object storage methodology, and 10 we've seen that before in the description of 11 what iManage does. It actually talks about 12 databases. It talks about tables and things 13 like this. 14 Q. Where is that in reference manual? 15 A. I believe I identified it. 16 If we look at this here, there we 17 see the second one talks about information 18 tables or databases. We talked about the file 19 server and source of file. Files are objects, 20 so all that's covered. 21 Q. If we go back to the claim 22 language, and why does the mention simply 23 tables tell us that we have relational and/or 24 object storage methodology?</p>
Page 1532	Page 1534
<p>1 A. Essentially it's a rewording of 2 everything I've covered already. 3 Q. What is your opinion regarding 4 claim twenty-three as it applies to the iManage 5 Reference Manual prior art? 6 A. That iManage covers -- discloses 7 each and every element of claim twenty-three. 8 Q. Almost there. 9 What about claim twenty-five? Do 10 you have an opinion on claim twenty-five? 11 A. Okay. So claim 1025 is that the 12 context component capturing relationship data 13 associated with a relationship between the first 14 user workspace and at least one other user 15 workspace, and I've already described that, in 16 that people are working, user workspace, and 17 this is shown as part of the history system. 18 Q. Where is that? Here? 19 A. Yes. 20 Q. And here, for the record, would be 21 in figure 3.26; is that correct? 22 A. That's correct. We see that as 23 part of the user's view of the history. 24 Q. What is your opinion regarding</p>	<p>1 A. It said databases before, and it 2 said a table, so that's a relational database. 3 Q. What's your opinion regarding 4 claim thirty-one? 5 A. That iManage discloses claim 6 thirty-one. 7 Q. And finally, claim thirty-two. Do 8 you have an opinion regarding thirty-two? 9 A. Yes, I do. 10 Q. What is your opinion regarding 11 claim thirty-two and the iManage Reference 12 Manual? 13 A. iManage discloses claim 14 thirty-two. 15 Q. Why is that? 16 A. Here we have -- this speaks to the 17 Many2Many functionality of data and iManage as a 18 document management system. That's what it's 19 for. As I mentioned at the beginning, it says 20 so thousands of users can access millions of 21 documents and all the information within them. 22 This is for multiple people to access multiple 23 things. 24 Q. What is your opinion regarding</p>

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<p>1 claim thirty-two vis-a-vis the iManage Reference 2 Manual? 3 A. That the iManage Reference Manual 4 discloses what is found in claim thirty-two. 5 Q. Have you heard of the term 6 enabling reference or enables prior art? 7 A. Yes, I have. 8 Q. What does that mean? 9 A. It means that the description is 10 rich enough that one of ordinary skill in the 11 art could build a system that has those 12 characteristics. 13 Q. As far as the claims of the 761 14 patent -- just have those in mind -- is it your 15 opinion that the iManage Reference Manual is an 16 enabling reference? 17 MR. ANDRE: Objection, Your Honor. 18 Outside the scope of this expert's report. 19 THE COURT: We'll note the 20 objection. You may answer if you have the 21 question in mind. 22 THE WITNESS: Can you read back 23 the question, please, or restate the question. 24 BY MS. KEEFFE:</p>	<p>1 filed. 2 Q. Thank you. 3 Can we pull up the summary slide 4 again, please. We're getting there. I promise. 5 What is the third document that we 6 see under the second opinion? 7 A. The third document is a European 8 patent application, by EP 1087306 A2, and the 9 inventor is Hubert, and I believe this patent 10 was assigned to Xerox. 11 Q. Do you have an opinion regarding 12 the Hubert patent? 13 A. I do. 14 Q. What is that? 15 A. That Hubert discloses all but 16 claim sixteen of each and every element of -- 17 all but claim sixteen of the asserted claims of 18 the 761 patent. 19 Q. Can you please turn to DTX 0922 in 20 your binder. 21 A. I have it. 22 Q. Do you recognize that? 23 A. Yes, that is the Hubert patent. 24 MS. KEEFFE: Your Honor, I would</p>
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<p>1 Q. Do you believe that the iManage 2 Reference Manual is an enabling reference? 3 A. Yes, I do. 4 Q. Can you pull up the front page of 5 the patent and pull up the references cited 6 section, please. I think we're missing one from 7 the very bottom. The references cited are in 8 two places. 9 Dr. Greenberg, do you see the 10 iManage Reference Manual listed here? 11 A. No, I do not. 12 Q. So in conclusion, regarding the 13 prior art, iManage Reference Manual, what is 14 your opinion regarding the asserted claims of 15 the 761 patent? 16 A. So my opinion is that the iManage 17 Reference Manual discloses each and every 18 element of all of the certified claims of the 19 761 patent. 20 Q. And what does that mean for 21 validity of the 761 claims? 22 A. It means that the patent is 23 invalid. The ideas were expressed in this 24 publication well before the 761 patent was</p>	<p>1 move the DTX 0922 into evidence, please. 2 MR. ANDRE: No objection. 3 THE COURT: It's admitted. 4 BY MS. KEEFFE: 5 Q. Pull up the front page of the 6 Hubert patent. When was it published, 7 Dr. Greenberg? 8 A. If we look at it, we see the date 9 of filing is August 29th of the year 2000, and 10 it was published on March 28, 2001. That's at 11 the very top. 12 Q. What does that mean, date of 13 publication? 14 A. Well, this is the date -- 15 Q. Not a tricky question. 16 A. It means it's when it was 17 published. 18 Q. What -- does it mean is it 19 publicly available? 20 A. Publicly available, yes. 21 Q. What is the Hubert patent about? 22 A. The Hubert patent is actually 23 quite similar at a high level to what we saw 24 before with Swartz and with iManage. It was</p>

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<p>1 really about --</p> <p>2 Hubert was concerned as well with</p> <p>3 how can we track all the activities as people</p> <p>4 work across or within and between environments,</p> <p>5 in particular within documents and the data that</p> <p>6 they were using.</p> <p>7 Q. Before I move on, I realized I</p> <p>8 forgot to ask you another question about Hubert.</p> <p>9 Could you please turn to DTX 0604.</p> <p>10 A. I have it.</p> <p>11 Q. And what is that?</p> <p>12 A. This is the U.S. patent that was</p> <p>13 granted to Hubert, where it's essentially the</p> <p>14 same as the European patent application.</p> <p>15 MS. KEEFE: I would also move DTX</p> <p>16 0604 into evidence.</p> <p>17 MR. ANDRE: Your Honor, may I have</p> <p>18 one moment.</p> <p>19 THE COURT: Sure.</p> <p>20 MS. KEEFE: It relates back to the</p> <p>21 European patent application.</p> <p>22 MR. ANDRE: No objection, Your</p> <p>23 Honor.</p> <p>24 THE COURT: It's admitted.</p>	<p>1 conveys, as we see in the quote, that conveys</p> <p>2 document information, processing information</p> <p>3 pertaining to the processing of the</p> <p>4 metadocument, and metadata for indexes and</p> <p>5 retrieving the processing information.</p> <p>6 That's a bit of a mouthful. If we</p> <p>7 go on to the next slide, this is what we have</p> <p>8 here. So the idea in Hubert is that you have</p> <p>9 those documents, a thing called the</p> <p>10 metadocument. This is the picture on the right,</p> <p>11 figure one from his patent.</p> <p>12 And the idea is that the</p> <p>13 metadocument would contain data, but it would</p> <p>14 also contain metadata as well as the processing</p> <p>15 information, which is yet another form of</p> <p>16 metadata that captures all the things that</p> <p>17 people are doing to that document over time, and</p> <p>18 that information would be stored.</p> <p>19 Now, if we go on some more, Hubert</p> <p>20 talks about -- and this is a quote from him --</p> <p>21 "when metadocument is transmitted from source to</p> <p>22 source and processing information is created --"</p> <p>23 So this is -- the things that are</p> <p>24 done in a document, this is similar to a bee</p>
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<p>1 BY MS. KEEFE:</p> <p>2 Q. You were just talking about what</p> <p>3 the Hubert patent was about. Have you prepared</p> <p>4 some graphics to illustrate what Hubert was</p> <p>5 trying to accomplish?</p> <p>6 A. Yes, I have.</p> <p>7 Q. What was Hubert all about?</p> <p>8 A. Hubert was -- again he had a</p> <p>9 similar notion he had, that he wants to track</p> <p>10 how data or documents would move between</p> <p>11 different sources or different environments, so</p> <p>12 in this case, we're talking about context.</p> <p>13 If you look at the quote on the</p> <p>14 bottom, it says "In some organizations the</p> <p>15 document will be indexed and described</p> <p>16 in terms of important keywords and</p> <p>17 stored in a document-management</p> <p>18 repository where it may be accessed via</p> <p>19 an intranet or over the internet."</p> <p>20 So here we have the storage</p> <p>21 component as well. These are terms of Hubert.</p> <p>22 He talked about sources and environments. If we</p> <p>23 go on, Hubert came up with this idea, what he</p> <p>24 calls a metadocument, and this is an object that</p>	<p>1 traveling to a flower and picking up pollen. So</p> <p>2 this is his own words. It's rare you find</p> <p>3 metaphors like this in patents.</p> <p>4 He had this idea that the document</p> <p>5 would see all the things that would happen to</p> <p>6 it, would capture all the things happening to it</p> <p>7 in a certain source of environment, and move it</p> <p>8 across the network from one environment to</p> <p>9 another or from one context to another, that</p> <p>10 that information would spread to other places.</p> <p>11 It would keep on collecting pollen, so to speak,</p> <p>12 or knowledge as metadata that it would store.</p> <p>13 So if you go on, all that captured</p> <p>14 knowledge is essentially, as it says here on the</p> <p>15 quote, on the left is stored in the</p> <p>16 metadocument, and we have that captured in this</p> <p>17 figure on the right where you see stored data</p> <p>18 processing information, metadata that describes</p> <p>19 all the things that happen to this document in</p> <p>20 these different environments.</p> <p>21 Q. Are there other things in the</p> <p>22 Hubert patent that help illustrate this?</p> <p>23 A. If we look another figure two, so</p> <p>24 we see Hubert drew three different sources or</p>

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<p>1 environments, and again he uses the word</p> <p>2 environment or context interchangeably, which is</p> <p>3 defined as context by the Court,</p> <p>4 interchangeably.</p> <p>5 What we see in that little square</p> <p>6 if the bottom is the metadocument, which is</p> <p>7 seeing what's happening, what a person is doing</p> <p>8 in each location, and as you move that document</p> <p>9 from one source to another, one context to</p> <p>10 another, in this case, over the internet, it</p> <p>11 captures what goes on in those places as well,</p> <p>12 and it pollinates it, which means it makes that</p> <p>13 information available to those other sources.</p> <p>14 Q. Before I forget to tie one loose</p> <p>15 end, we mentioned Hubert filed his first patent</p> <p>16 in Europe?</p> <p>17 A. Yes.</p> <p>18 Q. And then he filed in the United</p> <p>19 States?</p> <p>20 A. That's correct.</p> <p>21 Q. Are the filings he made in Europe</p> <p>22 and the United States similar?</p> <p>23 MR. ANDRE: Objection. Outside</p> <p>24 the scope of his report.</p>	<p>1 of the elements.</p> <p>2 It says, "dynamically storing the</p> <p>3 context information in metadata associated with</p> <p>4 the user defined data." The user defined data</p> <p>5 and metadata stored on the storage component,</p> <p>6 this is what Hubert says. He says certain</p> <p>7 additional data called metadata is stored with</p> <p>8 the document.</p> <p>9 Metadata is simply data about</p> <p>10 data. Again similar words.</p> <p>11 If we keep going, 761 describes</p> <p>12 the tracking component for tracking a change of</p> <p>13 the user from a first context to a second</p> <p>14 context. Hubert says there is also a need for a</p> <p>15 system and method managing documents which</p> <p>16 tracks all of the information about what</p> <p>17 happened to a document during its whole</p> <p>18 lifetime.</p> <p>19 I guess there is a further need</p> <p>20 for a system and method of managing documents</p> <p>21 that can track a document's path of</p> <p>22 distribution, so by path we're talking about its</p> <p>23 movement from environment to environment,</p> <p>24 context to context. It's very similar language</p>
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<p>1 THE COURT: Objection noted.</p> <p>2 THE WITNESS: Except for the</p> <p>3 differences -- except for all the disclosures,</p> <p>4 the text, the figures are identical, yes.</p> <p>5 BY MS. KEEFE:</p> <p>6 Q. Are there particular features of</p> <p>7 the system disclosed by Hubert in the European</p> <p>8 patent application and the U.S.?</p> <p>9 Let me back up. Are there</p> <p>10 features in the Hubert reference that are</p> <p>11 comparable to the elements of the claims in the</p> <p>12 761 patent?</p> <p>13 A. Yes, there are.</p> <p>14 Q. And using claim one first as an</p> <p>15 example, can we walk through the language and</p> <p>16 compare it to the Hubert reference, please.</p> <p>17 A. Sure. Here's claim one.</p> <p>18 I think what I'd like to also do</p> <p>19 is I have a PowerPoint slide that -- like with</p> <p>20 Swartz, there's a lot of similar language that's</p> <p>21 used, so like in Swartz we saw that they used</p> <p>22 similar language.</p> <p>23 Well Hubert, it's also the same.</p> <p>24 Here's from the 761 patent from claim one, one</p>	<p>1 that Hubert uses.</p> <p>2 Q. Thank you. We now go back and try</p> <p>3 to apply the language you found in Hubert to</p> <p>4 claim one of the 761 patent, please.</p> <p>5 A. Sure. So we see a</p> <p>6 computer-implemented, network-based system.</p> <p>7 That's what Hubert is describing, that it's</p> <p>8 network based. Well, it's running over the</p> <p>9 internet, and we see the first element, a</p> <p>10 computer-implemented context component of the</p> <p>11 network-based system for capturing context</p> <p>12 information.</p> <p>13 Now I've identified places in</p> <p>14 Hubert that shows us if we could bring that up,</p> <p>15 so here we have page four of Hubert. It talks</p> <p>16 about the -- what's something that in part</p> <p>17 behaves as a context component. It says</p> <p>18 optional foot eighteen is shown in metadocument</p> <p>19 ten, and let me find the relevant part to it.</p> <p>20 To continue in this embodiment,</p> <p>21 foot eighteen is an embedded software program</p> <p>22 which generates and stores processing</p> <p>23 information for this, and associated metadata</p> <p>24 for indexing and retrieving the processing</p>

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<p>1 information, it follows by saying whenever the 2 metadocument is accessed or processed, the tool 3 generates a piece of processing information and 4 metadata to record that fact. And this is 5 exactly what a context component is supposed to 6 do.</p> <p>7 I should mention there's another 8 embodiment or method where this system, instead 9 of being part of the metadocument, is part of 10 the source or environment. Hubert has several 11 ways of describing a context component.</p> <p>12 Q. What about the remaining elements 13 of claim one?</p> <p>14 A. Let's take a look where are we.</p> <p>15 Q. We're at dynamically storing the 16 context information.</p> <p>17 A. That claim essentially says the 18 same thing, that information is captured and 19 stored as it happens.</p> <p>20 Then for the second element, it 21 talks about a computer-implemented tracking 22 component for tracking a change of the user from 23 a first context to a second context of the 24 computer-based system.</p>	<p>1 all this is happening on the fly and stored as 2 part of the document. So this is also disclosed 3 by Hubert.</p> <p>4 Q. And what about the final portion 5 wherein the user accesses the data from the 6 second context?</p> <p>7 A. Well, again, Hubert is all about 8 we have documents, and people should be able to 9 access that document and all the information at 10 any time. This is precisely what Hubert was 11 trying to do.</p> <p>12 Q. So what is your opinion regarding 13 Claim 1 of the '761 patent vis-a-vis the prior 14 art Hubert patent?</p> <p>15 A. My opinion is that Hubert 16 discloses each and every element of Claim 1.</p> <p>17 Q. Do you have an opinion regarding 18 Claim 4 of the '761 patent vis-a-vis the Hubert 19 patent?</p> <p>20 A. Yes, I do.</p> <p>21 Q. And what is that?</p> <p>22 A. So here we -- they add a 23 relationship between the user and at least one 24 of the application data and user environment.</p>
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<p>1 And I've identified a part in the 2 Hubert that shows this. Okay. So if we go 3 to -- let me see here.</p> <p>4 Okay. So at the end of that first 5 line, it says Source 32 includes a processing 6 program, if we can highlight that, and which 7 processes the document information by copying 8 the document text and storing it in a new 9 document.</p> <p>10 But most importantly, if you go to 11 the, let's see, the next line. Sorry, skip a 12 line. And it says a record of the fact that the 13 meta-document 20 was received at Source 32 is 14 stored as processing information and processing 15 information is part of the metadata. So this is 16 tracking the movement.</p> <p>17 We see that we have this 18 processing program that tracks the movement in 19 this case, the receipt of this document of the 20 second source. So there is one example of a -- 21 of a tracking component.</p> <p>22 Q. And what about the next portion of 23 the claim that talks about dynamic updates?</p> <p>24 A. Well, yes. As I mentioned before,</p>	<p>1 Q. And where is that in Hubert?</p> <p>2 A. I believe I've identified here -- 3 let's see. So if we look at the second 4 sentence, it says namespaces. It says each of 5 them is, more or less, dedicated to an 6 application or a domain.</p> <p>7 So it's talking about this as part 8 of the metadata model. Maybe I should start 9 from the beginning.</p> <p>10 It says clearly, part of the value 11 of the metadata model depends on namespaces and 12 some of these namespaces are associated to an 13 application or domain.</p> <p>14 Q. Dr. Greenberg, what is a 15 namespace?</p> <p>16 A. A namespace is a way to 17 essentially uniquely identify a set of data. So 18 in this case, the name space would say, Here are 19 things that happen within this application or 20 within this domain.</p> <p>21 So later on it's the last -- the 22 second to last line. It says suppose we want to 23 encode the identity of the reader, the rating he 24 or she gives an associated comment. So we --</p>

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<p>1 here we see that the system also will capture 2 the user and that's enough to satisfy that claim 3 element. 4 Q. So what is your opinion regarding 5 claims regarding this Claim 4? 6 A. That Hubert discloses Claim 4. 7 Q. Do you have an opinion regarding 8 Claim 7? 9 A. Sure. Claim 7 says wherein data 10 created in the first context is associated with 11 data created in the second context. 12 Now, remember, we talked about the 13 meta for -- of the bee carrying pollen from 14 place to place. So there's the association, 15 it's capturing -- the meta-document is capturing 16 not only what happens in one environment, but 17 also what's happening between environments as 18 things are moved around between these contexts. 19 Q. So what is your opinion regarding 20 Claim 7 vis-a-vis the Hubert prior art patent? 21 A. That Hubert discloses everything 22 in Claim 7. 23 Q. Do you have an opinion regarding 24 Claim 9?</p>	<p>1 A. Well, it's not all you need. It 2 certainly is one of skilled in the art would 3 know that. And I believe there's later 4 references I have that talk about it working 5 over at the -- over the web. So... 6 Q. What about the next element of 7 Claim 9? 8 A. Okay. So we have dynamically 9 associating metadata with the data. We saw that 10 Hubert had stored on the storage component. We 11 saw that. 12 We saw information related to the 13 user, the data, the application and the user 14 environment. I've actually covered that 15 already. 16 We saw this tracking of movement 17 and we have -- and that's already been 18 discussed. And we also saw the dynamic updating 19 stored metadata with all the other parts of that 20 element. 21 Q. And what about the last portion of 22 the user employing at least one of the 23 application and the data from the second 24 environment?</p>
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<p>1 A. Yeah. 2 Q. And what is that? 3 A. So here we have a 4 computer-implemented method. You know, Hubert 5 is a computing system, so it discloses that. 6 We talked -- in the first element, 7 now it talks about a user environment. You 8 know, in fact, Hubert uses that term and uses 9 the term environment. And so we have that. 10 Hubert is a web-based computing 11 platform. I've shown you that Hubert says it 12 runs over the internet. And I believe I have a 13 few other places. 14 Do I? I can't remember. 15 Let me see. 16 Q. So what are we seeing here in 17 Paragraph 9? 18 A. I -- this isn't -- I don't think 19 this is the right one. 20 Q. But Hubert is a system that works 21 over the internet; is that right? 22 A. That's correct. 23 Q. And so is that really all you need 24 to establish that element?</p>	<p>1 A. Yes. Well, this -- again, this is 2 the whole point of the system that as you -- you 3 can access your document at any time and see 4 what's happened to it. So clearly this is what 5 Hubert was all about. 6 Q. So what is your opinion regarding 7 Claim 9 and the Hubert prior art patent? 8 A. That -- that Hubert discloses each 9 and every element of Claim 9. 10 Q. Do you have an opinion regarding 11 Claim 11? 12 A. Okay. Let's take a look. 13 So this is the one that talks 14 about indexing the content of the user 15 environment. 16 Q. Does Hubert disclose indexing? 17 A. Yes, he does. 18 Q. Where is that? 19 A. So here we see in -- if you look 20 at the end of the second line or it's -- well, 21 there it says information pertaining to each 22 processing step is stored with the document 23 along with metadata for indexing and retrieving 24 the processing information.</p>

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<p>1 Q. So do you have an opinion 2 regarding Claim 11 vis-a-vis the Hubert patent?</p> <p>3 A. Yes, I do.</p> <p>4 Q. And what is that opinion?</p> <p>5 A. That Hubert discloses Claim 11.</p> <p>6 Q. Do you have an opinion regarding 7 Claim 21?</p> <p>8 A. Yes, I do.</p> <p>9 Q. And what is that?</p> <p>10 A. So that Hubert discloses each and 11 every element of Claim 21.</p> <p>12 Q. Why is that?</p> <p>13 A. Well, let's look at this again. 14 Hubert discloses a competing system. 15 So one skilled in the art would 16 know that's on the computer readable medium. 17 We've pretty well seen everything in the first 18 element with the exception that we're talking 19 about a user workspace. And again, we're 20 talking about a meta- document. 21 This is a place where people are 22 supposed to do their work. So, by definition, 23 this is a user workspace. 24 The second element talks about</p>	<p>1 going onto the next. That's the knowledge 2 that's being captured.</p> <p>3 Q. And what about the dynamic 4 association of the data and the application with 5 the second user workspace in the metadata?</p> <p>6 A. Yeah. So that's -- well, we saw 7 that this is -- we've actually covered all of 8 that before and we've -- I've also described how 9 the person should be able to access all that 10 from any context. It's the whole point of 11 Hubert.</p> <p>12 Q. And the last element of indexing?</p> <p>13 A. That's essentially a remix of what 14 I discussed previously. I've shown you the 15 index in regard to this does do indexing and 16 it's just been remixed into here. I think I 17 covered that in Claim 11.</p> <p>18 Q. Yes.</p> <p>19 A. Yes.</p> <p>20 Q. So what is your opinion regarding 21 Claim 21?</p> <p>22 A. That Hubert discloses each and 23 every element of Claim 21. 24 Q. I'm sorry. We're almost there.</p>
Page 1556	Page 1558
<p>1 dynamically associating metadata with the data. 2 We've seen that.</p> <p>3 That's stored on web-based 4 computing platform. We talked about this. This 5 is on the internet. It's stored.</p> <p>6 Q. What about the tracking of the 7 movement of the user from a first user workspace 8 to a second user workspace?</p> <p>9 A. Yes. We've already seen that 10 where, in fact, in Figure 2 you saw how it 11 actually tracks the movement of a person from 12 one source or environment, which is also their 13 user workspace. And it's over the internet. So 14 it's a web-based computing platform.</p> <p>15 Q. And we can remember Hubert best 16 because of the little bumble bee; is that right?</p> <p>17 A. Yeah. That's a whole tracking of 18 the movement thing. This whole idea of 19 pollenization, if you think of this little bee 20 going from flower to flower to flower, which in 21 this case would be user workspace collecting 22 stuff that's happened in each place and bringing 23 it to the next one and leaving it behind and 24 taking some more stuff that's happening and then</p>	<p>1 What about Claim 23? Do you have 2 an opinion there?</p> <p>3 A. Yes, I do.</p> <p>4 Q. And what is that?</p> <p>5 A. That Hubert discloses each and 6 every element of Claim 23.</p> <p>7 Q. And why?</p> <p>8 A. So now we're talking about a 9 computer-implemented system. Again, this is 10 back to the same thing. Hubert's talking about 11 a computer system.</p> <p>12 We now see a computer-implemented 13 context component of a web-based server. The 14 fact that you can access this information over 15 the internet would make it a web-based server.</p> <p>16 We saw the first user workspace 17 before. In fact, we saw all of this. All of 18 this was essentially covered on the previous 19 screens on my discussion. We saw capturing of 20 context data associated with user interaction.</p> <p>21 We saw dynamically storing the 22 context data as metadata on a storage. We saw 23 metadata being dynamically associated with data 24 created in the first user workspace.</p>

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<p>1 A. Misspelled. Okay.</p> <p>2 Q. Perfect.</p> <p>3 A. We created a table.</p> <p>4 Q. So here this is the code that</p> <p>5 tells the Facebook computer to create a table</p> <p>6 that can receive the metadata about the minifeed</p> <p>7 storage. So here we seem to have a table that</p> <p>8 has I think it's twelve entries. Does that</p> <p>9 sound about right?</p> <p>10 A. I trust you.</p> <p>11 Q. Can you -- I drew one of those,</p> <p>12 too. Anyway. Eleven or twelve, I think I lost</p> <p>13 track. One, two, three, four, five, six, seven</p> <p>14 --</p> <p>15 A. Eleven.</p> <p>16 Q. Eight, nine, ten, eleven. I get</p> <p>17 eleven.</p> <p>18 So this is the table you were</p> <p>19 talking about, so some information from the wall</p> <p>20 post was stored in the metadata, the context</p> <p>21 information about the wall post was stored in</p> <p>22 the wall table, and separately based on the</p> <p>23 action, not based on the data, but based on the</p> <p>24 action of posting, that's the tracking you were</p>	<p>1 Q. But we were talking about the</p> <p>2 wall, what you posted on the wall, how are you,</p> <p>3 Mary? Context information about that data was</p> <p>4 captured in the wall table; correct?</p> <p>5 A. And in the minifeed storage.</p> <p>6 Q. The fact that you post it was also</p> <p>7 captured, and what was posted is captured here</p> <p>8 in the minifeed storage table; is that correct?</p> <p>9 A. Correct. So these are two</p> <p>10 different ways in which metadata is updated when</p> <p>11 this particular event happened.</p> <p>12 Q. Now, you can go ahead and take</p> <p>13 that down.</p> <p>14 Can you pick up Exhibit PTX 906,</p> <p>15 please. I think this is a document that we were</p> <p>16 looking at before lunchtime. Can you go --</p> <p>17 sorry, just to put some context on it.</p> <p>18 This is the document about the</p> <p>19 photos.get, this is a document telling</p> <p>20 developers who are drafting code on -- to be</p> <p>21 used with Facebook's website how they would do</p> <p>22 that, right, so if they want to get a photo from</p> <p>23 Facebook and pull it on to their page, they</p> <p>24 would use the instructions from here, is that</p>
Page 811	Page 813
<p>1 talking about. Information is also entered into</p> <p>2 the minifeed table; is that correct?</p> <p>3 A. So these are both ways to update a</p> <p>4 metadata, correct.</p> <p>5 Q. But each one, so the wall table,</p> <p>6 though, holds information about the wall post,</p> <p>7 and the context information of that data, the</p> <p>8 wall post itself. And the minifeed story table</p> <p>9 keeps track of the fact that you did post, it</p> <p>10 says okay, John did this, he inserted something</p> <p>11 on to Mary's wall, and that's the metadata that</p> <p>12 we're going to do here; right?</p> <p>13 A. I mean, you know, two aspects are</p> <p>14 the same thing, because context information also</p> <p>15 refers to the actual action. In fact, there is</p> <p>16 a time at which you know this particular event</p> <p>17 happened, so it's -- I'm not sure that you can</p> <p>18 really tell content from the action. It's sort</p> <p>19 of an atomic action on deciding, I want to post</p> <p>20 this information and as a result the context</p> <p>21 component grabs some information, puts in the</p> <p>22 metadata, the tracking component, puts some</p> <p>23 information in the metadata, and the metadata</p> <p>24 gets updated.</p>	<p>1 right, something like that?</p> <p>2 A. That is something like that, yeah.</p> <p>3 Q. Can we go to the second page. And</p> <p>4 let's look at the paragraph that says FQL</p> <p>5 equivalent. Now, again, here, FQL was</p> <p>6 Facebook's version of the database language that</p> <p>7 we were talking about; is that right?</p> <p>8 A. Sequel, correct.</p> <p>9 Q. And what we have here is a way to</p> <p>10 grab some information from Facebook, from a</p> <p>11 table inside Facebook; is that right?</p> <p>12 A. Correct.</p> <p>13 Q. And in particular, I'm really bad</p> <p>14 with these. This one is going to say that it</p> <p>15 wants to select the information from the photo</p> <p>16 table; is that right?</p> <p>17 A. That's correct.</p> <p>18 Q. So this command would pick up</p> <p>19 information from the columns that we talked</p> <p>20 about before from the photo table; is that</p> <p>21 right?</p> <p>22 A. That is correct, with one</p> <p>23 exception that it will not return just one line,</p> <p>24 but multiple lines.</p>

Page 814	Page 816
<p>1 Q. Thank you.</p> <p>2 If a developer wanted to get</p> <p>3 information about wall posts instead of about</p> <p>4 uploaded photos, this command would change and</p> <p>5 it would say select with the appropriate column</p> <p>6 header strain from wall; is that right?</p> <p>7 A. That is actually -- I'm not sure</p> <p>8 if that is correct, because actually -- I mean,</p> <p>9 by analogy, the answer would be yes, but I'm not</p> <p>10 sure if you can actually do it, because there</p> <p>11 are certain things that you can see using FQL</p> <p>12 and certain things that you cannot see. But of</p> <p>13 course, for example, you could use other pieces</p> <p>14 of the API to extract that tracking information</p> <p>15 from the metadata and show it to a user.</p> <p>16 Q. Thank you.</p> <p>17 Dr. Vigna, can you put Claim 25</p> <p>18 back on the board, on the easel for me, please.</p> <p>19 A. Absolutely.</p> <p>20 Q. Thank you, sir.</p> <p>21 A. You're welcome.</p> <p>22 Q. Now, in Claim 25, I just had a</p> <p>23 question about a couple of small little things.</p> <p>24 Claim 25 starts out and first off,</p>	<p>1 Doctrine of Equivalents, I think that was the</p> <p>2 end of all of your analyses, you have to get</p> <p>3 through the whole thing first, find out if it</p> <p>4 infringes literally; in other words, does it</p> <p>5 have every single word of every single part of</p> <p>6 the claim, and then you have to do another</p> <p>7 analysis with the Doctrine of Equivalents.</p> <p>8 Is it your position that Facebook</p> <p>9 infringes under the Doctrine of Equivalents for</p> <p>10 the same reasons that it infringes literally?</p> <p>11 A. So, my opinion is that infringes</p> <p>12 literally, so that every element of the claim is</p> <p>13 directly mapped on an element of the Facebook</p> <p>14 system.</p> <p>15 Q. Please, go ahead.</p> <p>16 A. Okay.</p> <p>17 Q. And -- so I understand that.</p> <p>18 A. Okay.</p> <p>19 Q. And then you also said that</p> <p>20 Facebook infringes under the Doctrine of</p> <p>21 Equivalents.</p> <p>22 A. At least under the Doctrine of</p> <p>23 Equivalents.</p> <p>24 Q. And I'm asking you is it your</p>
Page 815	Page 817
<p>1 this is a dependent claim; right?</p> <p>2 A. Pardon?</p> <p>3 Q. Claim 25 --</p> <p>4 A. Yeah, it's a dependent claim.</p> <p>5 Q. And all that means is that in</p> <p>6 order for someone to infringe Claim 25, they</p> <p>7 have to find everything from Claim 23 plus; is</p> <p>8 that right?</p> <p>9 A. That is correct.</p> <p>10 Q. And that's what's meant by the</p> <p>11 language, the system of Claim 23, that's</p> <p>12 shorthand for all that other gobbledegook from</p> <p>13 23 would get replaced right here; right?</p> <p>14 A. Correct.</p> <p>15 Q. Then it goes on and it says the</p> <p>16 thing of 23 wherein the context component</p> <p>17 captures relationship data. What does the word</p> <p>18 "wherein" mean here? So the system of Claim 23</p> <p>19 what does that -- what does that word mean to</p> <p>20 you?</p> <p>21 A. To me it means in which, during</p> <p>22 which.</p> <p>23 Q. Thank you.</p> <p>24 Now, you talked a lot about the</p>	<p>1 position that Facebook infringes under the</p> <p>2 Doctrine of Equivalents for the same means that</p> <p>3 it literally infringes?</p> <p>4 A. Correct.</p> <p>5 Q. But under the Doctrine of</p> <p>6 Equivalents, in order for there to be</p> <p>7 infringement under the Doctrine of Equivalents</p> <p>8 don't you have to have at least one item of the</p> <p>9 claim that's missing?</p> <p>10 A. In fact, my position is that it</p> <p>11 infringes literally, because all the items are</p> <p>12 there. But if somebody had to find some</p> <p>13 difference, my position is at least would</p> <p>14 infringe under the Doctrine of Equivalents</p> <p>15 because those differences would be</p> <p>16 insubstantial. So that's what I was trying to</p> <p>17 convey. My clear position as expressed in my</p> <p>18 report is that there is literal infringement on</p> <p>19 every element of the claim. I just want to be</p> <p>20 really clear about it.</p> <p>21 And also I'm not a lawyer, I'm a</p> <p>22 computer scientist and my job is not to discuss</p> <p>23 exactly all the nuances of this, but what I</p> <p>24 wanted to convey is that these two systems are</p>

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<p>1 so similar that there is direct -- literal</p> <p>2 infringement and even if somebody would look at</p> <p>3 this and say well, this is not exactly the same</p> <p>4 thing of this other thing, substantially, or you</p> <p>5 know, the same thing, performing the same</p> <p>6 functioning, the same way to achieve the same</p> <p>7 result. So at least they infringe under the</p> <p>8 Doctrine of Equivalents. And that's my</p> <p>9 position. But, I mean, that's how I see this</p> <p>10 problem.</p> <p>11 I mean, it's just like the systems</p> <p>12 are so similar that even though somebody can</p> <p>13 considering that there is a flaw, at least there</p> <p>14 would be an equivalent. Maybe they're not exact</p> <p>15 copies, but they're close. If you look at two</p> <p>16 people and they look perfectly identical and</p> <p>17 they actually are perfectly the same, you say</p> <p>18 that guy is a clone here, they're too close,</p> <p>19 they look exactly the same. That's what's I was</p> <p>20 trying to convey with my statement.</p> <p>21 Q. And you used the same analysis</p> <p>22 from your literal infringement analysis and</p> <p>23 applied it to your Doctrine of Equivalents</p> <p>24 analysis?</p>	<p>1 MR. ANDRE: Objection, Your Honor.</p> <p>2 Calls for legal conclusion. He's not a lawyer.</p> <p>3 MS. KEEFFE: He has an opinion on</p> <p>4 contributory infringement and inducement of</p> <p>5 infringement.</p> <p>6 THE COURT: I think the door has</p> <p>7 been opened to it. I'm going to overrule the</p> <p>8 objection. You can answer the question.</p> <p>9 THE WITNESS: Can you repeat it?</p> <p>10 MS. KEEFFE: Absolutely.</p> <p>11 BY MS. KEEFFE:</p> <p>12 Q. So part of what I heard you</p> <p>13 testifying about earlier is one of the ways that</p> <p>14 you find that Facebook is infringing is by</p> <p>15 virtue of the fact that it has a terms of</p> <p>16 service that tells its users how to use the</p> <p>17 website; is that correct?</p> <p>18 A. Well, it's not just that. There</p> <p>19 are also help files and other documents that</p> <p>20 tell the user how to follow certain steps and to</p> <p>21 follow certain procedures in order to achieve a</p> <p>22 certain result.</p> <p>23 Q. So in other words, Facebook has</p> <p>24 the terms of service, and it has sets of</p>
Page 819	Page 821
<p>1 A. So what I did, my analysis</p> <p>2 convinced me that there is literal infringement.</p> <p>3 And then all the information that I gathered</p> <p>4 during my analysis, all the evidence, all the</p> <p>5 documents and the source code, and all the</p> <p>6 deposition, made me think that these two guys</p> <p>7 are clones. But if one shows up with a scar and</p> <p>8 the other guy doesn't have it, that's</p> <p>9 insubstantial. So at the very least, therefore,</p> <p>10 it's the Doctrine of Equivalents that can be</p> <p>11 applied. Nonetheless, I see them as clone,</p> <p>12 they're the same thing.</p> <p>13 Q. Did you see any scars on Facebook?</p> <p>14 A. Not really.</p> <p>15 Q. Now, Dr. Vigna, you also</p> <p>16 understand that the law requires for</p> <p>17 infringement there be just one actor that does</p> <p>18 all of the steps. In other words, you can't</p> <p>19 have -- you can't find infringement of a claim</p> <p>20 if one person performs half of the steps and a</p> <p>21 second person performs the other half, unless</p> <p>22 you can find some way to show that person A</p> <p>23 really made person B do everything else; is that</p> <p>24 right?</p>	<p>1 instructions that people could use if they</p> <p>2 wanted to know how to do certain things. Is</p> <p>3 that right?</p> <p>4 A. Correct.</p> <p>5 Q. And that through the combination</p> <p>6 of those things, if a user were to be infringing</p> <p>7 in your opinion, they would really be -- it</p> <p>8 would really be Facebook that's doing it because</p> <p>9 Facebook has told the user it has to use the</p> <p>10 website; is that right?</p> <p>11 A. Well, actually in my report, I say</p> <p>12 that Facebook infringes because there is very</p> <p>13 overwhelming evidence that Facebook's employee</p> <p>14 performed all the steps described in Claim 9.</p> <p>15 You're referring to the method claim, right?</p> <p>16 Q. Correct.</p> <p>17 A. I look at that, I show the example</p> <p>18 testimony, you can find in many of the testimony</p> <p>19 the positions that were captured that the</p> <p>20 employees of Facebook just does that stuff. And</p> <p>21 I know, again, I'm not a lawyer, but my</p> <p>22 understanding, okay, which is very superficial,</p> <p>23 I never took a class on the law system, but my</p> <p>24 understanding is that if the Facebook employees</p>

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1 are performing all the steps of Facebook	1 paragraph before?
2 provides, you know, encouragement, direction for	2 A. Yeah.
3 others to perform those steps, that is grounds	3 Q. Can you read the sentence for me
4 for infringement. Is that correct or not?	4 that starts "Although"?
5 Q. I'm talking about the second part.	5 A. "Although we provide rules for
6 Let's put the Facebook employees over here. So	6 user conduct and postings, we do not control and
7 let's just focus on the second part where	7 are not responsible for what users post,
8 Facebook is I think your words were directing or	8 transmit or share on the site and are not
9 controlling or encouraging --	9 responsible for any offense, inappropriate,
10 A. Encouraging, yeah.	10 obscene, unlawful, or otherwise objectionable
11 Q. -- the users's actions. Is that	11 content you may encounter on the site or in
12 right? And it's your opinion that Facebook	12 connection with any user content or third party
13 encourages, directs or controls the users	13 applications, software, or content."
14 through the terms of service and help files that	14 MS. KEEFE: Thank you, Dr. Vigna.
15 give instructions on how to use the website; is	15 That's all I have for you.
16 that right?	16 THE WITNESS: Thank you.
17 A. And also other documents. That	17 THE COURT: Redirect.
18 was interesting, the enthusiastic document that	18 REDIRECT EXAMINATION
19 was about politicians, hey, politicians, come to	19 BY MR. ANDRE:
20 me, use my tool to involve your users and when	20 Q. Hello, Dr. Vigna.
21 somebody will become a fan of you, everybody, so	21 A. Hello.
22 it was really trying to, you know, convince the	22 Q. Do you have your expert report
23 people to perform this action and use the system	23 with you up there?
24 and follow those.	24 A. Yes, I do.
Page 823	Page 825
1 Q. Kind of a marketing document,	1 Q. Would you open up your expert
2 please use me this way?	2 report and go to page 35 of your expert report.
3 A. Yeah.	3 A. Yes.
4 MS. KEEFE: Can we put up exhibit	4 Q. About midway through the page
5 628; please. P. P628, please. It should be a	5 you'll see a parenthetical there after the word
6 terms of service or a terms of use.	6 cookie. Do you see that?
7 Q. I think you have it in your	7 A. Yes.
8 binder.	8 MS. KEEFE: Objection. To the
9 A. PTX 1000 or 1001. Oh, you're	9 extent that Mr. Andre is going to either read
10 right.	10 from the record or Mr. Vigna is, it's going to
11 Q. So on this one, so this is a terms	11 be hearsay.
12 of use that Facebook has; correct? Can we go	12 THE COURT: Mr. Andre.
13 into -- I think it's the second page. Where did	13 MR. ANDRE: Your Honor, she opened
14 I put it in my binder? Hang on one second.	14 the doorway. She asked about him using Burp and
15 A. It says page two of eight, so	15 firebug before his report. This is evidence
16 maybe it is the second page.	16 that he actually did use those tools in writing
17 Q. I think it probably is. Hang on	17 this report. It just gives the cookie
18 one second. Nope, my bad, page six. Glad I	18 identification that he showed.
19 didn't make us read all of that. Right?	19 MS. KEEFE: Still hearsay, Your
20 A. Oh, yeah.	20 Honor.
21 Q. So if we go to page six. Can we	21 THE COURT: I'm going to overrule
22 please blow up the very first paragraph. No,	22 it and see where this one question goes. But
23 just the first paragraph.	23 we'll see where it goes.
24 Dr. Vigna, have you read this	24 BY MR. ANDRE:

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1 Q. Dr. Vigna, without revealing	1 asked earlier today if you used the tools
2 what's said there, do you see the I.D. where it	2 Firebug or Burp, similar tools when you wrote
3 says EG under cookie?	3 your expert report; correct?
4 A. Yes.	4 A. Yes.
5 Q. Where did you get that information	5 Q. And as you sit here right now, can
6 from?	6 you say if you did or did not use such tools?
7 A. From the analysis of the	7 A. Yes, I did.
8 interaction of the browser with Facebook	8 Q. Okay. That's all I needed.
9 website.	9 THE COURT: Is that it?
10 Q. Is that the same number of the	10 MR. ANDRE: No, on that
11 cookie that you would find when you were doing	11 questioning. Sorry.
12 the Interceptor program here?	12 BY MR. ANDRE:
13 A. Yes. I mean, the value would be	13 Q. In the demonstrations that you
14 of course different because a different user,	14 have done, the demonstrative exhibits, any of
15 but yes, that's the same thing.	15 the demonstratives that you have shown here in
16 Q. So does that indicate to you that	16 the last two days, did they help in any way to
17 you actually used the type of tools you	17 shape your opinion?
18 demonstrated here in Court yesterday and today?	18 MS. KEEFE: Objection, Your Honor.
19 MS. KEEFE: Objection, Your Honor.	19 A. The demonstratives --
20 Leading.	20 THE COURT: Hold on a second,
21 THE COURT: Sustained.	21 Doctor. Sorry.
22 BY MR. ANDRE:	22 Just briefly what's the basis for
23 Q. Turn to the next page, page 36 of	23 the objection?
24 your expert report.	24 MS. KEEFE: He's talking about the
Page 827	Page 829
1 A. Yes.	1 demonstratives he's created in the last few days
2 Q. And after the end of the first	2 forming an opinion that was supposed to be
3 paragraph there, do you see that?	3 disclosed three months ago.
4 MS. KEEFE: Objection, Your Honor	4 THE COURT: That's just a
5 Hearsay.	5 question. Overruled. I don't know if you can
6 MR. ANDRE: I haven't asked yet.	6 --
7 THE COURT: I'm sorry?	7 THE WITNESS: My answer is no, my
8 MR. ANDRE: I just want to know --	8 opinion is my report. And I made those
9 I'm asking him to testify what it says, I'm just	9 demonstratives afterwards to illustrate my
10 asking if he sees it.	10 opinion that was filed with my expert report.
11 THE COURT: I'm going to overrule,	11 Everything is here. This is the best I could
12 but let's hear what the next question is, after	12 do, you know, with hundreds of hours of work.
13 we hear whether he sees it.	13 So I don't think I need more.
14 MS. KEEFE: I'll stay here.	14 MR. ANDRE: Thank you. I have no
15 BY MR. ANDRE:	15 further questions, Your Honor.
16 Q. Do you see that, Dr. Vigna?	16 THE COURT: Okay. Thank you. You
17 A. Yes, I see that. I extracted this	17 may step down, Doctor.
18 information--	18 THE WITNESS: Thank you very much.
19 MS. KEEFE: Objection, Your Honor.	19 Should I leave this computer here?
20 Hearsay.	20 MS. KEEFE: Yes, please.
21 THE COURT: Sustained. Let's move	21 THE WITNESS: My computer?
22 on.	22 MS. KEEFE: No, you can take your
23 BY MR. ANDRE:	23 computer.
24 Q. All right. Dr. Vigna, you were	24 THE COURT: Do you need a couple

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1 couldn't do.

2 THE COURT: Overruled. He can

3 answer the question.

4 BY MS. KEEFE:

5 Q. Could Facebook actually design its

6 system so that the photo table did actually get

7 updated to reflect the fact that you had moved

8 over to my profile page?

9 A. Yes, you could do that.

10 Q. And why have you not done that?

11 A. Frankly, because it would just be

12 a mess.

13 Q. What do you mean by that?

14 A. It would like going and writing on

15 every book you had ever checked out that you

16 were moving around the library.

17 Q. You have created a graphic to

18 illustrate how that might happen?

19 A. Yeah, I did.

20 Q. What are we seeing here?

21 A. So each of the contexts are

22 different pages on the site. Just imagine

23 they're like different user profiles. And this

24 is the photo metadata, the green is the photo

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1 metadata.

2 Q. So the green box around the smiley

3 face is the photo metadata?

4 A. Yeah, for this example. And so if

5 I were moving around and we kept updating the

6 photo metadata, it would just like literally --

7 people moving around on Facebook all day long,

8 we would be like editing all these photos all

9 the time. And you know when you try to edit

10 something on your computer, it slows down a

11 little bit. We would be massively slowing down

12 the system, because every time people would be

13 moving around we would be like trying to change

14 all their photos. It would be expensive. It

15 would be inefficient. And it wouldn't even do

16 anything useful, so we don't do it.

17 Q. Is there ever a time when the mere

18 movement of a user from one say profile page to

19 another profile page will cause the photo

20 metadata in the photo table to be updated in any

21 way?

22 A. No.

23 Q. Would navigation, mere navigation

24 ever change that row in the photo table?

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1 A. No.

2 Q. Would visiting a friend's profile

3 without doing anything more ever change that row

4 in the photo table?

5 A. It would not.

6 MS. KEEFE: Your Honor, this is a

7 very good time for a break.

8 THE COURT: Let's take our

9 afternoon break at this time for fifteen

10 minutes. If you can show the jury out.

11 THE CLERK: All rise.

12 (Jury leaving the courtroom at

13 2:58 p.m.)

14 THE COURT: We'll be in recess.

15 (A brief recess was taken.)

16 THE COURT: I may have gotten

17 confused, but with Mr. Cox we're not going to be

18 showing source code?

19 MS. KEEFE: No, Your Honor.

20 THE COURT: I think I can not only

21 unseal the record, but open the courtroom;

22 correct?

23 MS. KEEFE: Yes, sir, Your Honor.

24 THE COURT: So ask the court

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1 security officer while we bring the jury in, you

2 can remove the papers and open the doors.

3 THE CLERK: All rise.

4 (Jury entering the courtroom at

5 3:15 p.m.)

6 THE CLERK: Please be seated.

7 THE COURT: Welcome back. The

8 witness can return to the stand.

9 MS. KEEFE: Thank you, Your Honor.

10 BY MS. KEEFE:

11 Q. Mr. Cox, what is a page view on

12 Facebook?

13 A. A page view is what we call it

14 when a user looks at a page one time.

15 Q. So would it be accurate to say,

16 then, that you made a page view by coming to my

17 profile page from your profile page?

18 A. Yeah.

19 Q. How many page views are there on

20 Facebook a day?

21 A. It's upwards of twenty billion.

22 Q. Was that billion with a B?

23 A. Billion with a B.

24 Q. How many -- and so again, a page

Page 882	Page 884
<p>1 basically a little piece of information that's</p> <p>2 stored on your browser, so the browser is like</p> <p>3 Internet Explorer, Safari, Firefox, the cookie</p> <p>4 is a little piece of information that gets</p> <p>5 stored on there by a website that you're</p> <p>6 visiting to make the site more usable.</p> <p>7 Q. Does Facebook use or interact with</p> <p>8 cookies?</p> <p>9 A. Yes, we do.</p> <p>10 Q. How does Facebook use cookies?</p> <p>11 A. We use cookies for authentication</p> <p>12 so you only need to log in one time and then you</p> <p>13 can use Facebook and Facebook knows that it's</p> <p>14 you. So if you go to Facebook and you're not</p> <p>15 logged in, it will ask you for your user name</p> <p>16 and password. A lot of sites do this. Once you</p> <p>17 enter your user name and password, we put a</p> <p>18 cookie which is kind of like a key on your</p> <p>19 browser so that as you're navigating through the</p> <p>20 site, we can know that you have a key.</p> <p>21 It's kind of like a museum where</p> <p>22 you go into the museum, you need to show your</p> <p>23 I.D. and pay and then they give you a key and</p> <p>24 you can use that key if there were locked doors</p>	<p>1 THE WITNESS: Yes.</p> <p>2 BY MS. KEEPE:</p> <p>3 Q. And so does Facebook do that?</p> <p>4 A. So we log page views in this big</p> <p>5 log which contains all the page views that</p> <p>6 happened in the system. A log is just a big</p> <p>7 file that you can add stuff to very, very</p> <p>8 quickly.</p> <p>9 Q. And what is that log used for?</p> <p>10 A. It's used for several things.</p> <p>11 It's used to analyze how the site is being used</p> <p>12 so we know if it's broken, or to find people</p> <p>13 that are acting maliciously like robots that are</p> <p>14 going and friending people. The way that we can</p> <p>15 ascertain and understand what's wrong is just</p> <p>16 looking for patterns that are malicious or</p> <p>17 erroneous or abnormal in the activity log.</p> <p>18 Q. Is information from those logs</p> <p>19 ever used to alter metadata in the photo table?</p> <p>20 A. No.</p> <p>21 Q. Is information from those logs</p> <p>22 ever used to update information in the wall</p> <p>23 table?</p> <p>24 A. No.</p>
Page 883	Page 885
<p>1 in the museum you would need a key to open them,</p> <p>2 that's kind of how we use cookies.</p> <p>3 The museum guard is the login</p> <p>4 screen and then we give you a key and you can</p> <p>5 use that key to visit the rest the site.</p> <p>6 Q. Does the cookie information have</p> <p>7 anything to do with the photo metadata table</p> <p>8 that we were talking about earlier?</p> <p>9 A. No, not at all.</p> <p>10 Q. Is information from the cookies</p> <p>11 ever used to update metadata in the photo table?</p> <p>12 A. No.</p> <p>13 Q. Is cookie information ever used to</p> <p>14 update information in the wall table?</p> <p>15 A. No.</p> <p>16 Q. Does Facebook track users using</p> <p>17 cookies?</p> <p>18 A. No.</p> <p>19 Q. Does Facebook track user movement</p> <p>20 from one location to another using anything</p> <p>21 other than cookies?</p> <p>22 MR. ANDRE: Objection, Your Honor.</p> <p>23 Calls for testimony, opinion testimony.</p> <p>24 THE COURT: Overruled.</p>	<p>1 Q. Is information from the logs ever</p> <p>2 used to update information in the mini-feed</p> <p>3 table?</p> <p>4 A. No.</p> <p>5 Q. A user can fan a page; is that</p> <p>6 correct?</p> <p>7 A. Yes.</p> <p>8 Q. How does that work?</p> <p>9 A. Well, first I should tell you</p> <p>10 that's called "like" now. It used to be called</p> <p>11 become a fan.</p> <p>12 Q. So how does a user like a page?</p> <p>13 A. So if the privacy settings allow</p> <p>14 it, there will be a like button on a page. A</p> <p>15 page can be a page for a sports team or a</p> <p>16 politician or a celebrity or a business. It can</p> <p>17 be a lot of things. A user will visit that</p> <p>18 page. There will be a like button on the page.</p> <p>19 They click the like button and it's done.</p> <p>20 Q. What information is recorded when</p> <p>21 a user likes a page?</p> <p>22 A. It's very similar to group</p> <p>23 membership, there is a table that stores the</p> <p>24 people that like the page. I think the table is</p>

Page 914	Page 916
1 Take a look at the second page, second full	1 MS. KEEFE: Objection. Beyond the
2 paragraph. It says right there, each page is	2 scope.
3 stored with an enormous amount of metadata.	3 THE COURT: Overruled.
4 Isn't that right, Mr. Wiseman?	4 THE WITNESS: I'm sorry. Can you
5 A. Let me just look through this.	5 ask that question again?
6 Yes, I see that.	6 Q. Sure.
7 Q. Now, you mentioned you worked on	7 If you fan a page, information is
8 photos; is that right?	8 going to be written in the user database where
9 A. That's right.	9 all these other tables are stored; isn't that
10 Q. And you talked about the different	10 right?
11 information that we heard earlier about what was	11 A. Correct.
12 stored in the photo table; is that correct?	12 Q. How about if you import a photo
13 A. Correct.	13 into a group?
14 Q. The user ID; correct?	14 A. Yes, there will be a change in
15 A. Right.	15 user database.
16 Q. Album ID?	16 Q. And the user database is
17 A. Yes.	17 maintained by Facebook; isn't that right?
18 Q. The creator?	18 A. Correct.
19 A. Yes.	19 Q. And we heard a little bit of talk
20 Q. All that information that's stored	20 about different contents on Facebook; is that
21 in the user database; isn't that right?	21 right?
22 A. It's stored in the photo table	22 A. Yes.
23 which is part of a larger database.	23 Q. Did you ever mention -- did you
24 Q. And you call it the user database;	24 ever hear of Mulligan?
Page 915	Page 917
1 right?	1 A. Yes, I have heard of that.
2 A. Yeah. It's one of many tables	2 MS. KEEFE: Objection. Beyond the
3 that are part of the user database.	3 scope.
4 Q. The other tables like the minifeed	4 MR. HANNAH: He was talking about
5 table are in there?	5 the photos and about how they're uploaded. And
6 A. Yes, there is a table called	6 this is actually directly related to the
7 minifeed.	7 technology that they use and I'm just going to
8 Q. And it's in the user database;	8 establish that --
9 right?	9 THE COURT: Okay. You said
10 A. Correct.	10 plenty.
11 Q. How about groups, there is a table	11 MS. KEEFE: Absolutely beyond the
12 for groups, too; right?	12 scope.
13 A. Yes, there is a table for groups.	13 THE COURT: I'm going to sustain
14 Q. That's in the user database; is	14 it. Move on.
15 that right?	15 BY MR. HANNAH:
16 A. Correct.	16 Q. That's all I have, Your Honor.
17 Q. So all these tables are all	17 Thank you.
18 maintained in the user database; is that right?	18 THE COURT: Redirect, Ms. Keefe.
19 A. The user database is basically the	19 MS. KEEFE: Just one second, Your
20 service that we use to query all these different	20 Honor.
21 tables.	21 THE COURT: Certainly.
22 Q. Right. So when you fan a page,	22 REDIRECT EXAMINATION
23 that's also stored in the user database, isn't	23 BY MS. KEEFE:
24 it?	24 Q. Can we pull up PTX 882 again for

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	Trial Volume 4
)	
)	
Plaintiff,)	
	)	C.A. No. 08-862-JJF-LPS
v.)	
)	
FACEBOOK, INC., a)	
Delaware corporation,)	
)	
Defendant.)	

July 22, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBYALKA, ESQ.
BY: JAMES HANNAH, ESQ.

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<p>1 THE COURT: You may.</p> <p>2 Ms. Keefe, how much further are</p> <p>3 you asking be read?</p> <p>4 MS. KEEFE: I read to the bottom</p> <p>5 of the page, Your Honor. I know that ends in</p> <p>6 the middle of something, so I'm not exactly</p> <p>7 sure, do you have another copy, I can pick a</p> <p>8 line.</p> <p>9 MR. HANNAH: Can I just ask if he</p> <p>10 was asked the following question and if he gave</p> <p>11 the following answer, Your Honor? I would like</p> <p>12 to move on.</p> <p>13 MS. KEEFE: Your Honor, I</p> <p>14 apologize. My objection would still stand.</p> <p>15 THE COURT: Mr. Hannah, if you</p> <p>16 want to read through to the top of, well, line</p> <p>17 two of 122, you may start at the point that you</p> <p>18 want to start.</p> <p>19 BY MR. HANNAH:</p> <p>20 Q. Mr. Bosworth, during your</p> <p>21 deposition, you were asked:</p> <p>22 "QUESTION: Has there been</p> <p>23 significant changes to minifeed since its</p> <p>24 launch?</p>	<p>1 THE COURT: On 121 to the end,</p> <p>2 there were several words.</p> <p>3 BY MR. HANNAH:</p> <p>4 Q. "QUESTION: Significantly.</p> <p>5 "ANSWER: Replacing one vague, one</p> <p>6 vague term for another vague term is not a way</p> <p>7 to -- unfortunately I don't know. I can think</p> <p>8 of no major structural changes. Whereas the</p> <p>9 description I just gave you would no longer</p> <p>10 apply today. The description I gave you for how</p> <p>11 it operated at launch applies today. There may</p> <p>12 have been other changes architecturally to</p> <p>13 tables, names, schemas, operations, objects,</p> <p>14 displays, but to the structure I talked about, I</p> <p>15 know of nothing."</p> <p>16 So, Mr. Bosworth, you knew why I</p> <p>17 asked if there had been any significant changes,</p> <p>18 you knew the answer to that question, didn't you</p> <p>19 during your depo?</p> <p>20 A. You were as vague when you asked</p> <p>21 it then as you are now. I think the question</p> <p>22 sounds the same now as it was then. I agree the</p> <p>23 definition of substantial. But there is</p> <p>24 obviously lots of things we added. You also</p>
Page 967	Page 969
<p>1 "ANSWER: Not that I know of.</p> <p>2 "QUESTION: So is it fair to say</p> <p>3 that it operates in substantially the same way</p> <p>4 as it did in October 2006?</p> <p>5 "ANSWER: For some definition of</p> <p>6 the word substantial.</p> <p>7 "QUESTION: Significantly.</p> <p>8 "ANSWER: Well replacing one</p> <p>9 vague, one vague term for another, the term is</p> <p>10 not a way to -- I don't know, I can think of no</p> <p>11 major structural changes. The description I</p> <p>12 gave you would apply today. The description I</p> <p>13 gave you today of how it operated at launch</p> <p>14 applies today. There have been other changes to</p> <p>15 tables, operations, objects, displays, but to</p> <p>16 the structure I talked about, I know of</p> <p>17 nothing."</p> <p>18 MS. KEEFE: Just one quick</p> <p>19 clarification, Your Honor. He misread a</p> <p>20 statement on lines 21 and 22.</p> <p>21 THE COURT: Yes. I know it was</p> <p>22 inadvertent, but he did, so let's read from line</p> <p>23 15 again, Mr. Hannah.</p> <p>24 MR. HANNAH: On 121?</p>	<p>1 kind -- I was referring in that deposition to</p> <p>2 some structure that I had described earlier, and</p> <p>3 that structure much like that I described</p> <p>4 earlier matches the description that I gave</p> <p>5 here. So yeah, I feel that still stands today.</p> <p>6 Q. Okay. Thanks.</p> <p>7 Now, let's be clear. The minifeed</p> <p>8 table, it stores information that -- it stores</p> <p>9 activity information of a user in a minifeed</p> <p>10 table; is that right?</p> <p>11 A. And that's correct.</p> <p>12 Q. And the minifeed table that's in</p> <p>13 the user database; isn't that right?</p> <p>14 A. Yes.</p> <p>15 Q. And you mentioned yesterday that a</p> <p>16 number of user actions that result in stories</p> <p>17 are displayed on the wall using the minifeed</p> <p>18 table; isn't that right?</p> <p>19 A. That's correct.</p> <p>20 Q. And that includes writing on</p> <p>21 someone's wall?</p> <p>22 A. Actually writing on someone's wall</p> <p>23 wouldn't be used in the minifeed table on that</p> <p>24 actual wall, writing on someone else's wall</p>

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1 would be, so yes, I want to be very precise.	1 to describe it, yeah, absolutely.
2 Q. So if I go to someone else's wall	2 Q. And falcon is still used today; is
3 and I write on their wall, I'm going to get an	3 that right?
4 action on my profile that says that I wrote on	4 A. Falcon is still used today for
5 their wall; right?	5 some things, although not for news feed.
6 A. That's correct.	6 Q. We'll get to that.
7 Q. And these actions also include	7 Now, the Q feed servers say they
8 joining a group; is that right?	8 would tail these falcon logs, they would store
9 A. That's correct.	9 that information in the memory; is that right,
10 Q. Fanning a page?	10 in a memory log?
11 A. Now called liking a page. I have	11 A. Yeah, not in the log, they would
12 been using the wrong language, but we just made	12 store it in memory, though. And I kind of
13 that change.	13 talked about memory yesterday as being this
14 Q. All these actions that are done	14 short-term thing that eventually dissolves, it
15 that are stored, those are all stored in the	15 is not permanent.
16 minifeed table on the user database; isn't that	16 Q. And then workers would come and
17 right?	17 they would aggregate that data; is that right?
18 A. Yes.	18 A. Yeah, there is a process called
19 Q. You also testified yesterday about	19 the worker.
20 a photo table. Do you remember that?	20 Q. And then the workers, they would
21 A. I do.	21 rank that data; is that right?
22 Q. Now, the photo table, that's also	22 A. That's correct.
23 stored in the user database; isn't that right?	23 Q. And then that data would get
24 A. That's correct.	24 written into the user database; is that right?
Page 971	Page 973
1 Q. Now, you mentioned yesterday that	1 A. Into a separate table called news
2 there is no interaction between the minifeed and	2 feed stories.
3 the photo table, but both these tables are	3 Q. So the news feed stories would
4 stored in the user database; is that right?	4 also be stored in the user database?
5 A. That's correct.	5 A. That's right.
6 Q. You also testified about a news	6 Q. Along with the photo table and the
7 feed. Do you remember that?	7 minifeed table?
8 A. Yeah.	8 A. I think the best way to think
9 Q. I'm going to get a little bit into	9 about it is you have a house with like a car and
10 the weeds on this, but I just want to be	10 a bike in it, and then it's got a blender in it,
11 precise. Now, in 2006 when news feed launched,	11 and those things aren't related but they're all
12 you were part of that launch; is that right?	12 stored in the house. So I think you're right,
13 A. I was.	13 these things are stored someplace.
14 Q. All right. Now, when news feed	14 Q. All in the user database?
15 launched, it was using Q feed servers; is that	15 A. They were different tables in the
16 right?	16 user database.
17 A. That's correct.	17 Q. Now, there was a change to the
18 Q. And the Q feed servers, they would	18 news feed in 2008; is that right?
19 tail what are called falcon logs; is that right?	19 A. Yes.
20 A. They would tail falcon logs, yes.	20 Q. And that's when you started using
21 Q. Now, just to explain, falcon logs	21 multifeed; is that right?
22 is a way to log users' actions on the site; is	22 A. That's correct.
23 that right?	23 Q. And multifeed, they would tail the
24 A. Falcon logs are -- that's one way	24 falcon logs as well; isn't that right?

Page 1002	Page 1004
<p>1 information.</p> <p>2 So what is that? Well, we'll come</p> <p>3 to that. But it's not arbitrary information,</p> <p>4 it's context information. And as you'll see,</p> <p>5 context is really a synonym in this patent for</p> <p>6 what environment you're in, what virtual</p> <p>7 environment you're in, what web page you're on.</p> <p>8 So if the user is in some context,</p> <p>9 there is a context component of the system</p> <p>10 that's capturing this context information. And</p> <p>11 that context information is associated with some</p> <p>12 data that the user creates in this first</p> <p>13 context.</p> <p>14 So they're in some location. That</p> <p>15 location is the context and the user creates</p> <p>16 some data. So it's data created by user</p> <p>17 interaction, so I also want to circle that it's</p> <p>18 created.</p> <p>19 So the user is in this</p> <p>20 environment. They are in some context or</p> <p>21 location in this environment and they undergo</p> <p>22 some act of creation. So if you want to create</p> <p>23 examples, they perhaps create a new document and</p> <p>24 start typing a letter to their mother into it.</p>	<p>1 everywhere you see dynamically, you can swap in</p> <p>2 the lengthier but more precise expression,</p> <p>3 automatically and in response to the preceding</p> <p>4 events.</p> <p>5 What is the preceding events?</p> <p>6 There is only one candidate for it. There is</p> <p>7 only one thing that's happened so far which is</p> <p>8 the user has created some data in the first</p> <p>9 context.</p> <p>10 The context component has captured</p> <p>11 information about that context and they're going</p> <p>12 to automatically store this context component in</p> <p>13 metadata.</p> <p>14 As you probably know by now,</p> <p>15 metadata is sort of a very general computer</p> <p>16 science term that basically refers to</p> <p>17 information about information, sort of data</p> <p>18 about data.</p> <p>19 So, for instance, you know, as I'm</p> <p>20 sure you heard in some of the discussions</p> <p>21 already, if I have a photograph, a digital</p> <p>22 photograph, right, the digital photo, the file</p> <p>23 kind of containing the bits of the digital</p> <p>24 photograph itself, that we would consider data.</p>
Page 1003	Page 1005
<p>1 Okay. That's just one example.</p> <p>2 But so now we're starting to see</p> <p>3 the interleaving of steps by the system, steps</p> <p>4 by the user. The system is there. It has a</p> <p>5 context component. The user is in some</p> <p>6 context/location. The user then takes a step of</p> <p>7 creating some data. Okay? And that data, of</p> <p>8 course, being created in the first context of</p> <p>9 the network-based system, so on and so forth.</p> <p>10 Now, the context component is</p> <p>11 supposed to do something automatically in</p> <p>12 response to the mere creation of that new</p> <p>13 content or data by the user.</p> <p>14 So the context component then</p> <p>15 dynamically stores the context information in</p> <p>16 metadata. So that's a lot of words, I realize,</p> <p>17 but I think at the end of the day it's quite</p> <p>18 simple.</p> <p>19 So first of all there is this term</p> <p>20 dynamically, which I would imagine the jury has</p> <p>21 been told has been given a precise meaning by</p> <p>22 the Court. So it's a synonym for automatically</p> <p>23 and in response to the preceding event.</p> <p>24 So there is a reference, so</p>	<p>1 And then I might have metadata which is sort of</p> <p>2 annotations or additional information about that</p> <p>3 photo that I might want to keep around for</p> <p>4 various reasons, like how high quality is the</p> <p>5 photograph, what is its resolution, what are the</p> <p>6 intended width and heights that it should be</p> <p>7 displayed, so on and so forth, this would be</p> <p>8 what we would call metadata.</p> <p>9 So, you know, the sequence is the</p> <p>10 user is in this first context or environment,</p> <p>11 they create some data in that first context or</p> <p>12 environment, the context component silently</p> <p>13 without any further initiative by the user just</p> <p>14 in response to the act of creation then</p> <p>15 automatically stores metadata about the context</p> <p>16 right, so not about the data per se, but about</p> <p>17 the context, and automatically stores that with</p> <p>18 the data.</p> <p>19 So this is going to be stored with</p> <p>20 the user defined data. And this is just one of</p> <p>21 many places in the patent where it makes it</p> <p>22 clear that what happens is, you know, the user</p> <p>23 creates some data, the system automatically</p> <p>24 wraps up and stores with that piece of data the</p>

Page 1074	Page 1076
<p>1 So my first, you know, 2 disagreement here is that the Facelook 3 technology meets the condition that the metadata 4 he storing the context information as it's 5 clearly called for in the first item. 6 Okay. So let's move on. Right. 7 The tracking component is entirely absent. I 8 think this is perhaps the biggest hole in all of 9 this. There is no component of Facebook which 10 is there perpetually watching users navigate 11 from one page to another and then automatically 12 updating the metadata created in the first 13 context in response to that movement. It's just 14 entirely absent. It's just not there. 15 As an aside, I would just comment 16 there is a good reason it's not there. It would 17 be horribly impractical. They have 18 500,000,000 users now, much of what users are 19 doing on Facebook is not uploading photos or 20 leaving contents, but they're just browsing 21 around. They're not taking any action other 22 than navigating through the system. And if 23 Facebook had to log perpetually all of that 24 navigation information and furthermore store it</p>	<p>1 THE COURT: Cross-examination. 2 CROSS-EXAMINATION 3 BY MR. ANDRE: 4 Q. Good morning, Dr. Kearns. 5 A. Good morning. 6 Q. My name is Paul Andre. I'm going 7 to ask you a few questions here. 8 A. Please. 9 Q. Let me just ask you a couple of 10 questions that just came up about the Yahoo for 11 Dummies and eBay for Dummies. Is that what 12 computer scientists like yourself use to build 13 software systems? 14 A. These books? 15 Q. Yeah. 16 A. Of course not. 17 Q. Okay. Who are they meant for? 18 A. They're meant amend for end users 19 who are, you know, not builders of systems, but 20 users of system. 21 Q. Right. Those books wouldn't teach 22 them how to build Yahoo!, for example? 23 A. They would not. 24 Q. And that wouldn't teach them how</p>
<p>Page 1075</p> <p>1 with the original data created back in the first 2 context or some previous context, they just 3 never would have been able to have a working 4 system of the scale that they have today. 5 So the tracking component is 6 entirely missing. That's doing this tracking 7 from one context to another. The dynamic 8 updating of the stored metadata based on the 9 change of context is, therefore, also missing. 10 And finally, you know, there is 11 no -- there is no requirement that the user when 12 navigating from that second context do anything 13 there? So this final step wherein the user 14 accesses the data from the second context is 15 also entirely missing. 16 Q. So in your opinion, you would 17 agree that there are some elements of that claim 18 that might be present on the Facebook system? 19 A. Right. 20 Q. But the ones that you identify are 21 the ones that are missing? 22 A. Correct. 23 MR. RHODES: Your Honor, thank 24 you.</p>	<p>Page 1077</p> <p>1 to build eBay? 2 A. They would not. 3 Q. You didn't do any type of 4 inspection of the back end of Yahoo! or eBay, 5 did you? 6 A. I did not. 7 Q. And you don't know the back end of 8 Amazon, either, do you? 9 A. I do not. 10 Q. Okay. Now, I noticed in your 11 testimony here with Mr. Rhodes that you didn't 12 really take exception with Dr. Vigna's analysis, 13 per se, the technical analysis. 14 A. Well, I think I disagreed with 15 many, many parts of it actually. 16 Q. I'm not talking about if I apply 17 the claims, I'm just talking about how the 18 system operates. 19 A. You know, in his use case, his 20 description of the end user's experience when 21 navigating through various Facebook pages is 22 accurate and easily verified. But, as I said 23 earlier, I think that what matters is the 24 implementation of what's under the hood.</p>

Page 1142	Page 1144
<p>1 A. Same comment to metadata. If you 2 define metadata to be sufficiently broad and 3 inclusive, then sort of updating any piece of 4 metadata is an update to all of the other 5 metadata.</p>	<p>1 I mean, it wasn't a term used very 2 often at that time?</p>
<p>6 Q. Right. So if we get the 7 definition of metadata of just data about data, 8 the broadest possible interpretation, then if 9 new metadata is added, then you update the 10 metadata?</p>	<p>3 A. I would say circa 2002-2003, we 4 were starting to see that term enter sort of 5 popular language. But, you know, a couple of 6 years before that, most people wouldn't have 7 associated that term with any specific kind of 8 technology.</p>
<p>11 A. Yeah. I would agree.</p>	<p>9 Q. All right. And Facebook itself 10 wasn't founded until 2004 and that's by far the 11 largest social networking site in the world?</p>
<p>12 Q. All right. Fair enough. 13 Now, your interpretation of the 14 claims, as you walked through them this morning 15 with Mr. Rhodes, is that essentially all four 16 independent claims all have essentially the same 17 meaning when it comes to the tracking aspect of 18 the claims; correct?</p>	<p>12 A. That's right. But things like 13 Friendster were around like a year or more 14 before that.</p>
<p>19 A. It seems to me, yes.</p>	<p>15 Q. I'll ask you one other question. 16 Do you have Claim 1?</p>
<p>20 Q. And you didn't offer an opinion 21 one way or the other regarding the dependent 22 claims, did you?</p>	<p>17 When you see the word right here 18 based on the change, the word based, that's what 19 I want to say.</p>
<p>23 A. I mean in my report, I think I 24 said brief things about them and the fact that</p>	<p>20 Do you interpret that as because? 21 A. In response to. 22 Q. So --</p>
<p>Page 1143</p>	<p>23 A. I see that as sort of reinforcing 24 the phrase dynamically in the Court's</p>
<p>1 since they're all dependent, you know.</p>	<p>Page 1145</p>
<p>2 Q. But I'm talking about today with 3 Mr. Rhodes, you didn't talk about the dependent 4 claim; others than the fact --</p>	<p>1 construction.</p>
<p>5 A. Not in any detail, sir.</p>	<p>2 Q. I understand. So that's your 3 definition in response to or because of?</p>
<p>6 Q. Okay. Now, early in your 7 testimony, you talked about the possible uses 8 for the invention of the '761 patent.</p>	<p>4 A. In response.</p>
<p>9 And you said it seemed to be 10 somewhat business related, but it could be for 11 other things as well; right?</p>	<p>5 Q. So if I wrote a book based on 6 George Washington's life, it's because I wrote a 7 book because George Washington lived?</p>
<p>12 A. Right.</p>	<p>8 A. I consider that to sort of be 9 taking what I'm saying out of context here. I 10 mean, we're talking about the patent. We're 11 talking about a precise series of steps to 12 implement my computer.</p>
<p>13 Q. And it could be for recreational 14 purposes, for example?</p>	<p>13 Q. I understand your definition. I'm 14 trying to get the word based.</p>
<p>15 A. There's no language in the patent 16 that would exclude that, sir.</p>	<p>15 A. Yeah. So the definition of based 16 that I would use here would be in response to.</p>
<p>17 Q. And back in -- I believe you said 18 you started one of the early social networking 19 courses there at Penn. That was 2003, 2004 time 20 period?</p>	<p>17 Q. In response to or because of?</p>
<p>21 A. That's right.</p>	<p>18 A. And again, taking that -- if you 19 take that and apply it to a book about George 20 Washington's life, that you can find examples, 21 as you can almost always with language, where 22 you know, interpretations are different. But 23 here I think it's in response.</p>
<p>22 Q. And that term didn't really gain a 23 lot of notoriety until probably after that; 24 right?</p>	<p>24 Q. And that's just interpretation</p>

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES,) Trial Volume 5
INC.,)
)
Plaintiff,)
) C.A. No. 08-862-JJF-LPS
v.)
)
FACEBOOK, INC., a)
Delaware corporation,)
)
Defendant.)

Friday, July 23, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
BY: JAMES HANNAH, ESQ.

Counsel for Plaintiff
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1 are the platform and the phone are actually	1 the truth, the whole truth and nothing but the
2 separate things?	2 truth so help you God?
3 A. No, that statement was going to	3 THE WITNESS: Yes, I do.
4 issues of finances and had nothing to do with	4 THE CLERK: Please be seated.
5 the technologies that was out. They would be	5 THE COURT: Good morning.
6 charged out and counted out within The Limited.	6 THE WITNESS: Good morning.
7 Q. Have you ever heard the phrase	7 DIRECT EXAMINATION
8 vaporware?	8 BY MS. KEEFE:
9 A. Yes.	9 Q. Good morning, Dr. Greenberg.
10 Q. What is it?	10 Could you please briefly run through your
11 MS. KOBIALKA: Objection, Your	11 education and your degrees for us?
12 Honor. This is beyond the scope of the cross.	12 A. So I received my bachelor of
13 THE COURT: I don't know where	13 science from the Gill University in 1976. I
14 this is going.	14 think it was quite a long time ago.
15 MR. RHODES: Thank you.	15 Sorry, 1980.
16 THE COURT: Okay.	16 Q. What was that degree in? You said
17 MR. RHODES: It's time to move on.	17 bachelor of science?
18 THE COURT: We'll move on.	18 A. Bachelor of science.
19 MR. RHODES: I thank you for your	19 Q. And was there a specialization?
20 indulgence.	20 A. That was in microbiology and
21 THE COURT: Okay.	21 immunology. I then received a diploma of
22 Mr. McKibben you can, step down.	22 education, that training for teaching.
23 THE WITNESS: Do I take this?	23 It was '78 my initial one. And
24 THE COURT: You can leave it for	24 in -- I received my master of computer science
Page 1388	Page 1390
1 counsel to remove.	1 in 1984 and my Ph.D. in computer science in
2 MS. KEEFE: Your Honor, we also	2 1988.
3 have more paper for the jury members, and we've	3 Q. And could you briefly run through
4 discussed it with opposing counsel, and I don't	4 your work history for us?
5 think there's any objections; is that right?	5 A. Sure. After I finished my Ph.D.,
6 MR. ANDRE: There's no objections.	6 I worked for the Alberta Research Counsel at the
7 THE COURT: So you want the	7 post-doctoral research where I was asked to
8 distribute the binders?	8 explore the area of computer support and
9 MS. KEEFE: May I, please?	9 cooperative work.
10 THE COURT: Let's do that now.	10 And shortly after --
11 MS. KEEFE: I tried to decide if	11 Q. Sorry. Just real quick, when you
12 it was afternoon or morning.	12 use the terms computer operative work; is that
13 THE COURT: Still morning.	13 what I heard?
14 MS. KEEFE: Good morning, Your	14 What is this?
15 Honor. At this time, Facebook would like to	15 A. Computer supported cooperative
16 call Dr. Saul Greenberg to the stand.	16 work. That's essentially how people and teams
17 THE COURT: You may do so.	17 can work together using computing technology.
18 THE CLERK: Please state and spell	18 Q. Sorry. Please keep going.
19 your name for the record.	19 A. Okay. Then shortly after that, I
20 THE WITNESS: Saul Greenberg.	20 was hired on at the University of Calgary as an
21 S-A-U-L G-R-E-E-N-B-E-R-G.	21 assistant professor.
22 THE CLERK: Do you swear the	22 And I was pretty fairly rapidly
23 testimony you will give to the Court and the	23 promoted through the rank to associate professor
24 jury in the case now pending before it will be	24 and then full professor. In fact, that's my

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<p>1 position today.</p> <p>2 I'm a full professor with computer</p> <p>3 science at the University of Calgary.</p> <p>4 Q. And what do you do as a full</p> <p>5 professor?</p> <p>6 A. Oh, lots of stuff. Primarily I do</p> <p>7 teaching, research and service.</p> <p>8 So teaching is, of course,</p> <p>9 teaching undergraduate computer scientists about</p> <p>10 the basic concepts in the field. But it also</p> <p>11 involves supervising and mentoring graduate</p> <p>12 students. So these are students who will become</p> <p>13 highly skilled professionals researching in</p> <p>14 their own right and perhaps professors in</p> <p>15 academics as well.</p> <p>16 For research, I work with my</p> <p>17 students. We investigate usually quite novel</p> <p>18 areas of technology.</p> <p>19 We try to -- to -- essentially to</p> <p>20 envision the future to try to make the future a</p> <p>21 better place with technology and to explore the</p> <p>22 possibilities of those.</p> <p>23 And with service, usually that</p> <p>24 involves helping the community as a whole. In</p>	<p>1 A. Well, around -- so I first got</p> <p>2 into this around 1980, '81. And at that time,</p> <p>3 technology was really designed for programmers</p> <p>4 or for people who spent a lot of time trying to</p> <p>5 figure out computing technology.</p> <p>6 And I was introduced to this</p> <p>7 concept of human computer cooperative</p> <p>8 interaction by one of my professors where it</p> <p>9 tried to really envision how we can create</p> <p>10 technology that's really for everyday people for</p> <p>11 everyday people performing their everyday work.</p> <p>12 And that's -- kind of sounds</p> <p>13 updated now, but because here we are in 2010 but</p> <p>14 back in 1980, that wasn't the case. Technology</p> <p>15 was really only available to highly skilled</p> <p>16 people or for people who spent a lot of time</p> <p>17 training themselves to understand the colloquial</p> <p>18 language of technology.</p> <p>19 Q. As a researcher, do you also write</p> <p>20 code?</p> <p>21 A. Oh, absolutely. So what -- the</p> <p>22 kinds of things that I tend to do in my job has</p> <p>23 a lot to do with designing new ways to think</p> <p>24 about technology.</p>
Page 1392	Page 1394
<p>1 this case, the academic community comes to some</p> <p>2 consensus about the quality of work that is</p> <p>3 worthy of acceptance and distribution to the</p> <p>4 rest of the community.</p> <p>5 So we do a lot of judging of</p> <p>6 things like papers, whether they're worthy for</p> <p>7 publications. I spend a lot of my time doing</p> <p>8 that.</p> <p>9 I do things such as judging other</p> <p>10 professors to see whether they should be</p> <p>11 promoted or not. So I'm often given --</p> <p>12 Q. Sorry. Is there a special area of</p> <p>13 computer science that you focus on?</p> <p>14 A. Yes, the area I work in is called</p> <p>15 human computer interaction, which is essentially</p> <p>16 designing and computing technology for human use</p> <p>17 for everyday people.</p> <p>18 And within that, I work in a</p> <p>19 subdiscipline called computer supported</p> <p>20 cooperative work. And we often call that CSU.</p> <p>21 So there is a bit of jargon for</p> <p>22 you. Or it's also more colloquially known as</p> <p>23 groupware.</p> <p>24 Q. Why did you get into that field?</p>	<p>1 And often the new ways that we</p> <p>2 want to do things don't really fit on a</p> <p>3 computing platform as they now exist. So we</p> <p>4 spent a lot of time -- and by we, I meant</p> <p>5 myself, my students, my post-docs, research</p> <p>6 assistants, essentially working at the low-level</p> <p>7 plumbing of system design where we spent a lot</p> <p>8 of time building systems, building the</p> <p>9 underlying architectures that will let us</p> <p>10 actually create a new way of envisioning</p> <p>11 computers.</p> <p>12 So, yes.</p> <p>13 Q. Have you been recognized with any</p> <p>14 awards in your field?</p> <p>15 A. Yes. I have several awards from</p> <p>16 some organizations. Starting with the most</p> <p>17 local, I have a university professorship from my</p> <p>18 own university, University of Calgary. And</p> <p>19 that's different from being a professor.</p> <p>20 It's essentially -- it's an award</p> <p>21 of distinction. It's recognized as my</p> <p>22 contributions to the field. And I'm still</p> <p>23 currently holding that.</p> <p>24 It's a five-year special</p>

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<p>1 recognition. It comes with finding and other 2 things.</p> <p>3 Within Canada, I have an award 4 from the computer -- I have to remember the 5 acronym. It CHCCS Society, which essentially 6 has recognized my research achievements in the 7 field. And that was, I think, in about 2005, 8 2006.</p> <p>9 But probably the one I'm the most 10 proud of is I'm what's -- I was elected as a 11 member of the ACM Chi Academy for essentially my 12 overall research contributions to the field. 13 And I should explain that ACM is the association 14 of computing machinery.</p> <p>15 It's -- essentially it's an 16 academic association that really takes care of a 17 bit of the academic stuff that happens, and not 18 only in North America, but internationally.</p> <p>19 And the Chi is the discipline that 20 I work with in computer human interaction. So 21 the ACM Chi Academy is essentially a peer 22 recognition by the group that there's certain 23 members in the discipline, thousands of 24 researchers in the discipline that should be</p>	<p>1 that we build.</p> <p>2 Q. Can you give us an example of 3 something that would be a groupware, a product 4 in the market today?</p> <p>5 A. Sure. There's -- in fact, I 6 suspect many members of the Court and jury has 7 already experienced this of these computers.</p> <p>8 So the small kind of things that 9 you use, like Instant Messenger or Skype, maybe 10 even email at one extreme is a type of 11 groupware. It lets you interact with other 12 people through the technology.</p> <p>13 But more broadly, there's more 14 enterprise-level systems that are really there 15 to try to support teams to pursue some task 16 where the -- you know, in an organizational 17 setting, there could be a team that's working 18 toward a goal.</p> <p>19 And they have, for example, a 20 whole bunch of documents that they're producing. 21 Maybe people are working across distributed 22 sites, so the technology will help them 23 communicate with each other. It will also help 24 them coordinate their activities, and as well it</p>
Page 1396	Page 1398
<p>1 recognized for their contributions in the area.</p> <p>2 And I received that in '95 -- in 3 2005. As I said, I'm very proud of that.</p> <p>4 Q. And you mentioned that groupware 5 was one of the words that can be used to 6 describe your particular special field of 7 computer science; is that right?</p> <p>8 A. That's correct.</p> <p>9 Q. And what is groupware?</p> <p>10 A. Well, groupware is the underlying 11 technology that -- it's essentially computing 12 systems that lets groups of people, teams 13 actually do their work, pursue their tasks 14 together.</p> <p>15 So the field of computer support 16 of cooperative work is really a much broader 17 thing. It looks at the design. It looks at the 18 implementation.</p> <p>19 But it also looks to see what 20 people do today. We actually go out in the 21 field. We watch what people do.</p> <p>22 And we try to use that and 23 influence our design. Groupware is the actual 24 technology. It's the system and all the time</p>	<p>1 will help them share and store all their 2 artifacts, their documents, those kind of 3 things, in a way that goes beyond what we can 4 currently do with our traditional computers that 5 are designed for one person to use them.</p> <p>6 Q. Have you ever created a groupware 7 product?</p> <p>8 A. Yes.</p> <p>9 Q. What was it called?</p> <p>10 A. We actually created a lot of 11 groupware products, and the typical way we work 12 in our lab is that we build our systems and we 13 write papers about them and then we almost 14 always try to place our systems online to give 15 them to others. We make them freely available 16 so other researchers can build upon our 17 platforms or try them out to see if what which 18 say is true.</p> <p>19 One of the systems we build is 20 team rooms. To give you a flavor of it, we did 21 that, I guess, in the early 2000s. Team rooms 22 was a system that essentially lets groups of 23 people create virtual rooms where you can create 24 a room around a topic of interest.</p>

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<p>1 One or more people can go in the 2 room, bring applications to the room, bring work 3 and documents and their own data. It's a real, 4 physical room that you work with a team. You 5 can leave stuff in there, and stuff stays where 6 it is.</p>	<p>1 the time you're working with us in this case? 2 A. Yes. 3 Q. And how much are you being paid? 4 A. \$450 an hour. 5 Q. Were you asked to perform any 6 tasks in this case?</p>
<p>7 People can come and go in it, and 8 everything they have in the room is available to 9 them. In a way it sets a context or environment 10 for them to do their work together over time.</p>	<p>7 A. Yes, I was. 8 Q. And what were you asked to do? 9 A. I was essentially asked to do two 10 different things.</p>
<p>11 Q. Just one last background question. 12 Have you ever been mentioned in connection with 13 any rankings in the computer industry in terms 14 of your papers or groupware?</p>	<p>11 The first was to look -- to 12 essentially compare the provisional application 13 filed by Leader with the actual 761 patent. 14 Everybody knows what I mean about the 761 15 patent?</p>
<p>15 A. Sure. One -- well, the way 16 academics are normally ranked is by the 17 publication. That's the corner of realm. It's 18 how we spread our ideas around.</p>	<p>16 Q. I think we heard about it a lot. 17 A. To the 761 patent. I was 18 essentially asked to compare the two to see if 19 the provisional application discloses each and 20 every element in the asserted claims of the 761 21 patent and to render an opinion as to whether it 22 does. And if it didn't disclose them, I believe 23 that Leader was not entitled to the filing date 24 of the provisional application.</p>
<p>19 There's two external sites that I 20 know that have ranked me. There's one site 21 called the HCR, human computer interaction 22 video. I don't go there. They collect the 23 papers of everything in my area. I'm listed as 24 I believe -- as think I'm the third from the top</p>	
Page 1400	Page 1402
<p>1 author on their top authors list, and this is of 2 thousands.</p>	<p>1 Q. Were you asked to perform another 2 task?</p>
<p>3 And more recently I just came back 4 from Microsoft, and they have a service there 5 called Microsoft academic search they just 6 released over the last recent period of time, 7 and if you go into their site and look up 8 human-computer interaction over the last ten 9 years, I believe I'm the third most ranked at 10 that one, and I'm the fifth one at HCR, and 11 these are done by external organizations I have 12 nothing to do with.</p>	<p>3 A. Yes. 4 Q. What was that? 5 A. The second task was to take the 6 761 and essentially to judge its novelty. That 7 is, to compare each and every asserted element 8 in the asserted claims of the 761 patent against 9 several references. That is, several 10 publications or systems that appeared before the 11 filing of the -- either the provisional and 761 12 patent.</p>
<p>13 Q. Thank you, Dr. Greenberg.</p>	<p>13 And if in fact the ideas in the</p>
<p>14 MS. KEEFE: At this time, Facebook 15 would like to proffer Dr. Greenberg as an expert 16 in the field of computer science.</p>	<p>14 761 patent appeared earlier, then it's not 15 novel, so that in the words, it means that the 16 patent would be invalid.</p>
<p>17 MR. ANDRE: No objection.</p>	<p>17 Q. Did you prepare a slide to show</p>
<p>18 THE COURT: So recognized.</p>	<p>18 the two things that you were asked to do?</p>
<p>19 MS. KEEFE: Thank you, Your Honor.</p>	<p>19 A. Yes, I did.</p>
<p>20 BY MS. KEEFE:</p>	<p>20 Q. I believe you already testified</p>
<p>21 Q. Dr. Greenberg, have you been</p>	<p>21 the first task. That's what's under the first 22 number there; is that right?</p>
<p>22 retained as an expert in this case?</p>	<p>22 A. That's right. So my first opinion</p>
<p>23 A. Yes, I have.</p>	<p>23 is the provisional patent application did not</p>
<p>24 Q. And are you being compensated for</p>	<p>24</p>

Page 1403	Page 1405
<p>1 disclose every element of the asserted claims of 2 the 761 patent.</p> <p>3 Q. And did you come to an opinion 4 regarding your second task, whether or not the 5 patent was valid?</p> <p>6 A. Yes, I did.</p> <p>7 Q. What was that?</p> <p>8 A. As you can see here, I compared 9 each asserted claim of the 761 patent to a 10 variety of references, and for the first three 11 there, we see U.S. patent 6236994. I'll call 12 this Swartz from now on. Swartz is the inventor 13 assigned to.</p> <p>14 Everything in the asserted claims 15 was in Swartz, and the iManage 6.0 reference 16 manual, and I again found all the ideas in the 17 asserted claims in each and every element of the 18 asserted claims in the iManage system.</p> <p>19 And I also looked at the European 20 patent application, EP 10873067 AT, which I'll 21 call Hubert, and I found each and every element 22 of the asserted claims in the Hubert patent were 23 in the 761 patent -- I should correct myself, 24 For Swartz and Hubert. That's each and every</p>	<p>1 So what materials you used and what documents 2 you relied on in coming up with your opinion.</p> <p>3 A. Sure. Should I start with the 4 provisional?</p> <p>5 Q. Let's start with the provisional. 6 What documents did you use in order to come to 7 your opinion that the provisional did not 8 disclose all of the elements of the final 9 patent?</p> <p>10 A. For the provisional, I looked only 11 at the provisional, and I compared all the 12 material, and I compared that extensively with 13 what was in the asserted claims of the 761 14 patent. I would look at, for example, claim 15 one, each one of the elements, and I would 16 search through the provisional application to 17 see if that idea was there.</p> <p>18 Q. And in order to understand what 19 the claims of the issued patent covered, how did 20 you do that? Did you have any documents that 21 educated you as to what the language of the 22 claims meant?</p> <p>23 A. Yes, the Court construed certain 24 terms that was in the 761 patent, so I followed</p>
Page 1404	Page 1406
<p>1 asserted claim except for sixteen.</p> <p>2 If you look at these patents in 3 combination with another patent called Ausems, 4 then claim sixteen, the idea is also there.</p> <p>5 Q. If I understand you correctly, 6 you're saying that all of the claims would be 7 invalidated by -- every claim except sixteen 8 would be invalidated by Swartz or iManage or 9 Hubert by themselves; is that correct?</p> <p>10 A. It's almost correct, except for 11 sixteen by Swartz or Hubert alone. iManage does 12 disclose claim sixteen.</p> <p>13 Q. And then for claim sixteen, would 14 claim sixteen be invalid as well?</p> <p>15 A. Well, I believe claim sixteen, if 16 you look at what's in the claim, it would really 17 be obvious to one skilled in the art to a 18 practitioner of the day.</p> <p>19 Aside from that, it would be 20 obvious in you combine the Ausems patent with 21 any one of the other patents.</p> <p>22 Q. We'll go into those with detail. 23 Before we do that, I'd like to 24 learn about how you went about your analysis.</p>	<p>1 that definition when they were there.</p> <p>2 If the Court did not construe or 3 define any terms, I went to the patent itself to 4 see if they provided a definition.</p> <p>5 If they did not provide a 6 definition, I used the definition that would be 7 known to one skilled in the art.</p> <p>8 These slides are bit of evidence 9 back up.</p> <p>10 Q. I think you were saying if there 11 wasn't a definition provided by the Court, you 12 used the patent itself to find the definition or 13 you used what one of ordinary skill in the art 14 would use.</p> <p>15 A. That's correct.</p> <p>16 Q. What is one of ordinary skill in 17 the art in computer science in this case?</p> <p>18 A. One of ordinary skill in the art, 19 as I believe, is somebody with a bachelor of 20 science in computing science or computer 21 engineering or equivalent and a couple years of 22 experience.</p> <p>23 I kind of know what students can 24 do as soon as they graduate, and you need a</p>

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<p>1 couple years experience to mature and understand</p> <p>2 what you do and how to build products within</p> <p>3 that.</p> <p>4 Because of the nature of the 761</p> <p>5 patent, they would have to have background in</p> <p>6 networking, in distributed systems, in</p> <p>7 weapon-based platforms, and a little groupware.</p> <p>8 Doesn't have to be extensive.</p> <p>9 Q. When you were doing your analysis</p> <p>10 regarding the other pieces of prior art Swartz</p> <p>11 and iManage and Hobert, did you use a different</p> <p>12 definition or different process for the claim</p> <p>13 terms?</p> <p>14 A. No, I used exactly what was</p> <p>15 construed by the Court then what the patent said</p> <p>16 and then failing that, what one of ordinary</p> <p>17 skill in the art would understand those words to</p> <p>18 mean.</p> <p>19 Q. So right now, Dr. Greenberg, I'd</p> <p>20 like to step us through your first opinion, the</p> <p>21 one regarding the provisional application, and</p> <p>22 whether or not the provisional application</p> <p>23 contains a disclosure of each and every element</p> <p>24 of the issued claims.</p>	<p>1 A. Well, as I mentioned, the law</p> <p>2 states that I have to confine myself to the</p> <p>3 provisional application. I am, of course,</p> <p>4 allowed to apply my understanding as one skilled</p> <p>5 in the art or as I would interpret one skilled</p> <p>6 in the art at the time of the filing, how they</p> <p>7 would understand the terms in the provisional</p> <p>8 application. As a matter of law, that's how it</p> <p>9 is.</p> <p>10 Q. What conclusion did you make when</p> <p>11 you started this analysis?</p> <p>12 A. The provisional application -- I</p> <p>13 have a graphic on this.</p> <p>14 The provisional application</p> <p>15 defines a whole variety of -- defines ideas in</p> <p>16 it. There is some stuff in it. When I compared</p> <p>17 it to the 761 patent, the 761 patent has</p> <p>18 substantially more material in it, and it's not</p> <p>19 just more words, but it has substantially new</p> <p>20 ideas, new parts of invention, that just don't</p> <p>21 appear in the provisional anywhere.</p> <p>22 Q. Doctor, before we move on, I</p> <p>23 notice you have claim numbers up there. Why did</p> <p>24 you choose those claims?</p>
Page 1408	Page 1410
<p>1 A. Yes.</p> <p>2 Q. I think you have an exhibit in</p> <p>3 your binder, P'IX 3. Can you turn to that.</p> <p>4 A. I see it.</p> <p>5 Q. What is that?</p> <p>6 A. This is the provisional</p> <p>7 application.</p> <p>8 Q. And again just for clarity, when</p> <p>9 you were doing your analysis comparing the</p> <p>10 claims of the issued patent to the provisional</p> <p>11 application, did you confine yourself to just</p> <p>12 those two pieces of paper?</p> <p>13 A. Yes, I did.</p> <p>14 Q. Why did you do that?</p> <p>15 A. My understanding of patent law is</p> <p>16 that for a patent to be entitled to the date of</p> <p>17 provisional application, the provisional</p> <p>18 application by itself has to disclose each and</p> <p>19 every element of the claim, and if it doesn't,</p> <p>20 the patent is not allowed to use the filing date</p> <p>21 of provisional application.</p> <p>22 Q. And so why didn't you look to</p> <p>23 anything else that was in existence at the same</p> <p>24 time?</p>	<p>1 A. Yes, because when you look at the</p> <p>2 ideas that are in the claims, those ideas are</p> <p>3 covered by the material added to the 761 patent</p> <p>4 and they're not in the provisional application.</p> <p>5 The provisional application does overlap with</p> <p>6 what's in the patent, but not in the ideas that</p> <p>7 are in the claims. That's all the new stuff</p> <p>8 that was added.</p> <p>9 Q. And why did you pick these</p> <p>10 particular claims?</p> <p>11 A. Well, my understanding is that</p> <p>12 these are the claims being asserted in the case,</p> <p>13 and that's where I focused my attention. Other</p> <p>14 claims may talk about what's in the provisional</p> <p>15 application, but that's not what's at issue</p> <p>16 here.</p> <p>17 Q. Did you analyze each and every one</p> <p>18 of these claims and compare it to what was</p> <p>19 disclosed in the provisional application?</p> <p>20 A. Yes, I did.</p> <p>21 Q. And what did you -- you said that</p> <p>22 there was some things in these claims that was</p> <p>23 not in the provisional application. What do you</p> <p>24 mean by that?</p>

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<p>1 A. Well, what I did was, I looked for 2 the ideas, what's in each one of the elements. 3 Can I find a match of the provisional 4 application? 5 So for example, at one level, are 6 the words there? At another level, if the words 7 aren't there, is the idea there? 8 There's some code included in the 9 provisional application. I looked at the code, 10 and I asked, does the code actually have any of 11 these words or ideas within it? 12 So that's how I did my comparison. 13 Q. Can you pull up a slide of claim 14 one, please. Just go to the patent itself and 15 show claim one. 16 So for example, this is claim one; 17 is that right? 18 A. Right. 19 Q. Now, are there -- what elements in 20 claim one are you talking about when you say 21 that there are ideas that are in the claim that 22 are not in the provisional application? 23 A. We see two major elements. We see 24 two paragraphs.</p>	<p>1 which is a little figure we see clearly. 2 So this is obviously important. 3 It's on the very front of the patent, and 4 there's -- on the left side we see this thing 5 called a context component and this thing called 6 a tracking component. This is part of the 761 7 patent. 8 Q. Are those figures in the 9 provisional patent? 10 A. This figure is not in the 11 provisional patent. There's no figures at all 12 in the provisional patent. 13 Q. Are there more figures in the 14 issued patent? 15 A. There's twenty or twenty-one. 16 However you count in the issued patent, there's 17 quite a lot more. 18 Q. Are there other differences 19 between, just facial differences between the 20 provisional patent application and the final 21 patent? 22 A. Well, the provisional application 23 is a lot shorter, for one thing. And I 24 actually --</p>
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<p>1 In the first, we see a 2 "computer-implemented context component for 3 capturing context information associated with 4 user defined data." One of the things I looked 5 for was a context component in the provisional 6 that captures context information. Is there 7 something there that's associated with user 8 defined data? 9 The second paragraph says there's 10 a computer-implemented tracking component for 11 tracking of change of the users from the first 12 context to the second context. I looked at the 13 provisional to see is there anything there that 14 tracks a user moving from one context to 15 another. 16 And the third thing, dynamically 17 updating the stored metadata based on the 18 change. I looked to see, first, is there any 19 notion of metadata and any notion of dynamically 20 updating the metadata on change. 21 Q. Is there anything in the patent 22 that talks about these things you're mentioning? 23 A. Absolutely. I believe the figure 24 on the face of the patent, that is Figure 1,</p>	<p>1 Q. Did you prepare a slide? 2 A. Yes. So here's a good 3 side-by-side comparison. 4 The provisional application, as I 5 mentioned, is quite a bit shorter. We see 6 there's nine and a half pages of text, plus 7 eight and a half pages of code. 8 And it's in quotes because I don't 9 actually know if it's working code or just 10 something that was written that never actually 11 ran. There's nothing in the application that 12 says that. 13 Whereas the final patent 14 application has 39 pages of text. You know, so 15 this is substantially more stuff in it. 16 The provisional has no figures to 17 illustrate a concept whereas the final patent 18 application has 22 figures. 19 I mention words like tracking, 20 context, context data, metadata. There's 21 absolutely no mention of the word tracking in 22 the provisional application. And in the final 23 patent application, tracking is an element of 24 every single asserted claim, and it's also</p>

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<p>1 described thoroughly in the specification. 2 In the provisional application, 3 there's no mention of context data or this idea 4 of metadata. Well, there is of storing 5 metadata. 6 There is one mention of metadata 7 that I'll talk about shortly. But there's no 8 mention of these terms of context data at all. 9 Whereas in the final patent, their 10 context data and metadata are in -- are elements 11 of each and every one of the independent claims. 12 And it's also claimed in the -- described in the 13 specification. 14 Q. And you mentioned that the 15 metadata is used once in the provisional, but 16 it's not used as -- the same way in the final? 17 A. And again, metadata is in each and 18 every one of the elements of the asserted -- of 19 the independent claims that are asserted in this 20 case. 21 Q. Can you describe for us some of 22 the examples of the description of context 23 components and context data that you found in 24 the patent itself? And I think you had some</p>	<p>1 provisional, I'd like you to walk us through a 2 little bit of how those elements are described 3 in the final patent application. 4 A. Sure. 5 Q. So I think you actually had some 6 slides that showed some portions of the patent 7 that describe these elements; is that right? 8 A. There is columns from the patent, 9 yes. 10 MS. KEEFE: Can you bring up 11 Columns 6 and 7? 12 BY MS. KEEFE: 13 Q. Does this look familiar? 14 A. Yeah. Yeah, it does. 15 Q. What is this? 16 A. So this is from Column 6 of the 17 patent. So here -- here we see it clearly says, 18 The system 100 also includes a context component 19 in association with the figures context to 20 monitor and generate context data associated 21 with data operations of the user in the first 22 context. 23 Essentially what this means is 24 that there, context component is monitoring what</p>
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<p>1 slides for that as well. 2 A. Sure. 3 Q. Column 6. 4 A. Well -- 5 Q. Oh, go ahead. Did you want to 6 talk about this? 7 A. Sure. Maybe we can just bring 8 them both up at the same time. Okay. 9 This just elaborates a little bit 10 more about what I said before. Tracking appears 11 zero times. Track appears zero times. 12 Metadata appears once. And as I 13 mentioned, not in the way it's used, access 14 appears twice. And whereas these terms are 15 really heavily used in the final patent. 16 They appear 64 times. So that was 17 back to the question of, you know, on the face 18 level, you know, are there stark differences. 19 And the answer is yes. 20 Q. Okay. So you mentioned that these 21 terms appear numerous times in the final 22 application? 23 A. That's correct. 24 Q. Before we dive into the</p>	<p>1 people are doing with their data and it's 2 generated context data captioning that 3 information. 4 Q. And is the same true with respect 5 to the tracking component you were mentioning in 6 the claims? 7 A. Yes, it is. 8 Q. Can we look at Column 7? 9 A. Yeah. So here's another excerpt. 10 And here at the bottom we see -- 11 let's see. So such user activities and data 12 operations in the one or more context of the 13 system 100 and movement of the user between 14 context are tracked using a tracking component. 15 So what this is talking about here 16 is that we have a tracking component in a bit of 17 the software that's actually watching what's 18 going on, that's watching how the user moves 19 from one context to another. And it's 20 captioning that as information. 21 Q. And is it your opinion that either 22 of these concepts, which are in all of the 23 claims, do they appear anywhere in the 24 provisional application?</p>

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<p>1 A. No. They don't appear whatsoever.</p> <p>2 And again, I have to stress, and I think this is</p> <p>3 really important, it's not just that the words</p> <p>4 don't appear, but the concept itself just isn't</p> <p>5 there in the provisional.</p> <p>6 Q. Is the process of moving between</p> <p>7 contexts, so moving from one context to another,</p> <p>8 discussed in the later -- in the later patent</p> <p>9 application, just that idea of movement, not</p> <p>10 just tracking?</p> <p>11 A. It's discussed in the patent.</p> <p>12 Yes.</p> <p>13 Q. Could you show Figure 2 again,</p> <p>14 please? How does Figure 2 show that?</p> <p>15 A. Well, there's also some associated</p> <p>16 text with this. I don't know if you can bring</p> <p>17 this side by side.</p> <p>18 Q. Column 7.</p> <p>19 A. That may be a bit -- can everybody</p> <p>20 see that?</p> <p>21 So here this -- this essentially</p> <p>22 describes the basic process that's handled by</p> <p>23 pretty well all of the asserted independent</p> <p>24 claims of the patent.</p>	<p>1 this -- actually the first question: Does this</p> <p>2 language appear in the provisional application,</p> <p>3 the language that you were just describing?</p> <p>4 A. No, it does not.</p> <p>5 Q. And does Figure 2 appear in the</p> <p>6 provisional application that you've been</p> <p>7 describing?</p> <p>8 A. They're -- not only does Figure 2</p> <p>9 not appear, there's nothing in the provisional</p> <p>10 application that even textually describes what's</p> <p>11 in Figure 2.</p> <p>12 Q. Aside from the exact language, is</p> <p>13 there any description using any language of the</p> <p>14 concepts that are disclosed in the paragraph</p> <p>15 that you've been talking about here?</p> <p>16 A. No, it's not. It's not in the</p> <p>17 description.</p> <p>18 It's not in the examples given,</p> <p>19 nor is it in the code that was provided.</p> <p>20 Q. So I think you've actually</p> <p>21 mentioned three things, if I remember right.</p> <p>22 You mentioned that the provisional application</p> <p>23 did not have any concept of metadata storage or</p> <p>24 updating; is that right?</p>
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<p>1 We have at the beginning here, you</p> <p>2 know, it starts user is associated with a first</p> <p>3 context. They do some stuff. You know, user</p> <p>4 sends application. They may perform data</p> <p>5 operations.</p> <p>6 That is the notion of context</p> <p>7 component. You know, watching what's going on</p> <p>8 and actually looking at this.</p> <p>9 But then we see the step 206,</p> <p>10 where it says the user changes context, and</p> <p>11 there's a text that describes it. It says at</p> <p>12 206, the user changes context from the first</p> <p>13 context to a second context. So there's the</p> <p>14 movement there.</p> <p>15 And then at 208, it says the data</p> <p>16 and applications are then automatically</p> <p>17 associated with the second context. So there's</p> <p>18 a consequence there.</p> <p>19 But we see this idea of user</p> <p>20 changing context is part of the general flow</p> <p>21 that's described in the '761 patent. And this</p> <p>22 is pretty well what happened with all of the</p> <p>23 independent claims being asserted.</p> <p>24 Q. And does a description like</p>	<p>1 A. That's correct.</p> <p>2 Q. In fact, can I get a --</p> <p>3 MS. KEEFE: Your Honor, may I</p> <p>4 approach behind to write on a white board? To</p> <p>5 put a white board up and write on it?</p> <p>6 THE COURT: You may.</p> <p>7 MS. KEEFE: So I apologize already</p> <p>8 for speaking from here. I'll be very loud</p> <p>9 before I go back over there.</p> <p>10 BY MS. KEEFE:</p> <p>11 Q. So I believe that you actually</p> <p>12 said that the first thing that you couldn't</p> <p>13 find -- and by the way, I'm only doing this</p> <p>14 because Dr. Greenberg says his handwriting is</p> <p>15 very bad.</p> <p>16 A. It's really bad.</p> <p>17 Q. I think you said the first concept</p> <p>18 that's all throughout all of the claims as well</p> <p>19 as the specification of the patent was the idea</p> <p>20 of metadata storage and updating; is that right?</p> <p>21 A. That's correct.</p> <p>22 Q. And then if I remember right --</p> <p>23 MR. ANDRE: Your Honor, objection.</p> <p>24 Counsel is leading. He can tell her what to</p>

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<p>1 write.</p> <p>2 THE COURT: Sure. Sustained.</p> <p>3 BY MR. RHODES:</p> <p>4 Q. What were the other two concepts</p> <p>5 that you did not find from the claims of the</p> <p>6 patent in the provisional application?</p> <p>7 A. Okay. So the other -- I am just</p> <p>8 going to bring the patent, just use the right</p> <p>9 language in front of me. So this is '761 here.</p> <p>10 So essentially the context</p> <p>11 component for captioning context. For caption</p> <p>12 context information.</p> <p>13 Q. Okay. And another?</p> <p>14 A. And the third one is tracking</p> <p>15 component for tracking a change of the user from</p> <p>16 the first context to a second context.</p> <p>17 Q. Does that look right?</p> <p>18 A. That's correct.</p> <p>19 Q. Okay. So I'd like to go through</p> <p>20 these with you one by one.</p> <p>21 A. Sure.</p> <p>22 Q. So why don't we take the first one</p> <p>23 first.</p> <p>24 Why do you think that there is no</p>	<p>1 paragraph right at the middle, we see the word</p> <p>2 metadata. If we can highlight that.</p> <p>3 There it is. So we see the</p> <p>4 context component dynamically storing the</p> <p>5 context information in metadata associated with</p> <p>6 the user-defined data. So that is the first</p> <p>7 place it appears.</p> <p>8 Essentially the context component</p> <p>9 is taking this information and it's storing</p> <p>10 it. And metadata, by the way, is just data</p> <p>11 about data. That's the Court's construction.</p> <p>12 That's the everyday use of the Court's</p> <p>13 construction, I believe.</p> <p>14 The second paragraph says metadata</p> <p>15 based on the change. So what this is talking</p> <p>16 about is that the tracking component is watching</p> <p>17 the person moving from one context to another,</p> <p>18 And as part of that, it takes that metadata, the</p> <p>19 stuff that was stored in the first context and</p> <p>20 is updating it again. Essentially is adding</p> <p>21 new.</p> <p>22 It's either changing the</p> <p>23 information or adding things associated with</p> <p>24 that information.</p>
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<p>1 description of metadata storage or update in the</p> <p>2 provisional application?</p> <p>3 A. Well, it's just not there. In</p> <p>4 fact, they -- the term metadata is used only</p> <p>5 once, and it's used as a description of what was</p> <p>6 available previously.</p> <p>7 And the way it's used is in a</p> <p>8 different way from the way it's described in the</p> <p>9 '761 patent.</p> <p>10 In fact, I have some -- I've</p> <p>11 highlighted some materials about that.</p> <p>12 Q. Actually, no, before we bring that</p> <p>13 up --</p> <p>14 A. That's not --</p> <p>15 Q. No. No, before we bring that up,</p> <p>16 so with metadata, I just want to track up and</p> <p>17 make sure this concept is very clear.</p> <p>18 Where does metadata storage and</p> <p>19 update -- in fact, let's bring up Claim 1 again.</p> <p>20 Where does metadata and storage</p> <p>21 appear in Claim 1?</p> <p>22 A. Okay. So it appears in -- let's</p> <p>23 take a look at this.</p> <p>24 So if we look at the first</p>	<p>1 Q. Is this an important context in</p> <p>2 the claim?</p> <p>3 A. Well, absolutely. It appears in</p> <p>4 every -- as I mentioned, it appears in every one</p> <p>5 of the asserted independent claims.</p> <p>6 And it's talked about extensively</p> <p>7 throughout the patent. Essentially it says in</p> <p>8 computer science terms, it says, this is a</p> <p>9 method by which we will take this information</p> <p>10 and we'll structure it and store it for later</p> <p>11 access and use.</p> <p>12 Q. Can you show us where the concept</p> <p>13 of metadata is in Claim 9, please?</p> <p>14 A. Sure. Let's move to Claim 9.</p> <p>15 It's -- we'll see that there's --</p> <p>16 it's all very similar, although the wording</p> <p>17 around it is somewhat different. So, again, in</p> <p>18 the middle, we see dynamically -- well,</p> <p>19 beginning of the second paragraph, we see</p> <p>20 dynamically associating metadata with the data.</p> <p>21 So it appears there again.</p> <p>22 And then it says the data and</p> <p>23 metadata stored on a storage component. We see</p> <p>24 even later on, the metadata -- what the metadata</p>

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<p>1 consists of, what it includes. So information 2 related to the user, the data, the application 3 and the user environment. 4 In the last paragraph, we see 5 dynamically updating the stored metadata. And 6 again, it gives a bit of a description of what 7 it's doing. So there it is in Claim 9. 8 Q. And is the concept in Claim 21? 9 A. Let's look at Claim 21, and we see 10 something very similar. We see in the second 11 paragraph, again dynamically associating 12 metadata with the data. And again, the data, 13 metadata stored, in this case, on a web-based 14 computing platform. 15 There we see the metadata includes 16 information and it says what's in it. 17 We see in the one, two, three, 18 fourth paragraph dynamically associating the 19 data and the application with the second user 20 workspace in the metadata. 21 And then final paragraph, we see 22 starting near the bottom that we see a plurality 23 of different users can access the data via the 24 metadata from a corresponding plurality of</p>	<p>1 the provisional application? 2 A. Well, as I mentioned, the word 3 metadata appears only once and it appears in a 4 completely different context. In fact, as part 5 of the background of the invention. 6 And there's -- there's nothing 7 else in the -- in the provisional that actually 8 has any concept of metadata, nor is there 9 anything in the code, nor is there anything in 10 the examples. I didn't see it. 11 Q. Can you please pull up the 12 background of the provisional. 13 So is this the paragraph that 14 describes metadata? 15 A. Yes. So let me just see where it 16 is, if it's this particular part. 17 Maybe it's the next paragraph. 18 I'm not sure. 19 Q. How about Paragraph 11? 20 A. Yeah, keep going. 21 There we go. In fact, if you 22 include Paragraph 12 as well, that would be 23 good. 24 So this is in the background of</p>
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<p>1 different user workspaces. 2 So, again, we see it's littered 3 throughout this claim. 4 Q. And finally, is it also -- the 5 concept of metadata also in Claim 23? 6 A. Yes, it is. So, again, something 7 very similar. Let me just search for this. 8 Here -- it's somewhere in the 9 middle of the first paragraph. It says for 10 dynamically -- just a little bit below, for 11 dynamically storing the context data as metadata 12 on a storage component. 13 And a little bit right after that, 14 it says which metadata. It says that's 15 dynamically associated with data. 16 And then in the second paragraph, 17 we have again near the bottom, it says 18 dynamically storing the change information on 19 the storage component as part of the metadata. 20 So again, it's throughout these claims. It's a 21 fundamental component of many of the elements of 22 these claims. 23 Q. And what's the basis for your 24 opinion that these elements are not disclosed in</p>	<p>1 the invention in the provisional. And so what 2 they're talking about here is what existed at 3 the time of the filing of this provisional 4 application. 5 And here we see, the second line, 6 it says Current processes. So this is what 7 exists. Then designed to add context to files 8 such as the metadata tagging approach, involve 9 having a knowledge of free view files after they 10 have been stored and create metadata tags. 11 So here they're saying that at the 12 time of this filing, the one approach was to use 13 metadata where some person would manually assign 14 essentially this information to the file so they 15 can later search for it. 16 And then immediately following it, 17 it says -- it actually says, Well, this isn't 18 good enough. It says, Notwithstanding the 19 usefulness of the above-described methods, a 20 need still exists for a communications tool that 21 associates files generated by applications with 22 individual groups and topical context. 23 So really here they're talking 24 about metadata as here's what existed before.</p>

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<p>1 They're talking about it as, Oh, it was done 2 manually and we can do better than that. 3 But that's it. That's the only 4 use of the word metadata in this entire 5 provisional is to say, Here's what's been done 6 before. 7 And it's wrong or it's not wrong, 8 but it's not enough. 9 Q. If the provisional doesn't 10 describe metadata storage and updating, what 11 does it describe? 12 A. So I prepared a series of slides 13 on power point to try to illustrate this. If we 14 could bring that up. There we go. 15 So the provisional application 16 describes this idea -- describes here a lot of 17 the ideas in it. So there is stuff in there. 18 It's just not the stuff that's in the asserted 19 claims. 20 So the first thing it does, it 21 describes these things called boards. And 22 boards are essentially a collection of data and 23 application functions. 24 So these are things like, Well,</p>	<p>1 wanted to follow, what is the paragraph number? 2 What does that mean? 3 A. That means this is an excerpt from 4 paragraph twenty-two in the provisional 5 application. 6 The provisional application says 7 we can relate these boards together in a 8 sequence of steps, and the next thing the 9 provisional says -- this is a quote from page 10 six, paragraph three. The numbering is a little 11 different because the provisional looks like two 12 different documents stuck together. The way the 13 provisional numbers their paragraphs isn't 14 consistent. 15 It says the workflow process may 16 be readily reorganized by making a change to one 17 or more of the webs and boards. Imagine that. 18 Somehow we've created a sequence, maybe 19 manually, that there's a sequence or process 20 that goes from board A to board B to board C and 21 then D. 22 We can shuffle around that 23 sequence. The invention says we can change that 24 sequence and reorganize those boards, so we can</p>
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<p>1 you know, we have Microsoft Word and we have a 2 document prepared with it. And it's all the 3 stuff that -- essentially all the data and later 4 applications, stuff that can happen on the 5 board. So it's just a collection. 6 It knows that there could be a 7 word file, for example, with the document 8 associated with it. 9 The next thing it does, if you go 10 to the next slide, is that -- and this is a 11 quote from the provisional -- it says "the 12 present invention automates workflow processes." 13 The workflow is a sequence of 14 steps. It's usually designed -- workflow is 15 usually for office automation where it tries to 16 automate some kind of procedure that documents 17 will follow or that people have to follow. 18 So for example, like, if you 19 wanted to buy something, you filled out a form, 20 and that form would go to this place first and 21 that place next and that place next. It's a 22 sequence of steps. 23 Q. Dr. Greenberg, when you have your 24 quotes up there, I wanted to help. If anyone</p>	<p>1 go from board B to board D to board A. All that 2 stuff will be on those boards. 3 Q. Why would someone want to do that? 4 A. Workflow processes essentially, as 5 I said, describe a sequence of steps, and these 6 steps could change over time. 7 One of the problems around -- I 8 shouldn't say major problem. One of the issues 9 that we wanted workflow systems to be, for 10 example, so a site administrator could say, 11 let's change the sequence of steps we're going 12 to do things in without having to do a massive 13 amount of rewrite of code. 14 Essentially what this invention 15 says, we can change the sequence of steps. I 16 think we have a few more animations to show 17 that. 18 We could do this, and this is 19 captured by this quote, and this is what's meant 20 in the provisional. The user changes the 21 context, the files, and applications 22 automatically follow dynamically capturing those 23 shifts in context, so this is automated. 24 When they go from one board to the</p>

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<p>1 next, these things will be in the right place.</p> <p>2 This is not about tracking movements, capturing</p> <p>3 contexts. It is about, here's the boards,</p> <p>4 here's the relationships, and we keep juggling</p> <p>5 those relationships and boards around to define</p> <p>6 different sequences of steps and different</p> <p>7 relationships.</p> <p>8 Q. Say as a user changes their</p> <p>9 context. Why doesn't that mean when a user goes</p> <p>10 from board D to board C?</p> <p>11 A. Here they are going from board D</p> <p>12 to board C. This is an after-the-fact thing.</p> <p>13 What the invention describes is we</p> <p>14 can take the boards and change the</p> <p>15 relationships. Here we're talk about a person</p> <p>16 can go from one board to the next, and the stuff</p> <p>17 will be there. There is no capturing of the</p> <p>18 context of what the person is doing as they do</p> <p>19 that, nor is there any tracking of the movements</p> <p>20 nor updating of metadata. That is not in there.</p> <p>21 Q. You mentioned there's two</p> <p>22 documents pushed together to make up this</p> <p>23 provisional application; is that right?</p> <p>24 A. That's correct.</p>	<p>1 boards are.</p> <p>2 Q. Can you pull up the code,</p> <p>3 Dr. Greenberg. Do you see the import statements</p> <p>4 here?</p> <p>5 A. Yes, I do.</p> <p>6 Q. Are these in the provisional?</p> <p>7 A. Yes, they are at the beginning of</p> <p>8 the code section.</p> <p>9 Q. What's the purpose of an import</p> <p>10 statement?</p> <p>11 A. So an import statement is, as the</p> <p>12 name suggests, is a way for the computer program</p> <p>13 to import code that's somewhere else, so</p> <p>14 essentially it says it's a way for us to manage</p> <p>15 code. It says that there's code somewhere else,</p> <p>16 and I want to bring it into the program so the</p> <p>17 program can actually use it.</p> <p>18 Q. If we take the -- one of the first</p> <p>19 ones, for example, the import com.leader.util.</p> <p>20 What would that mean?</p> <p>21 A. Not much because one thing that is</p> <p>22 not in the provisional is what's in these</p> <p>23 external files. All this tells me is that --</p> <p>24 and I'm just guessing now, so this is an</p>
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<p>1 Q. What are those two documents?</p> <p>2 A. If I look at the provisional, so</p> <p>3 there's one that looks like an -- essentially a</p> <p>4 description, and it's -- they have paragraphs</p> <p>5 numbers one through twenty-five and then there's</p> <p>6 an attachment. It's labeled attachment two.</p> <p>7 So I'm not sure. There's no</p> <p>8 attachment one. I could see it just seems</p> <p>9 something gathered from someplace else which</p> <p>10 contained another description, and there's code</p> <p>11 associated with it.</p> <p>12 Q. Did you study that portion of</p> <p>13 application as well?</p> <p>14 A. Yes, I did.</p> <p>15 Q. Does the code included in that</p> <p>16 portion of the application change your opinion</p> <p>17 regarding what's disclosed in that provisional</p> <p>18 application?</p> <p>19 A. No, if anything, it reinforces</p> <p>20 what I found in the description.</p> <p>21 The code is all about here's a</p> <p>22 board and here's a relationship between boards,</p> <p>23 and one is simply form filling essentially</p> <p>24 manually what the relationships between the</p>	<p>1 educated guess -- that because it starts with</p> <p>2 com.leader, this is some code that Leader may</p> <p>3 have or may not have written yet or may plan to</p> <p>4 write that does some stuff.</p> <p>5 Essentially it just says that</p> <p>6 whatever is there is intrinsic to Leader, so I</p> <p>7 would be guessing. It's like, we have this box,</p> <p>8 and we have stuff in it, and the company</p> <p>9 holds the box, but I won't tell you what's in</p> <p>10 it.</p> <p>11 Q. Can you determine in any way from</p> <p>12 the import statements what the code looks like?</p> <p>13 A. First, I have to say I don't know</p> <p>14 if the code exists. I can't tell is this code</p> <p>15 working code. Is it actually code that they've</p> <p>16 actually compiled to run? I don't know. I</p> <p>17 can't tell from this because that's not</p> <p>18 complete.</p> <p>19 The second thing I can tell is</p> <p>20 this code or pseudocode is stuff intended to run</p> <p>21 compiled by systems to be run eventually, or</p> <p>22 it's more of a sketch. And looking at it, it</p> <p>23 looks more like code. Again I don't know.</p> <p>24 The third thing I can't tell is</p>

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<p>1 whether these files com.leader.util or debug, 2 whether they exist or not. I have no idea 3 whether these are just place holders or if they 4 have stuff there. It's not in the provisional. 5 If I look at any particular one of 6 them, I can make a guess. Com.leader.util, 7 maybe that means there's a utility program in 8 it, but there's another one called 9 asp.facebook.util, so I don't know what's in it. 10 I just make a wild guess. 11 Q. These are part of what's been 12 described as the code for this program? 13 A. Well, it's part of the code that 14 was produced in the provisional, but it's the 15 actual stuff in these things designated by the 16 import isn't there. They did not deliver that. 17 I've read other patent 18 applications, other things, before and sometimes 19 they come with a floppy or CD that says, here's 20 our stuff. 21 For one, this is all I have to 22 work with. I would be guessing. 23 Q. Can I direct your attention to a 24 particular part of the code attached here, the</p>	<p>1 have sub equal new concrete sub form create 2 relationship sub form. So that would probably 3 be the title of the window you would see as the 4 user and creator. 5 New relationship would be 6 instruction, and the rest of the code -- go a 7 little below it -- says sub.addboarddropdown. 8 It says sub.addboarddropdown, and following 9 that, it talks about the board drop down. 10 I think this is a drop down form 11 or guideline, something that you've probably 12 seen before on computer systems, but it brings 13 up this form that lets you set the relationship 14 of one board to another, and this is a manual 15 thing. 16 Q. Does anything in this disclose 17 tracking a user's movement from one board to 18 another board? 19 A. Neither is it in this code and 20 nowhere else in the code. 21 Q. Does anything in this code 22 disclose tracking a user's movement from one 23 context to a separate context? 24 A. No.</p>
Page 1440	Page 1442
<p>1 sixteenth page of the provisional. There should 2 be something called tool code. Tool code equals 3 get contact? 4 A. I think you want to see more than 5 that. The bottom one. Keep going right to the 6 bottom, to where it says return form. 7 Two more lines. 8 Q. And in here in particular, I'd 9 like to point your attention to the middle of 10 the page where it says action.addactionlistener. 11 Do you see that code? 12 A. I do. 13 Q. What does that code do? 14 A. So remember before I said that 15 what the provisional allows it to reset the 16 relationship between these boards. I believe in 17 looking at this and using my knowledge of 18 programming that what this essentially does is 19 really the user interface part for somebody to 20 manually set the relationship of one board to 21 another. 22 If I could highlight, it says the 23 fourth, fifth line down, add new relationship 24 subform. So it's using the word "form," and we</p>	<p>1 Q. There was a deposition taken in 2 this case of Mr. Lamb. Are you aware of that? 3 A. Yes, I am. 4 Q. Did you read Mr. Lamb's 5 deposition? 6 A. I did. 7 Q. Did you base your opinion on 8 Mr. Lamb's testimony in his deposition? 9 A. No, I did not. 10 Q. When you reviewed Mr. Lamb's 11 testimony about what he thought was in the 12 provisional application, did it change your 13 opinion as to whether or not the provisional 14 disclosed each and every element of the claim? 15 A. It enforced my position. He said 16 several times that no tracking was done in the 17 provisional application. 18 MR. ANDRE: I'm going to object to 19 the characterization of the witness's testimony, 20 and he testified to that. 21 THE COURT: Overruled. He's 22 testifying to his interpretation of that. 23 BY MS. KEEFE: 24 Q. Dr. Greenberg, one of the terms we</p>

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<p>1 A. Yes, absolutely. They're how you 2 interact with Facebook and just with Facebook, 3 of course. 4 Q. So you couldn't use the Facebook 5 API to interact with MySpace or something like 6 that? 7 A. No, it would not be possible. 8 Q. And where are the documents, the 9 public documents made available to tell the 10 developers how to build these applications and 11 how to interact with Facebook? 12 A. On the Facebook website. 13 Q. Have you heard what they call the 14 developers wiki? 15 A. Yeah. 16 Q. Is that where APIs are located? 17 A. Yes, I think so. 18 Q. When you build your application, 19 did you use the documents that are found on the 20 Facebook website? 21 A. Yeah, I used the public document 22 that described the API. 23 Q. I would like to show you what's 24 been marked as PTX 904. Dr. Vigna, are you</p>	<p>1 MS. KEEFE: No objection. 2 THE COURT: It's admitted. 3 BY MR. ANDRE: 4 Q. Is the wiki also developed to 5 assist the developer platform? 6 A. Yes. 7 MR. ANDRE: I would like to move 8 PTX 906. 9 BY MR. ANDRE: 10 Q. Dr. Vigna, are you familiar with 11 what's been marked as PTX 906? 12 A. Yes. 13 Q. What is this document? 14 A. This is another description of 15 another element of that API, in this case, 16 Photos.get is another way that a third party can 17 interact with a Facebook website. If an 18 application invokes this particular function it 19 will return all the visible photos according to 20 some specified filters. 21 Q. And how does this document inform 22 your opinion as to the infringement? 23 A. This is another example of how 24 Facebook provides the means for people to</p>
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<p>1 familiar with this document? 2 A. Yes. 3 Q. And what is this document? 4 A. So this describes one of those 5 entries in the interface that I showed you, so 6 one of the things that can be done. In 7 particular, it says that one of those requests 8 could be Photos.get Albums. That means get me 9 all the metadata about all the photo albums 10 uploaded by the specified user. 11 So if I have the rights, of 12 course, to access information and I perform this 13 request from my application, I will receive all 14 the metadata about the photo albums for that 15 user. 16 Q. What does that description provide 17 to you in forming your opinion about Facebook 18 infringing Claim 9 of the patent? 19 A. Well, that by providing this 20 problematic API, Facebook allows third party to 21 actually perform the steps of the claim. 22 Q. And if you -- 23 MR. ANDRE: I would like to move 24 PTX 904 into evidence, Your Honor.</p>	<p>1 develop applications that actually perform the 2 steps of Claim 9. 3 Q. Can we go to the second page of 4 the document. Go to this section here. 5 Dr. Vigna, could you describe what 6 we're looking at in this line right here? 7 A. Yeah. So this is a little on the 8 technical side, but this is -- it shows how 9 instead of using this API one could even go even 10 deeper into getting their -- the content of the 11 Facebook website. 12 If you remember, I was -- when I 13 was talking about PHP, the PHP was using this 14 other language, sequel, SQL. Facebook has a 15 variation on that language called FQL, Facebook 16 query language. That allows third-party 17 application to actually directly go into 18 Facebook and extract information such as in this 19 particular case the context information stored 20 in the photo table. 21 Q. And when it says select, pid, aid, 22 owner, src, src_big, src_small, link, caption, 23 created, is that some type of language that only 24 computers understand?</p>

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<p>1 A. Well, this is this is very similar</p> <p>2 to the information that is being uploaded that I</p> <p>3 showed in the source code when we showed how</p> <p>4 photos were uploaded. So what happens under the</p> <p>5 hood when somebody uploads a picture is that</p> <p>6 context information is captured and stored as</p> <p>7 metadata and here it shows how a subset of that</p> <p>8 metadata can be directly accessed by a</p> <p>9 third-party application using this mechanism.</p> <p>10 MR. ANDRE: Your Honor, I would</p> <p>11 like to move PTX 906 into evidence.</p> <p>12 MS. KEEFE: No objection, Your</p> <p>13 Honor.</p> <p>14 THE COURT: It's admitted.</p> <p>15 MR. ANDRE: I know we're close to</p> <p>16 our morning break. Would you like me to close</p> <p>17 out this line of questioning? I have two more</p> <p>18 documents I would like to show Dr. Vigna on this</p> <p>19 line.</p> <p>20 THE COURT: Why don't you close</p> <p>21 out this line of questioning, given the nature</p> <p>22 of the evidence we'll take our break a little</p> <p>23 early this morning, so go ahead.</p> <p>24 BY MR. ANDRE:</p>	<p>1 information that is stored by Facebook whenever</p> <p>2 a photo is uploaded. For example, the size of</p> <p>3 the photo, the size of the thumbnail for the</p> <p>4 photo, when it was created, for example, the</p> <p>5 third from last is the date when the photo was</p> <p>6 added. If the photo gets modified, also they</p> <p>7 track that. And they store the metadata when</p> <p>8 the photo was modified and so forth.</p> <p>9 Q. Dr. Vigna, did Exhibit PTX 907</p> <p>10 inform your opinion as to Facebook's</p> <p>11 infringement of the '761 patent?</p> <p>12 A. Yes.</p> <p>13 Q. How did it do so?</p> <p>14 A. Because it describes how third</p> <p>15 party can interact with the website and perform</p> <p>16 the steps of the claim.</p> <p>17 Q. Dr. Vigna, you referred to</p> <p>18 something being indexable. What does indexable</p> <p>19 mean?</p> <p>20 A. Well, this is sort of a technical</p> <p>21 term, but when there are a lot of information of</p> <p>22 a certain kind, it is possible to create indexes</p> <p>23 that allow to access this information in faster,</p> <p>24 in a faster way. So a classic example, for</p>
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<p>1 Q. Dr. Vigna, I would like to turn</p> <p>2 your attention to PTX 907. Are you familiar</p> <p>3 with this document?</p> <p>4 A. Yes.</p> <p>5 Q. This is also from the Facebook</p> <p>6 developer wiki?</p> <p>7 A. Yes.</p> <p>8 Q. What is this document?</p> <p>9 A. This is a description of the photo</p> <p>10 table that is accessible using that Facebook</p> <p>11 query language that I was mentioning before.</p> <p>12 And it shows how the main information about a</p> <p>13 photo can be retrieved using the FQL statement</p> <p>14 described there.</p> <p>15 Q. So when it says query this table</p> <p>16 to return information about a photo, are you</p> <p>17 talking about the metadata of the photo?</p> <p>18 A. Yes, the context information that</p> <p>19 has been captured and stored as metadata in the</p> <p>20 storage component.</p> <p>21 Q. If you look down to this table</p> <p>22 here, it says columns. What is that referring</p> <p>23 to?</p> <p>24 A. Well, this is all additional</p>	<p>1 example, is your contacts. Instead of having</p> <p>2 your contacts one after another in complete</p> <p>3 casual order, you store them by letter. So</p> <p>4 everybody who last name is under A, you have a</p> <p>5 little tag that say A. That's an index, because</p> <p>6 it allows you to get to that information faster</p> <p>7 than going through all the records one by one to</p> <p>8 find John Adams, instead you say A, okay, I can</p> <p>9 go there and immediately find that record.</p> <p>10 MR. ANDRE: Your Honor, I move PTX</p> <p>11 907 into evidence.</p> <p>12 MS. KEEFE: No objection, Your</p> <p>13 Honor.</p> <p>14 THE COURT: It's admitted.</p> <p>15 BY MR. ANDRE:</p> <p>16 Q. Dr. Vigna, I would like to turn</p> <p>17 your attention to PTX 911. Are you familiar</p> <p>18 with the document that's been marked as PTX 911?</p> <p>19 A. Yes.</p> <p>20 Q. What is this document?</p> <p>21 A. This is yet another description of</p> <p>22 one of those entries in the API. In this</p> <p>23 particular case, the Stream.publish</p> <p>24 functionality allows a third party to post a</p>

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<p>1 message on a user wall. For example, in my 2 application I use this particular functionality 3 to be able to write on the wall of the users of 4 my application so that I can communicate with 5 them, for example. 6 Q. When it talks about the post also 7 appears in the streams (News Feeds), do you see 8 that? 9 A. Yes. 10 Q. What is that referring to? 11 A. Well, whenever a third-party 12 application uses this method to this -- sorry, 13 this API code to perform the actions that I 14 describe as -- it's pretty much equivalent to a 15 user actually going to the page and putting in 16 manually the information on the wall. 17 Therefore, the metadata that 18 tracks what happens is generated and will appear 19 in the News Feed of the people that are 20 concerned. 21 Q. And does PTX-911 inform your 22 opinion as to whether Facebook's website 23 infringes? 24 A. Yes.</p>	<p>1 MR. ANDRE: Your Honor, I'm ready 2 to go through the Doctrine of Equivalents, Claim 3 9. 4 THE COURT: This would be an 5 appropriate time for us to take our break. 6 We'll take a break for 15 minutes. 7 We'll show the jury out. 8 THE CLERK: All rise. 9 (Jury leaving the courtroom at 10 10:17 a.m.) 11 THE COURT: We'll be in recess for 12 15 minutes. 13 (A brief recess was taken.) 14 THE CLERK: All rise. 15 THE COURT: Bring the jury in. 16 THE CLERK: All rise. 17 MR. ANDRE: Your Honor, would you 18 like Dr. Vigna to take the stand now or wait for 19 the jury to come in? 20 THE COURT: Rather than have to 21 raise that, that way maybe you could set up the 22 board if you're going to use it again after the 23 jury's seated. 24 (Jury entering the courtroom at</p>
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<p>1 Q. And how does it do so? 2 A. Because it shows how -- it shows 3 that Facebook is providing the means for 4 third-party application to perform the steps of 5 the claim. 6 MR. ANDRE: Your Honor, I'd like 7 to move PTX-911 into evidence. 8 MS. KEEFE: No objection. 9 THE COURT: It's admitted. 10 BY MR. ANDRE: 11 Q. Dr. Vigna, based on the documents 12 provided in this case and what you've reviewed 13 in the source code, do you have an opinion as to 14 whether or not the applications built by these 15 third-party developers would infringe the 16 claims of the Claim 9? 17 A. Yes, I think that these kind of 18 applications will infringe Claim 9. 19 Q. And are these applications built 20 pursuant to Facebook's instructions or 21 directions? 22 A. Yeah, because Facebook clearly 23 describes how to interact with the website and 24 create these applications.</p>	<p>1 10:57 a.m.) 2 THE CLERK: All rise. Be seated. 3 THE COURT: Welcome back. 4 Mr. Andre. 5 MR. ANDRE: Your Honor, I'd like 6 to recall Dr. Vigna. 7 THE WITNESS: Thank you. 8 MR. ANDRE: Your Honor, may I set 9 the board up, also? 10 THE COURT: Yes. 11 BY MR. ANDRE: 12 Q. So Dr. Vigna, we were just 13 finishing up Claim 9 -- 14 A. Yes. 15 Q. -- at the break. 16 And based on all of the documents 17 you provided or you've reviewed so far in this 18 case, and the source code, the testimony of the 19 Facebook employees, do you have an opinion as to 20 whether Facebook infringes Claim 9? 21 A. Yes, I do. 22 Q. And what is that opinion? 23 A. That Facebook infringes Claim 9. 24 Q. Could you put a check in the box</p>

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1 next to Claim 9, please?	1 stored on a storage component. And the metadata
2 Could you also explain what the	2 includes information related to the user, the
3 introductory section is? What's your	3 data, the application and the user environment.
4 understanding of what the introductory statement	4 Q. And at the very least, does the
5 is at the beginning of every claim?	5 Facebook website perform substantially the same
6 A. This preamble here?	6 functions as Element 3 of Claim 9?
7 Q. Right. The preamble.	7 A. Yes.
8 A. It's a way to sort of set forth	8 Q. Why do you say that?
9 the context for the -- all of the elements of	9 A. Because it has tracking, because
10 the claim. And as far as I understand, it's not	10 it tracks movement of the user from the user
11 necessarily confining the scope of the claims of	11 environment from one environment to a second
12 the elements.	12 environment of the computing platform.
13 Q. Okay. Thank you.	13 Q. And at the very least, does the
14 And did you find that every	14 Facebook website perform substantially the same
15 element of Claim 9 was literally infringed by	15 function of Element 4 of Claim 9?
16 the Facebook website?	16 A. Yeah, because it dynamically
17 A. Yes, I did.	17 updates the stored metadata with an association
18 Q. And does Facebook infringe under	18 of the data, and the second user environment
19 the Doctrine of Equivalents, Claim 9?	19 when the user employs at least one of the
20 A. Yeah, it at least infringes under	20 applications and the data from the second
21 the Doctrine of Equivalents.	21 environment.
22 Q. Why do you say that?	22 Q. At the very least, does the
23 A. Because it -- you know, it	23 Facebook website perform in substantially the
24 performs substantially in the same way to	24 same way as Element 1 of Claim 9?
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1 achieve the same result.	1 A. Yeah, because it creates the data
2 Q. Does it perform substantially the	2 via the user interaction and stores the data in
3 same function as well?	3 the form of at least files and documents.
4 A. Yeah, the same function in the	4 Q. And at the very least, does the
5 same way to achieve the same result.	5 Facebook website perform in substantially the
6 Q. Now, I apologize. I want to walk	6 same way as Element 2 of Claim 9?
7 through these element by element.	7 A. Yeah, because it dynamically
8 A. Let's do it.	8 associates the metadata with the data.
9 Q. At the very least, does the	9 Q. And at the very least, does the
10 Facebook website perform substantially the same	10 Facebook website perform in substantially the
11 function as Element 1 of Claim 9?	11 same way as Element 3 of Claim 9?
12 A. Yes.	12 A. Yeah, because it tracks the
13 Q. Why do you say that?	13 movement from the -- of the user from one
14 A. Because it describes steps for	14 environment to another.
15 creating data with a user environment or	15 Q. And at the very least, does the
16 web-based computing platform, user interaction	16 Facebook website perform in substantially the
17 by a user using an application.	17 say way as Element 4 of Claim 9?
18 Q. And at the very least, does the	18 A. Yeah, because it dynamically
19 Facebook website perform substantially the same	19 updates stored metadata with the association of
20 function as Element 2 of Claim 9?	20 the data, the application and the second user
21 A. Yes.	21 environment.
22 Q. And why do you say that?	22 Q. At the very least, does the
23 A. Because it dynamically associates	23 Facebook website yield the same results of
24 the metadata with the data, which are both	24 Element 1 of Claim 9?

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1 A. Yeah, because as a result, it
 2 creates data in -- within a user environment.
 3 Q. And at the very least, does the
 4 Facebook website yield the same result as
 5 Element 2 of Claim 9?
 6 A. Yeah, because it results in the
 7 association of the metadata with the data.
 8 Q. And at the very least, does the
 9 Facebook website yield the same results of
 10 Element 3 of Claim 9?
 11 A. Yeah, because as a result, the
 12 user is tracked from one environment to another.
 13 Q. And last, but not least, at the
 14 very least, does the Facebook website yield the
 15 same results as Element 4 of Claim 9?
 16 A. Yeah, because the stored metadata
 17 is dynamically updated as a result.
 18 Q. And does -- at the very least,
 19 does the Facebook website infringe under the
 20 Doctrine of Equivalents for all the reasons you
 21 testified about earlier today?
 22 A. Yes.
 23 Q. When I refer to the Facebook
 24 website, do you understand what I'm referring

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1 to?
 2 A. Yes.
 3 Q. What is that exactly?
 4 A. Well, the Facebook website is a
 5 web application, which is a system that can be
 6 accessed through the web to perform certain
 7 actions.
 8 Q. So it's -- when I'm referring to
 9 website, it's the servers and all the hardware
 10 and software that's --
 11 A. That is correct. It's -- you
 12 know, it's a very complex distributed system
 13 that is composed, of course, of both hardware
 14 and software, and that provides access to users
 15 to different types of functionality.
 16 Q. So when you're giving your opinion
 17 of infringement of the Facebook website, you're
 18 actually talking about the servers?
 19 A. Yeah. I'm talking about, you
 20 know, the systems, the code that is performing
 21 the function and whatever is being used by the
 22 users.
 23 Q. Okay. We'll turn to dependent
 24 Claim 11.

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1 A. Yes.
 2 Q. Dr. Vigna, do you have an opinion
 3 as to whether or not Facebook infringes Claim 11
 4 of the '761 patent?
 5 A. Yes.
 6 Q. And what is that opinion?
 7 A. That it infringes.
 8 Q. Can we have Claim 11?
 9 Could you describe generally
 10 what's disclosed in Claim 11?
 11 A. Yeah. So this is the method of
 12 Claim 9.
 13 And in addition to that, it
 14 describes a way of indexing content of the user
 15 environment, so that multiple users can access
 16 the content from different user environments.
 17 And what -- if we can switch to
 18 the code, actually I can, you know, show you. I
 19 have to find it.
 20 I think maybe I'd know it by heart
 21 at this point.
 22 MR. ANDRE: Oh, Your Honor, we'd
 23 like to seal the record.
 24 THE COURT: Yes.

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1 THE WITNESS: Okay. So one, you
 2 know, rather important piece of this whole thing
 3 is -- I think it's schema.
 4 So if you remember, I was
 5 describing the fact that this sequel language is
 6 used to store and retrieve information from a
 7 database. And this, as you can see from the
 8 first line, is a dump of the structure that is
 9 used to store some of the information on the
 10 Facebook website.
 11 And for example, if I go to --
 12 let's see if I can find it.
 13 Yeah. For example, let's look at
 14 this table info.
 15 Pretty big table. And this, for
 16 example, is information that is captured and
 17 stored about users.
 18 Now, you can see that here there
 19 is, for example, user meeting people, your
 20 interests, your clubs, the music you like, your
 21 birthday, your gender, your name, of course,
 22 first name, last name, et cetera, et cetera.
 23 So this is just a structured way
 24 to store the information. And what they do, if

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1 we look here at the end, we see that these keys
 2 are used for indexing.
 3 Okay. And you can see that
 4 whenever you create -- use a key in a database,
 5 it's a way -- it's sort of like if you remember
 6 the example of the contacts where you store
 7 everything by A, by B, by C to access them more
 8 easily, this is the same concept, you can set a
 9 key or an index on a particular table in order
 10 to make easier to access that information from
 11 different, from different point of view.
 12 Q. Is that the portion that you want
 13 to show this element?
 14 A. There is another portion. Let me
 15 check really fast.
 16 Q. Dr. Vigna, just while you're
 17 looking at that, how much time did you spend
 18 wading through the Facebook source code?
 19 A. Days. I don't have a precise
 20 count, but definitely four or five days
 21 full-time. It was long hours. Headaches, too.
 22 Yeah, so this is an example for the info table
 23 and it shows, you know, for example, that this
 24 is an indexing key called a primary key.

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1 Another example is, for example,
 2 the photo table that we have seen used many
 3 times in the source code. This is the actual
 4 description of the table. And you can see, you
 5 know, all the kind of information that is
 6 stored. And you can see that, for example, this
 7 is the primary key used for an index is the, you
 8 know, photo I.D. in this particular case, so
 9 it's a way of indexing contacts so that it can
 10 be easily accessed in multiple situation.
 11 Thank you.
 12 MR. ANDRE: Your Honor, we can
 13 unseal the record now.
 14 THE COURT: Okay.
 15 BY MR. ANDRE:
 16 Q. If we go to PTX 907 that we showed
 17 earlier where it says something is indexable, is
 18 that what you're referring to, the index table
 19 you were talking about?
 20 A. Correct.
 21 So this is pretty much saying that
 22 those particular parts of the information will
 23 be used as an index to grant fast access to the
 24 information from, you know, multiple user

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1 environments.
 2 Q. So based on the source code you
 3 showed us just now, the documents that we have
 4 shown and your previous testimony, do you have
 5 an opinion as to whether Facebook infringes
 6 Claim 11?
 7 A. Yes. My opinion is that it
 8 infringes Claim 11.
 9 Q. Could you put a check in the box.
 10 A. (Witness complying.)
 11 Q. If you can turn your attention to
 12 Claim 16, now.
 13 Dr. Vigna, do you have an opinion
 14 as to whether or not Facebook infringes Claim 16
 15 of the '761 patent?
 16 A. Yes, I do.
 17 Q. What is your opinion?
 18 A. That Facebook infringes Claim 16.
 19 Q. What does Claim 16 cover?
 20 A. It describes the method of Claim
 21 9. And in addition, the ability to access the
 22 user environment via a portable wireless device.
 23 Q. What would be an example of a
 24 portable wireless device?

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1 A. Your cell phone, for example, that
 2 has a browser on it so that you can go to
 3 Facebook as a website. Actually Facebook has a
 4 website called m.facebook.com that is devoted
 5 to portable wireless devices.
 6 Q. I would like to direct your
 7 attention to PTX 227.
 8 MR. ANDRE: Your Honor, may I have
 9 one moment? I have the wrong exhibit number.
 10 May I have one moment, please?
 11 THE COURT: Sure. Go ahead.
 12 (Discussion off the record.)
 13 MR. ANDRE: I apologize, Your
 14 Honor.
 15 THE COURT: Is the correct
 16 document in the binder?
 17 MR. ANDRE: I don't know. We're
 18 looking for it. Unfortunately I handwrote my
 19 notes on it, and I have the wrong one.
 20 THE WITNESS: Actually can I ask
 21 you to open 942.
 22 MR. ANDRE: Okay. Exhibit 942,
 23 please. Working late nights I reversed the
 24 numbers.

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1 THE WITNESS: If you go down,
 2 next. Next. Next. Again. Again. Okay. You
 3 can see here on the left-hand side that there is
 4 a clear depiction of how the website can be
 5 accessed through your mobile phone which would
 6 be wireless portable device.
 7 Q. And that's on PTX 942 on the Bates
 8 number LTI 157087; correct?
 9 A. Yes.
 10 Q. Let me try with the right exhibit
 11 number this time. Can you turn to PTX 277.
 12 A. I'm just trying to be helpful.
 13 Q. That's a good one, too. I
 14 appreciate that. This is what I was looking
 15 for.
 16 A. Yes.
 17 Q. Have you seen this document?
 18 A. Yes.
 19 Q. And did it inform your opinion as
 20 to Claim 16?
 21 A. Yeah.
 22 Q. And how did it do so?
 23 A. This is a document that describe
 24 the Facebook mobile client that allows to

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1 interact with Facebook through network mobile
 2 device, like a cell phone, for example.
 3 Q. When it talks about the mobile
 4 client provides automatic photo upload from
 5 mobile devices.
 6 A. Correct.
 7 Q. Does that inform your opinion at
 8 all?
 9 A. Yeah. I mean, this is just
 10 facilitating the access through the
 11 functionality of the website by means of cell
 12 phone or wireless portable device.
 13 Q. And based on the documents that
 14 you have shown us here today and the previous
 15 testimony that you have given, do you have an
 16 opinion as to whether or not Facebook infringes
 17 Claim 16 of the '761 patent?
 18 A. Yes, I think Facebook infringes
 19 that claim.
 20 Q. Would you put a check in that box?
 21 A. (Witness complying.)
 22 MR. ANDRE: Your Honor, may I
 23 approach?
 24 THE COURT: You may.

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1 MR. ANDRE: Your Honor, I would
 2 like to move Exhibit 277 into evidence as well.
 3 MS. KEEFE: No objection, Your
 4 Honor.
 5 THE COURT: It's admitted.
 6 BY MR. ANDRE:
 7 Q. Dr. Vigna, I would like to turn
 8 your attention to Claim 21. What type of claim
 9 is Claim 21?
 10 A. So this is a claim that describes
 11 a computer-readable medium for storing
 12 computer-executable instructions for a method of
 13 managing data and then describes the
 14 characteristics of the methods.
 15 Q. What exactly is computer-readable
 16 media?
 17 A. So, anything that can store
 18 information that you can retrieve and that can
 19 be used as part of a computer system. An
 20 example would be a computer disk, it could be
 21 the memory, it could be -- that's pretty much
 22 it. That's what we have. I was thinking about
 23 new technology, and not yet.
 24 Q. And in Facebook's case, where is

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1 the computer-readable media located?
 2 A. On the servers that execute the
 3 code, for example, the computer-readable
 4 instructions are somewhere, so whenever a
 5 request is made that code is retrieved and it's
 6 executed.
 7 Q. And where are Facebook's servers
 8 located?
 9 A. According to what I could read
 10 from the testimony, on a number of servers in
 11 the United States.
 12 Q. And what type of code are on these
 13 servers that Facebook has in California and the
 14 East Coast?
 15 A. I think that there are several
 16 kinds of code. By and large, Facebook is
 17 written PHP, which is this code that I have been
 18 showing you. Of course there is also Sequel
 19 code. There are also other pieces of the system
 20 that are implemented in different programming
 21 language. I mean, a complex system often times
 22 is implemented in different ways with different
 23 subcomponents implemented using different
 24 technologies for a number of reasons; could be

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<p>1 because of performance reason or just because,</p> <p>2 you know, the developer that day decided that he</p> <p>3 really liked a language called Python and</p> <p>4 decided to write something in Python.</p> <p>5 The important thing is that these</p> <p>6 are instructions. I mean, every programming</p> <p>7 language is just a series of commands, high</p> <p>8 level, low level, it doesn't really matter, but</p> <p>9 a series of commands to tell a computer what to</p> <p>10 do. And that's exactly what it is.</p> <p>11 Q. And based on your review of the</p> <p>12 code on the Facebook servers, did you form an</p> <p>13 opinion as to Claim 21?</p> <p>14 A. Yes.</p> <p>15 Q. And what is that opinion?</p> <p>16 A. That Facebook infringes Claim 21.</p> <p>17 Q. If you look at the first element</p> <p>18 of Claim 21, creating data related to user</p> <p>19 interaction, did you form an opinion as to</p> <p>20 whether or not Facebook code or Facebook</p> <p>21 infringes the first element of Claim 21?</p> <p>22 A. Yes. My opinion is that Facebook</p> <p>23 infringes that element.</p> <p>24 Q. And what is that element</p>	<p>1 that's being referred to in Claim 21?</p> <p>2 A. Correct. And the user interacts</p> <p>3 with his part of the user environment, so the</p> <p>4 user is the subset of the other user environment</p> <p>5 that allow it to interact with the system. And</p> <p>6 because of that, then the picture is uploaded,</p> <p>7 and the image is updated. So new data is</p> <p>8 created this way.</p> <p>9 MR. ANDRE: Your Honor, I would</p> <p>10 like to seal the record for the demonstration of</p> <p>11 the source code.</p> <p>12 THE COURT: That's fine.</p> <p>13 BY MR. ANDRE:</p> <p>14 Q. Could you show us in the source</p> <p>15 code where the first element of Claim 21 is</p> <p>16 located?</p> <p>17 A. Yes. I'm getting there.</p> <p>18 So, for example, if you go to</p> <p>19 upload.php, this is the actual files that is</p> <p>20 used to upload the profile picture. And you can</p> <p>21 see that this is actually then in</p> <p>22 html/ajax/profile/picture/upload.php. And</p> <p>23 eventually this code will actually store the</p> <p>24 profile picture, capture that information and</p>
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<p>1 describing?</p> <p>2 A. So, it's describing the creation</p> <p>3 of data related to user, interaction of a user</p> <p>4 within a user workspace of a web-computing</p> <p>5 platform using an application.</p> <p>6 Q. What is a workspace?</p> <p>7 A. A workspace is sort of like a</p> <p>8 subset of the context or environment where the</p> <p>9 user is operating, it allows the user to perform</p> <p>10 certain actions.</p> <p>11 Q. And could you show us with the</p> <p>12 Interceptor code where you would see the</p> <p>13 elements of Claim 1 -- I mean, the element --</p> <p>14 the elements described in the first element?</p> <p>15 A. Yeah.</p> <p>16 So --</p> <p>17 Q. You have to switch over.</p> <p>18 A. So, again, we have, for example,</p> <p>19 in the case of updating one's profile picture,</p> <p>20 we have the user interacts -- sorry. Here the</p> <p>21 user interacts with a workspace it allows to</p> <p>22 upload a picture, for example, this is part of</p> <p>23 the workspace.</p> <p>24 Q. So this is part of the workspace</p>	<p>1 produce the metadata.</p> <p>2 Q. And based on the demonstration of</p> <p>3 the code here, do you have an opinion as to</p> <p>4 whether or not Facebook infringes the first</p> <p>5 element of Claim 21?</p> <p>6 A. Yes.</p> <p>7 Q. And what is that opinion?</p> <p>8 A. That it infringes.</p> <p>9 Q. Could you put a check in the box.</p> <p>10 A. Yes. (Witness complying.)</p> <p>11 Q. The first element</p> <p>12 Dr. Vigna, I notice you have</p> <p>13 something in your hand there. Is that your</p> <p>14 expert report?</p> <p>15 A. Yeah, that's correct.</p> <p>16 Q. If we turn to the second element</p> <p>17 of Claim 21. Do you have an understanding as to</p> <p>18 -- strike that.</p> <p>19 Do you have an opinion as to</p> <p>20 whether or not Facebook infringes the second</p> <p>21 element of Claim 21?</p> <p>22 A. Yes, I do.</p> <p>23 Q. And what's that opinion?</p> <p>24 A. That it infringes.</p>

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<p>1 Q. Could you generally describe what 2 is being referred to in the second element? 3 A. So, in this case, the second 4 element describes the fact that metadata is 5 dynamically associated with the data where the 6 data and the metadata are stored on a 7 web-computing platform. 8 The metadata includes information 9 related to the user of the user workspace, the 10 data to the application and to the user 11 workspace. 12 Q. When it talks about here, it's 13 talking about the metadata stored on the 14 web-based computing platform, what does that 15 mean to one skilled in the art? 16 A. Well, I mean, it's a storage 17 component on the platform on the server that 18 will take this data and store it. 19 Q. So it's just any type of a 20 platform that would store the information? 21 A. Yeah. It could be any kind of 22 hierarchy or storage system, files, databases, 23 memory, it's just stored somewhere. 24 Q. Could you demonstrate in the code</p>	<p>1 understanding the relationships between these 2 pieces of code and identifying in all the codes 3 what were the most representative parts that 4 would support my opinion whether or not Facebook 5 infringes this particular patent. 6 Q. Is the Facebook source code 7 particularly large or small? How would you 8 characterize it? 9 A. It's very large. It's very large. 10 And it's actually a fairly complicated system. 11 Q. Okay. 12 A. So photos upload of PHP. Oops. 13 So this is one of the files. 14 Okay. 15 And here, for example, we have the 16 insertion of information into the photo table, 17 and there is context information in the form of 18 metadata that has to do, for example, with the 19 particular workspace operating, for example, the 20 album ID, the user in the user fashion, the data 21 as a link to the data or as a source reference 22 to the data. 23 And also information related to 24 the application by using the created -- by</p>
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<p>1 where the second element of Claim 21 is found? 2 A. Yeah. 3 THE COURT: Are we going to seal 4 this part of the record? 5 MR. ANDRE: It's been sealed, Your 6 Honor, I believe. 7 THE COURT: I don't know if we 8 unsealed. 9 MR. ANDRE: That's good. 10 THE WITNESS: For example, let's 11 see, if we have photos upload.php. We don't 12 have it yet. Let's load it up. 13 BY MR. ANDRE: 14 Q. Dr. Vigna, when you're typing in 15 these file names at the bottom of the screen, 16 what exactly are you typing in there? 17 A. Okay. So I'm typing there just a 18 path in the file system that identify the source 19 code file. So this computer has the source code 20 of Facebook and each little snippet of code is 21 stored in a separate file. And every file has a 22 different name. 23 And part of my job was to analyze 24 all these pieces of code, which are many,</p>	<p>1 storing, the application stores when this 2 information was created. 3 Q. And based on your review of the 4 source code, and your previous testimony and the 5 documents you reviewed, do you have an opinion 6 as to whether or not Facebook infringes the 7 second element of Claim 21? 8 A. Yes. My opinion is that infringes 9 that element of the claim. 10 Q. Could you please put a check in 11 that box? 12 A. Sooner or later, I'm going to 13 trip. 14 Q. I'd like to turn to the third 15 element of Claim 21. 16 Dr. Vigna do you have an opinion 17 as to whether or not Facebook infringes the 18 third element? 19 A. Yes, I do. 20 Q. What's your opinion? 21 A. That it infringes. 22 Q. And what -- generally speaking, 23 what does the third element disclose? 24 A. This is an element that describes</p>

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<p>1 tracking the movement of the user from the user</p> <p>2 workspace to a second user workspace of the</p> <p>3 web-computing platform.</p> <p>4 Q. And do you have a demonstration on</p> <p>5 your interceptor there showing -- describing</p> <p>6 writing on the wall?</p> <p>7 A. Yeah, I can show, for example, my</p> <p>8 wall example.</p> <p>9 Q. You'll need to switch.</p> <p>10 A. Oh, yeah. Sorry.</p> <p>11 And in this particular case, we</p> <p>12 saw that the user was in this first workspace</p> <p>13 and decides to click on the profile of a friend.</p> <p>14 And as a result, it moves to this second profile</p> <p>15 and interacts with a user, the workspace in this</p> <p>16 particular context.</p> <p>17 And you can see that here using</p> <p>18 the cookie, the user is tracked when moving from</p> <p>19 one workspace to another.</p> <p>20 Q. And based on your review of the</p> <p>21 source code, and your analysis of the website</p> <p>22 here itself and all the previous testimony you</p> <p>23 provided regarding documents and testimony, do</p> <p>24 you have an opinion as to whether or not</p>	<p>1 perspective, what exactly is that referring to?</p> <p>2 A. So, you know, the user uses the</p> <p>3 application and the data in the second workspace</p> <p>4 and again tracking information in the form of</p> <p>5 metadata is generated. And that metadata</p> <p>6 contains reference to these elements and puts</p> <p>7 into association data and application.</p> <p>8 Q. Could you demonstrate the fourth</p> <p>9 element of Claim 21 in the source code or you</p> <p>10 can do it any way you want to do it?</p> <p>11 A. Yeah. Yeah.</p> <p>12 Yeah. It's -- I can do it either</p> <p>13 way.</p> <p>14 So this is about -- for example, I</p> <p>15 will just go and say this is about writing on</p> <p>16 the wall and what happens when the wall gets</p> <p>17 updated.</p> <p>18 So, again, in this particular</p> <p>19 case, tracking -- for example, if we go to the</p> <p>20 source code, when this type of action is</p> <p>21 performed like posting on the wall of his</p> <p>22 friend, we would go to</p> <p>23 fib/feed/stories/add/insert.</p> <p>24 We can see here in this part that</p>
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<p>1 Facebook infringes the third element of Claim</p> <p>2 21?</p> <p>3 A. Yes.</p> <p>4 Q. What's that opinion?</p> <p>5 A. That it infringes.</p> <p>6 Q. Could you put a check in that box?</p> <p>7 A. I'd be happy to.</p> <p>8 Q. If you look at the fourth element</p> <p>9 of Claim 21, did you form an opinion as to</p> <p>10 whether or not Facebook infringed the fourth</p> <p>11 element of Claim 21?</p> <p>12 A. Yes.</p> <p>13 Q. And what's your opinion?</p> <p>14 A. That it infringes.</p> <p>15 Q. Okay. Could you generally</p> <p>16 describe what is being disclosed in the fourth</p> <p>17 element?</p> <p>18 A. So this is, again, about creating</p> <p>19 dynamically metadata that associates the data</p> <p>20 and the application with the second user</p> <p>21 workspace when the user -- such that a user</p> <p>22 employs the application and data from the second</p> <p>23 user workspace.</p> <p>24 Q. Okay. From a technical</p>	<p>1 a Minifeed story is created and it has</p> <p>2 reference, for example to the user, the type of</p> <p>3 application that is determining the story type,</p> <p>4 the data which is a reference to the object ID,</p> <p>5 and the second user workspace, which in this</p> <p>6 case actually it's the uid, because when -- this</p> <p>7 story will be created.</p> <p>8 It's the story about Mary Smith.</p> <p>9 So it's going to be about this particular user</p> <p>10 ID where the message is being posted.</p> <p>11 Q. And looking at this piece of the</p> <p>12 source code that you're referring to, is there</p> <p>13 some type of a file name or something we can use</p> <p>14 for that or can you see that on that screen</p> <p>15 somewhere?</p> <p>16 I'm just trying to make the record</p> <p>17 here. How would you find that?</p> <p>18 A. Oh, sorry. Sorry.</p> <p>19 Sorry. I couldn't understand.</p> <p>20 This is the file</p> <p>21 fib/feed/stories/add/insert.php.</p> <p>22 Q. Thank you?</p> <p>23 A. I couldn't understand what you</p> <p>24 were asking.</p>

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<p>1 Q. That's a common occurrence.</p> <p>2 Based on looking at the code and</p> <p>3 also your demonstration on the website, do you</p> <p>4 have, and all your previous testimony, do you</p> <p>5 have an opinion as to whether or not Facebook</p> <p>6 infringes the fourth element of Claim 21?</p> <p>7 A. Yes, I do.</p> <p>8 Q. And what's your opinion?</p> <p>9 A. That it infringes.</p> <p>10 Q. Would you put a check on the box</p> <p>11 on the fourth element?</p> <p>12 Please return to the final element</p> <p>13 of Claim 21, the fifth element. Dr. Vigna, do</p> <p>14 you have an opinion as to whether or not</p> <p>15 Facebook infringes the fifth element of Claim</p> <p>16 21?</p> <p>17 A. Yes, I do.</p> <p>18 Q. And what's that opinion?</p> <p>19 A. That it infringes.</p> <p>20 Q. Generally speaking, what is the</p> <p>21 fifth element of Claim 21 referring to?</p> <p>22 A. So it refers to the fact that data</p> <p>23 is indexed, so that a plurality of different</p> <p>24 users can access the data via the metadata from</p>	<p>1 Q. And based on your review of the</p> <p>2 source code and all the other testimony you've</p> <p>3 provided here today and the documents you</p> <p>4 reviewed, do you have an opinion as to whether</p> <p>5 or not Facebook infringes the fifth element of</p> <p>6 Claim 21?</p> <p>7 A. Yes. My opinion is that Facebook</p> <p>8 infringes the fifth element.</p> <p>9 Q. And based on that, do you have an</p> <p>10 opinion as to whether or not Facebook infringes</p> <p>11 all of the elements of Claim 21?</p> <p>12 A. Yeah. My opinion is that it</p> <p>13 infringes Claim 1 as a whole.</p> <p>14 Q. Claim 21?</p> <p>15 A. Yeah, Claim 21. What did I say?</p> <p>16 Q. Can you check the bottom box of</p> <p>17 the fifth element and also the top box?</p> <p>18 Thank you.</p> <p>19 MR. ANDRE: Your Honor may I</p> <p>20 approach to put the final board up?</p> <p>21 THE COURT: You may.</p> <p>22 BY MR. ANDRE:</p> <p>23 Q. And Dr. Vigna, before we go on to</p> <p>24 Claim 23, I'm going to ask you about the</p>
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<p>1 different users' workspaces.</p> <p>2 Q. Could you put that in layman's</p> <p>3 terms to understand what that's referring to?</p> <p>4 A. It's very similar with what we saw</p> <p>5 with the database. Actually it's the same thing</p> <p>6 where the data is indexed so that it's easily</p> <p>7 accessible.</p> <p>8 And so this information in the</p> <p>9 metadata is stored specifying specific keys that</p> <p>10 allow for fast access to that information from a</p> <p>11 number of different environments.</p> <p>12 Q. And could you demonstrate that for</p> <p>13 us once again in the source code?</p> <p>14 A. Sorry. For example, here in</p> <p>15 the -- in this particular table, for example,</p> <p>16 extra information, metadata that has been</p> <p>17 captured about a photo, and this is indexed by,</p> <p>18 for example, the photo ID to provide fast access</p> <p>19 to the information to multiple users.</p> <p>20 Q. And could you give where the</p> <p>21 source code is located?</p> <p>22 A. This is -- sorry. This is the</p> <p>23 source code, meaning that this is the schema of</p> <p>24 the database that shows how indexing happens.</p>	<p>1 Doctrine of Equivalents of Claim 21. So, please</p> <p>2 bear with me.</p> <p>3 First of all, did you find that</p> <p>4 every element of Claim 21 literally is infringed</p> <p>5 by Facebook?</p> <p>6 A. Literally, yes.</p> <p>7 Q. Does Facebook infringe Claim 21</p> <p>8 under the Doctrine of Equivalents?</p> <p>9 A. At least under Doctrine of</p> <p>10 Equivalents, it infringes Claim 21.</p> <p>11 Q. At the very least, does the</p> <p>12 Facebook website perform substantially the same</p> <p>13 function as Element 1 of Claim 21?</p> <p>14 A. Yeah, because it creates data</p> <p>15 through user interaction in a user workspace.</p> <p>16 Q. At the very least, does the</p> <p>17 Facebook website perform substantially the same</p> <p>18 function as Element 2 of Claim 21?</p> <p>19 A. Yeah, because it associates</p> <p>20 dynamically the metadata.</p> <p>21 Q. At the very least, does the</p> <p>22 Facebook website perform substantially the same</p> <p>23 function as Element 3 of Claim 21?</p> <p>24 A. Yeah, because it tracks the</p>

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<p>1 movement of users from between workspaces.</p> <p>2 Q. At the very least, does the</p> <p>3 Facebook website perform substantially the same</p> <p>4 function as Element 4 of Claim 21?</p> <p>5 A. Yes, because it dynamically</p> <p>6 associates data and application in the metadata.</p> <p>7 Q. At the very least, does the</p> <p>8 Facebook website perform substantially the same</p> <p>9 function as Element 5 of Claim 21?</p> <p>10 A. Yes, because it provides indexing</p> <p>11 capability, so that that data can be accessed by</p> <p>12 multiple environments.</p> <p>13 Q. Going back up to the first</p> <p>14 element, at least -- at the very least, does the</p> <p>15 Facebook website perform substantially the same</p> <p>16 way as Element 1 of Claim 21?</p> <p>17 A. Yeah, because it creates data</p> <p>18 through user interactions as it says.</p> <p>19 Q. At the very least, does the</p> <p>20 Facebook website perform in substantially the</p> <p>21 same way as Element 2 of Claim 21?</p> <p>22 A. Yeah, because it dynamically</p> <p>23 associates the metadata the same way.</p> <p>24 Q. At the very least, does the</p>	<p>1 Element 2 of Claim 21?</p> <p>2 A. Yeah, because it dynamically</p> <p>3 associates metadata with the data.</p> <p>4 Q. At the very least, does the</p> <p>5 Facebook website yield the same results as</p> <p>6 Element 3 of Claim 21?</p> <p>7 A. Yeah, because the user is tracked</p> <p>8 from one environment to another, from a</p> <p>9 workspace to another, I should say.</p> <p>10 Q. At the very least does the</p> <p>11 Facebook website yield the same results of</p> <p>12 element four of Claim 21?</p> <p>13 A. Yeah. Because it results in</p> <p>14 ascertaining the data in the application with</p> <p>15 the second user workspace.</p> <p>16 Q. At the very least does the</p> <p>17 Facebook website yield the same results of</p> <p>18 element five of the Claim 21?</p> <p>19 A. Yes. Because it results in</p> <p>20 creating the same data to allow access to</p> <p>21 information.</p> <p>22 Q. At the very least, when we are</p> <p>23 talking about the Doctrine of Equivalents, at</p> <p>24 the very least, does the Facebook website</p>
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<p>1 Facebook website perform in substantially the</p> <p>2 same way as Element 3 of Claim 21?</p> <p>3 A. Yeah, because it tracks the user</p> <p>4 from one workspace to another.</p> <p>5 Q. At the very least, does the</p> <p>6 Facebook website perform in substantially the</p> <p>7 same way as Element 4 of Claim 21?</p> <p>8 A. Yeah, because it dynamically</p> <p>9 associates the data and the application in the</p> <p>10 workspace in the metadata.</p> <p>11 Q. At the very least, does the</p> <p>12 Facebook website perform in substantially the</p> <p>13 same way as Element 5 of Claim 21?</p> <p>14 A. Yeah, because it indexes the data.</p> <p>15 That's a lot of results.</p> <p>16 Q. At the very least, does the</p> <p>17 Facebook websites yield the same results as</p> <p>18 Element 1 of Claim 21?</p> <p>19 A. Yes, because data gets created.</p> <p>20 Q. Are you talking about the data of</p> <p>21 Element 1?</p> <p>22 A. Yeah. Yeah.</p> <p>23 Q. At the very least, does the</p> <p>24 Facebook website yield the same results of</p>	<p>1 infringe under the Doctrine of Equivalents for</p> <p>2 all the reasons you testified to earlier today</p> <p>3 regarding Claim 21?</p> <p>4 A. Yes.</p> <p>5 Q. Would that hold true also for</p> <p>6 Claim 1 and Claim 9 as well?</p> <p>7 A. Yes.</p> <p>8 Q. All right. Now let's turn to the</p> <p>9 last independent claim, Claim 23. Dr. Vigna,</p> <p>10 what kind of a claim is Claim 23?</p> <p>11 A. It describes a system,</p> <p>12 computer-implemented system that facilitates the</p> <p>13 management of data.</p> <p>14 Q. How many elements does this claim</p> <p>15 have?</p> <p>16 A. There are two elements of the</p> <p>17 claim.</p> <p>18 Q. Let's talk about the first</p> <p>19 element, the context component element.</p> <p>20 A. Yeah. I could read it, but mainly</p> <p>21 in laymen's term, there is a context component</p> <p>22 that creates workspace where there are one or</p> <p>23 more application and when these applications are</p> <p>24 used, the context data is associated with the</p>

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<p>1 data uploaded by the user and it's dynamically 2 stored, this additional context information, as 3 metadata in a storage component. And the 4 dynamic -- the metadata is dynamically 5 associated with the data created in the first 6 user workspace.</p>	<p>1 group, a personal album called My Recipes that 2 is created by the user. It's a quite lengthy 3 task. But it would be clearer later.</p>
<p>7 Q. Can you turn back to JTX 942. 8 This is the screen captures of the presentation 9 you have been giving; correct?</p>	<p>4 Go ahead. For example, here, I 5 choose to upload a picture of lasagna. And as a 6 result of this, of interacting with this, I 7 uploaded a picture.</p>
<p>10 A. Correct.</p>	<p>8 Go next.</p>
<p>11 Q. Could you show us in I guess the 12 third use case how Claim 23 is implicated in 13 these slides?</p>	<p>9 And show now there is my recipes 10 is an album with a photo uploaded by me.</p>
<p>14 A. So, you have to go a little 15 forward because I think -- I don't remember 16 exactly where the group interaction starts. But 17 forward, forward, forward, this is writing on 18 the wall, becoming friends, writing on the wall. 19 Okay. The first part of this is actually 20 creating a group. So Mary Smith creates a 21 group. And next, fills in all the information 22 about the group that she's going to create.</p>	<p>11 Q. At this point you have a photo of 12 lasagna in your own personal photo album as John 13 Vineyard?</p>
<p>23 Q. Is that the group name right here? 24 A. Italian Food Lovers, yeah, that's</p>	<p>14 A. That's correct. Go forward. This 15 shows that I uploaded a photo and it's been 16 tracked, create an event. Not relevant at this 17 point. But let's go forward.</p>
<p>Page 743</p>	<p>18 At this point I get to the group 19 and I click on the group. Next. Okay. Go 20 next. I mean, click on photos of the group. 21 And you can see that there are no photos there 22 for the group. And I decide to add a photo to 23 the group. So I click on add group photo. And 24 I choose one of my albums, the recipes. And I</p>
<p>1 correct. Next. This is things that we can do 2 about the group. You can go ahead. At this 3 point Mary Smith actually invites John Vineyard 4 to participate in the group. Next. And this is 5 the page of the group itself. And it shows it 6 has one member. If you go forward.</p>	<p>Page 745</p>
<p>7 Here is the home page of John 8 Vineyard that decides to go to the group's 9 application that you can see on the left-hand 10 side, and decides to join the Italian Food 11 Lovers group. Go ahead.</p>	<p>1 add the selected photo to the group.</p>
<p>12 At this point if you go forward, 13 you will see that now in the group there are two 14 people involved in the members, John Vineyard 15 and Mary Smith. And if you go forward, in this 16 particular case, you know, John Vineyard is 17 actually posting a comment on the wall of the 18 group.</p>	<p>2 Q. How does that -- let me just give 3 the Bates number for the record of where you 4 started from. It was approximately --</p>
<p>19 Q. Is this the posting right here? 20 A. Yeah, that's correct.</p>	<p>5 A. No, go forward. Let me just 6 finish that and then I can comment on a more 7 high level. If you go next. These are photos, 8 if you go next. I commented on the photo saying 9 this is what I cooked the night before. People 10 can comment more. But go next. And this shows 11 for example, a news feed that this action has 12 been tracked and has been generating a news in 13 my personal news feed.</p>
<p>21 Go forward. Go a little forward. 22 And at this point, go a little forward. There 23 will be some photos that are updated, first to 24 the user itself. So go ahead. And this is a</p>	<p>14 Now, the main idea here, if you go 15 back to the claim for a second. So there is a 16 first -- the idea here is that there was a first 17 user workspace, in this case it's my personal 18 album and the way I interact with it. And in 19 this case, the upload application is what allows 20 me to insert the data into the first album. 21 And as we seen before, there is 22 the capturing of context data with the user 23 interaction. For example, the context data is 24 when I uploaded this picture on what album and</p>

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<p>1 so forth while in the first user workspace. 2 And dynamically this information 3 is stored in the context data as metadata. And 4 this is because when I uploaded the picture, the 5 metadata was the entry in the minified that John 6 Vineyard upload a picture to his personal album. 7 Okay! That was the metadata that is stored in a 8 storage component which is associated 9 dynamically with the actual data creating the 10 first user workspace that was the lasagna 11 picture. 12 What I showed then, if we move for 13 a second to the second element, I know this is a 14 fast summary, let me just go to the second. 15 Then I was tracked moving from my first 16 environment which is my profile, my album to the 17 group's album. Okay! And this change was being 18 noted. 19 And when the information about 20 accessing the picture in the second context is 21 created in the metadata when the user access the 22 second picture of the lasagna in the second 23 workspace which is the album of the Italian Food 24 Lovers group.</p>	<p>1 Q. Now, you have already provided an 2 analysis of the second element. Could you just 3 generally talk about what that element is 4 covering of Claim 23? 5 A. Sorry. Can you repeat? I 6 couldn't hear. 7 Q. I said generally you have 8 discussed some of the second element of Claim 9 23, but could you once again give an explanation 10 of what it's covering? 11 A. This is again about tracking 12 actions, so I exemplified the fact that user 13 moves from one environment to another, to a 14 second user workspace. And this information 15 about the change is used to dynamically update 16 the metadata, for example, by saying this user 17 posted a new picture in the group album. 18 Q. And based on that analysis and 19 what you showed us on Exhibit PTX 942, and the 20 examples you provided in the source code earlier 21 in your testimony as well as the documents, do 22 you have an opinion as to whether or not 23 Facebook infringes the second element of Claim 24 23?</p>
Page 747	Page 749
<p>1 Q. So going back to what you just 2 showed on the Exhibit PTX 942, does that inform 3 your opinion as to whether or not the Facebook 4 website infringes the first element of Claim 23? 5 A. Yes, it does. 6 Q. And is your opinion also 7 reflective of the previous testimony you gave 8 today in showing the code and all that? 9 A. Yes. This is very similar 10 example. And a lot of the code that I showed 11 exactly exemplifies the fact that there is a 12 workspace where a user interacts, uploads some 13 data and this data is captured together with 14 additional data and stored in a storage 15 component. 16 Q. And based on all of the evidence 17 you provided in this case, do you have an 18 opinion as to whether or not Facebook infringes 19 the first element of Claim 23? 20 A. Yes, I think Facebook infringes 21 that element. 22 Q. Would you put a check in that box, 23 please. 24 A. (Witness complying.)</p>	<p>1 A. Yes. 2 Q. What is that opinion? 3 A. That it all infringes. 4 Q. And based upon that, do you have 5 an opinion as to whether or not Facebook 6 infringes both elements of Claim 23? 7 A. Yes. 8 Q. What is your opinion? 9 A. That it infringes both. 10 Q. Can you put a check in the box at 11 element two and also at the top of the claim. 12 A. (Witness complying.) 13 Q. Dr. Vigna, you have shown us a few 14 examples of use cases as evidenced by Exhibit 15 PTX 942 and also on your demonstrative. These 16 are like joining the group as you just showed 17 now, or uploading a photo. What are these use 18 cases intended to show? 19 A. So, these are in a way very common 20 ways in which users interact with the website, 21 and they are intended to represent, show which 22 elements of the system that is behind the 23 curtains if you will, that is executing all 24 these different parts directly map to the</p>

Page 750	Page 752
<p>1 different elements of the different claims.</p> <p>2 Q. Are there a lot of other types of</p> <p>3 use cases that demonstrate this that you could</p> <p>4 use to demonstrate this type of activity?</p> <p>5 A. I think there are actually</p> <p>6 possibly infinite different ways in which --</p> <p>7 it's a very complex system, so you can compose</p> <p>8 this in the way you want, you can load a video</p> <p>9 instead of a picture, or you know, instead of a</p> <p>10 page, join a group, beyond to an event, but the</p> <p>11 basic concepts are all there.</p> <p>12 I mean, I use this to just</p> <p>13 exemplify the fact that there is a context</p> <p>14 component, that certain type of information is</p> <p>15 collected, there is a tracking component,</p> <p>16 metadata, context metadata, tracking metadata,</p> <p>17 these are only three example that I think are</p> <p>18 simple enough to exemplify infringement without,</p> <p>19 you know, making it too complex and too</p> <p>20 cumbersome.</p> <p>21 Q. So did you find that -- do you</p> <p>22 have an opinion as to whether or not Facebook</p> <p>23 literally infringes Claim 23 of the '761 patent?</p> <p>24 A. Yes, I do believe that Facebook</p>	<p>1 Facebook website perform in substantially the</p> <p>2 same way as the context component of Claim 23?</p> <p>3 A. Yeah. Because it has the context</p> <p>4 component, it actually captures these</p> <p>5 interaction and stores it as metadata.</p> <p>6 Q. At the very least does the</p> <p>7 Facebook website perform in substantially the</p> <p>8 same way as the tracking component of Claim 23?</p> <p>9 A. Yeah, because it actually tracks</p> <p>10 users from one workspace to another in the same</p> <p>11 way.</p> <p>12 Q. At the very least does the</p> <p>13 Facebook website yield the same results as the</p> <p>14 context component of Claim 23?</p> <p>15 A. Yeah, because the context</p> <p>16 component as a result stores the data and the</p> <p>17 metadata on a storage component of the web-based</p> <p>18 platform.</p> <p>19 Q. At the very least does the</p> <p>20 Facebook website yield the same results as the</p> <p>21 tracking component of Claim 23?</p> <p>22 A. Yeah, because as a result, the</p> <p>23 user is tracked from one workspace to another.</p> <p>24 Q. And does the Facebook website</p>
Page 751	Page 753
<p>1 literally infringe Claim 23.</p> <p>2 Q. Do you have an opinion as to</p> <p>3 whether or not Facebook infringes under Claim 23</p> <p>4 under the Doctrine of Equivalents?</p> <p>5 A. I think that at least it infringes</p> <p>6 under the Doctrine of Equivalents.</p> <p>7 Q. At the very least, does the</p> <p>8 Facebook website perform substantially the same</p> <p>9 function as the context component of Claim 23?</p> <p>10 A. Yes, it performs substantially the</p> <p>11 same function.</p> <p>12 Q. And why do you say that?</p> <p>13 A. Because it has a context component</p> <p>14 that assign one or more location to use space</p> <p>15 and capturing context data related to the</p> <p>16 interaction of the user with the workspace.</p> <p>17 Q. At the very least does the</p> <p>18 Facebook website perform substantially the same</p> <p>19 function as the tracking component of Claim 23?</p> <p>20 A. Yes, because it has a tracking</p> <p>21 component that tracks the change in access from</p> <p>22 one workspace to another, and provides dynamic</p> <p>23 updates to metadata based on that information.</p> <p>24 Q. At the very least does the</p>	<p>1 infringe Claim 23 under the Doctrine of</p> <p>2 Equivalents for all the reasons you testified to</p> <p>3 earlier today?</p> <p>4 A. Yes.</p> <p>5 Q. And just to be clear, with respect</p> <p>6 to Claim 23, when we say context component,</p> <p>7 we're talking about the entire first element of</p> <p>8 Claim 23; is that correct?</p> <p>9 A. Yes.</p> <p>10 Q. When we're talking about tracking</p> <p>11 component, we're talking about the entire second</p> <p>12 element of Claim 23?</p> <p>13 A. That is correct.</p> <p>14 Q. Let's turn to Claim 31. I'm</p> <p>15 sorry. Did I skip one? Claim 25. I'm sorry.</p> <p>16 Dr. Vigna, do you have an opinion</p> <p>17 as to whether or not Facebook infringes Claim 25</p> <p>18 of the '761 patent?</p> <p>19 A. Yes, I do.</p> <p>20 Q. What is that opinion?</p> <p>21 A. That it infringes.</p> <p>22 Q. And generally speaking, what does</p> <p>23 Claim 25 cover?</p> <p>24 A. So, the system -- Claim 25 is a</p>

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<p>1 dependent claim so it describe a system of Claim 2 23, but where the context component actually 3 captures relationship between the first user 4 workspace and at least one other user workspace. 5 Q. And could you put that in lay 6 terms? 7 A. So pretty much, it's a situation 8 where the context component is able to create 9 some data that puts in relation two different 10 systems. And I think that this is pretty well 11 exemplified even with the posting of the -- for 12 example, this is the wall of Mary Smith, and in 13 the moment in which somebody post on this 14 particular wall, it would create a relationship 15 between two environments, one is actually the 16 profile and the workspace of Mary Smith. But if 17 I would go here and click on this image, I would 18 be immediately brought to my own profile. 19 Actually John Vineyard's profile. 20 And so that connection creates a 21 relationship between the two workspaces. 22 Q. And that connection is also 23 reflected in the screen shots you've marked as 24 PTX-942?</p>	<p>1 A. It describes characteristics of 2 the storage component saying that the data and 3 the metadata are stored at least using one of 4 relational or object storage methodology. 5 In layman's terms, you use a 6 relational database or object database to store 7 the information. So it's describing the fact 8 that the system, in addition of being the system 9 of Claim 23, uses a database fundamentally to 10 store the information. 11 And -- sorry. 12 Q. When you say relational or -- 13 A. I was going to that. 14 Q. Okay. 15 A. I understand that. So a 16 relational database is just a type of database. 17 So there are -- if you remember 18 that sequel language used to store information 19 and put it back and forth in that structure 20 form. That is one of the possible ways of 21 structuring information or databases. 22 There are many types of databases. 23 The most popular form of database is definitely 24 the relational database that is called</p>
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<p>1 A. Correct. If you go to the screen 2 shot that it's equivalent to this -- to this 3 that shows John Vineyard posting a message. How 4 are you, for example, on Mary Smith's wall. It 5 would be completed. 6 Q. Based on the testimony you just 7 provided, and examples you gave, and the source 8 code you reviewed earlier and all the documents, 9 do you have an opinion as to whether Facebook 10 infringes Claim 25? 11 A. Yes. 12 Q. And what is that opinion? 13 A. That it infringes Claim 25. 14 Q. Would you put a check in the box, 15 please? 16 We'll turn to the dependent Claim 17 31 now. Dr. Vigna, did you have an opinion as 18 to whether or not Facebook infringes Claim 31 of 19 the '761 patent? 20 A. Yes. 21 Q. And what's your opinion? 22 A. That it infringes Claim 31. 23 Q. What does Claim 31 generally 24 cover?</p>	<p>1 relational because it put the data in tables 2 that originally were referred to as relations. 3 There are other ways of storing 4 information like object-based storage, for 5 example. That is used when stored in memory, 6 the information in memory is stored as objects. 7 And Facebook definitely uses a 8 relational database as we have seen. And I'm 9 going to show you in a second in the source code 10 in particular, in the schema. 11 Q. Could you go ahead and show that 12 now? 13 MR. ANDRE: And seal the record, 14 please. 15 THE COURT: I think we're still 16 sealed. 17 MR. ANDRE: I think so. I 18 apologize, Your Honor, that we have to go back 19 and forth like that. 20 THE COURT: I understand. 21 THE WITNESS: It's exactly the 22 file that we were seeing. And if you go to the 23 very -- this is all -- this is -- this is 24 describing exactly the type of technology.</p>

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<p>1 My sequel, then we -- that we see</p> <p>2 up there. It's just a product, a very commonly</p> <p>3 used product, which is a relational database</p> <p>4 used to store the information.</p> <p>5 So this is clear evidence that</p> <p>6 they store the information. This is exactly</p> <p>7 what I showed you before where the photo</p> <p>8 information, the user information is stored.</p> <p>9 And this shows that it used that particular kind</p> <p>10 of technology.</p> <p>11 Q. So in your review of the Facebook</p> <p>12 source code and what you've discovered through</p> <p>13 the documents, does Facebook use different types</p> <p>14 of storage components?</p> <p>15 A. Correct. I mean, there are many</p> <p>16 things that are used. One of which is this</p> <p>17 database, the user database, for example.</p> <p>18 But there are also different level</p> <p>19 of caches that are used. They use content</p> <p>20 distribution networks, which are a very large</p> <p>21 scale caching systems for certain type of data.</p> <p>22 But altogether they provide one</p> <p>23 functionality, which is the one of a storage.</p> <p>24 Q. Altogether they would be the</p>	<p>1 Q. What's your opinion?</p> <p>2 A. That Facebook infringes Claim 32.</p> <p>3 Q. And generally speaking, what does</p> <p>4 Claim 32 refer to?</p> <p>5 A. So this is describing the system</p> <p>6 of Claim 32. And in addition, it discusses the</p> <p>7 fact that by storing the metadata in the storage</p> <p>8 component together with the data, this</p> <p>9 facilitates many-to-many functionality. So</p> <p>10 many-to-many functionality means that I can</p> <p>11 reach many people and those many people can</p> <p>12 reach me.</p> <p>13 Okay. So, for example, typically</p> <p>14 speaking in a room is a many-to-many</p> <p>15 functionality, because you know, I am one to</p> <p>16 many. But if you guys answer to me, you also</p> <p>17 are talking to many. So everybody can talk to</p> <p>18 everybody.</p> <p>19 A one-to-one functionality would</p> <p>20 be if I called somebody on the phone and I'm</p> <p>21 talking to only that particular person.</p> <p>22 Now, my opinion actually on this</p> <p>23 is that this is very -- at the core of what</p> <p>24 we're talking about here, because the metadata</p>
Page 759	Page 761
<p>1 storage component that's referred to in the</p> <p>2 second -- the first element of Claim 23 and all</p> <p>3 the independent claims of that storage</p> <p>4 component?</p> <p>5 A. That's correct.</p> <p>6 Q. So based on -- you can take that</p> <p>7 down. Based on your view of the source code, do</p> <p>8 you have an opinion as to whether or not</p> <p>9 Facebook infringes Claim 31 of the '761 patent?</p> <p>10 A. Yes, I do.</p> <p>11 Q. And what's your opinion?</p> <p>12 A. That Facebook infringes Claim 31.</p> <p>13 Q. Is that based -- your opinion</p> <p>14 based upon the testimony you just provided</p> <p>15 regarding Claim 31 and all your previous</p> <p>16 testimony that you provided today?</p> <p>17 A. Yes.</p> <p>18 Q. Would you put a check in Box 31?</p> <p>19 We can turn to the final claim,</p> <p>20 Claim 32.</p> <p>21 Dr. Vigna, did you form an opinion</p> <p>22 as to whether Facebook infringed Claim 32 of the</p> <p>23 '761 patent?</p> <p>24 A. Yes.</p>	<p>1 are those tracking information, those stories</p> <p>2 that allow people to see what's going on on the</p> <p>3 website and to interact with that type of story.</p> <p>4 And for example, if you if you</p> <p>5 look at -- woops, this -- but even just a post</p> <p>6 on Mary Smith's wall, by tracking that is -- by</p> <p>7 tracking in the metadata that John Vineyard</p> <p>8 wrote on Mary Smith's wall, this is going to be</p> <p>9 used to inform many people of this event.</p> <p>10 Many people say, Hey, by the way,</p> <p>11 John vineyard wrote on Mary Smith's wall. And</p> <p>12 they can come here and also interact and</p> <p>13 collaborate and create a many-to-many</p> <p>14 relationship, where if I'm a third person that</p> <p>15 comes to here, it will see easily that there are</p> <p>16 a number of people involved that are more than</p> <p>17 two.</p> <p>18 And actually, can I show --</p> <p>19 Q. Please.</p> <p>20 A. -- one of the demonstratives?</p> <p>21 So here is another example that</p> <p>22 when the photo was uploaded, you can see that at</p> <p>23 the bottom there are at least three people.</p> <p>24 It's Mary Smith, John Vineyard and James</p>

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1 Montana.

2 And they -- by commenting on the

3 story that was created as metadata, that this

4 picture was uploaded to this album, they start

5 communicating with each other. And when I look

6 at this, I can see, you know, many people

7 communicating with many people.

8 It's not a one-to-one

9 communication. So the idea of this additional

10 claim is that by storing the metadata, tracking

11 the users, creating the stories about what the

12 users are doing, I invite people to communicate

13 and comment on it so that we can all share this

14 information.

15 So that's why I think that

16 directly infringes.

17 Q. And what we're looking at on the

18 screen, is this the photo from the Italian Food

19 Lovers?

20 A. Correct. So yeah, I -- context.

21 This is the photo that was uploaded.

22 And then, you know, Mary Smith

23 made a comment saying, "It looks yummy!" And

24 John Vineyard made a comment, This is a granita,

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1 which is a soft sherbert.

2 And James Montana came in and

3 says, Where's the best places in town to get

4 one? There's -- many-to-many interaction is a

5 chat where people can interact with the metadata

6 that recorded the fact that that event happened.

7 That the user was tracked going to

8 the group, uploading the picture, firing

9 automatically this metadata and then everybody

10 start using the metadata to actually enable

11 multi-to-multi communication.

12 Q. And based on what you've just

13 testified to, and the previous testimony you've

14 given and the source code you've shown, do you

15 have an opinion as to whether or not Facebook

16 infringes Claim 32 of the '761 patent?

17 A. Yes. My opinion is that Facebook

18 infringes Claim 32.

19 Q. Could you put a check in the final

20 box on the board?

21 So, Dr. Vigna, based on your

22 testimony here yesterday afternoon and this

23 morning, do you have an opinion as to whether or

24 not Facebook infringes all of the asserted

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1 claims of the '761 patent?

2 A. Yes.

3 Q. And what is that opinion?

4 A. That Facebook infringes the claims

5 that we have reviewed together.

6 MR. ANDRE: Thank you very much

7 for your time. Your Honor, I have no further

8 questions.

9 THE COURT: Okay. Thank you.

10 Cross-examination.

11 MS. KEEFE: Thank you very much,

12 Your Honor.

13 CROSS-EXAMINATION

14 BY MS. KEEFE:

15 Q. Oops. One too many pieces of

16 paper.

17 Good morning, Dr. Vigna.

18 A. Good morning.

19 Q. Dr. Vigna, you were holding up a

20 little bit earlier your report, and I think you

21 testified that you spent a lot of time writing

22 that report and going through the source code;

23 is that right?

24 A. Yeah. I testified that I looked

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1 at source code for a long time.

2 Q. And when you wrote that report,

3 here in Court you actually used -- let me back

4 up.

5 So you wrote that report. Then we

6 took your deposition and talked to you a little

7 bit about that report. Talked to you a lot

8 about that report, asked you questions about it,

9 spent a whole day discussing things.

10 And then after that, we ended up

11 here at this trial; is that right?

12 A. That is correct.

13 Q. And at the time you wrote that

14 report, after you had a chance to review all of

15 the source code and the documents and to analyze

16 the patent, you submitted that report and had

17 that deposition. But neither the deposition nor

18 the report contained any of the hump or fire bug

19 information that you presented here today;

20 right?

21 A. Actually not the information, but

22 if you look at the beginning of my report, I was

23 clearly stating that I would have used tools for

24 inspecting the interaction between the user and

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<p>1 the server, and also to inspect the rendering, 2 which is exactly what fire bug does. 3 And so I already -- I explicitly 4 say that I would have planned to use those tools 5 to exemplify even further my opinion. 6 Q. But you hadn't used those tools 7 yet at the time that we took your deposition; is 8 that right? 9 A. I haven't used -- I haven't used 10 them to create those particular demonstratives. 11 Correct. 12 Q. And when did you use the burp tool 13 to create the information that we saw here in 14 Court today? 15 A. After I wrote the report, I don't 16 remember exactly the time or the day. But after 17 the report, before coming here. 18 Q. Do you remember. Was it within 19 the last couple of weeks? 20 A. Yeah. I would say so. 21 Q. And when did you create the fire 22 bug information that we saw here in Court today? 23 A. I don't know if I understand your 24 question. I didn't create fire bug information.</p>	<p>1 I performed the steps that I was describing in 2 my report. 3 And then I use a screen capturing 4 tool to just show what I was doing at the 5 moment. 6 Q. Yes. 7 A. Okay. Sorry. 8 Q. And what -- no. No. I think 9 we're in the same page. 10 A. Perfect. 11 Q. When did you use the fire bug 12 program to do that? 13 A. Well, at the same time when I 14 performed those operations. 15 Q. And was that in June? 16 A. I think it was like in the past 17 two weeks sometime. 18 Q. And you mentioned that you created 19 an API, so that you could test the way that the 20 Facebook system works. Do you recall during 21 your deposition we asked you if you had already 22 created that API and you said you hadn't yet; is 23 that right? 24 A. That's absolutely right.</p>
Page 767	Page 769
<p>1 Q. You used fire bug to -- 2 A. I can't be. 3 Q. -- analyze information; correct? 4 A. Absolutely. Yeah. 5 Q. And by using fire bug, you 6 actually created some information that you -- 7 information that you captured using fire bug 8 that you showed us here on the screen today; 9 right? 10 A. Oh, yeah. Maybe it's just a 11 technical term. 12 I didn't create -- fire bug allows 13 you to inspect. 14 Q. Yes. 15 A. But it doesn't create any new 16 information. 17 Q. But the information that when 18 you're using the fire bug system, though, you 19 can have screen captures so that you can show 20 the information that you see using fire bug; 21 right? 22 A. So I want to explain. 23 Q. Please. 24 A. What I did, I set up these tools.</p>	<p>1 Q. When did you create the API that 2 you used to test the Facebook system that you 3 mentioned here in Court today? 4 A. Actually I never created any API. 5 Q. When did you create the system 6 using Facebook's platform or API? I'm sorry. 7 A. Okay. 8 Q. I think I was misspeaking there. 9 A. All right. 10 Q. So let me back up. 11 A. Perfect. 12 Q. So two complicated words; right? 13 A. Yeah. 14 Q. You said that you created a 15 program -- 16 A. Correct. 17 Q. -- using the API that Facebook 18 provides? 19 A. That is correct. 20 Q. And you write that program in 21 order to test some of the functions on Facebook; 22 is that right? 23 A. That is correct. 24 Q. And when we took your deposition,</p>

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<p>1 you said you were thinking about doing that, but</p> <p>2 you hadn't done it yet; isn't that right?</p> <p>3 A. That is correct.</p> <p>4 Q. When did you write that program?</p> <p>5 A. Sometime in July or the beginning</p> <p>6 of July, probably a couple weeks ago, something</p> <p>7 like that at the same time when I did the other</p> <p>8 stuff.</p> <p>9 Q. So this was the first time that</p> <p>10 you had actually put that information altogether</p> <p>11 in one place; is that right? The fire bug</p> <p>12 information, and the information from burp and</p> <p>13 your mention of the API -- sorry, the program</p> <p>14 you made using the API; is that correct?</p> <p>15 A. Those are, sorry, many questions.</p> <p>16 I want to be able to answer it --</p> <p>17 Q. Sure.</p> <p>18 A. -- clearly. So you're asking me</p> <p>19 was the first time that I ever used the API in</p> <p>20 my life?</p> <p>21 Q. No. No. No.</p> <p>22 When was the first time that you</p> <p>23 brought all of the information together that we</p> <p>24 saw here today, the burp program, the</p>	<p>1 Q. Did you use those tools when you</p> <p>2 were analyzing the Facebook source code before</p> <p>3 you wrote your report?</p> <p>4 A. That's a good question. It is</p> <p>5 likely that I used those tools, yeah, as well as</p> <p>6 many other.</p> <p>7 Q. And if you had been using those</p> <p>8 tools to conduct your analysis of the Facebook</p> <p>9 website, you could have created very similar</p> <p>10 screen shots to the ones that we saw here today</p> <p>11 before you submitted your report; correct?</p> <p>12 A. So you're asking me if</p> <p>13 hypothetically I could have created</p> <p>14 demonstratives at different times than the time</p> <p>15 that I created my demonstratives?</p> <p>16 Q. Yes.</p> <p>17 A. Yes.</p> <p>18 Q. Now, throughout the day today when</p> <p>19 we were listening to all of the stories about</p> <p>20 how Facebook works and the different mechanism</p> <p>21 that you were analyzing against the claims, in</p> <p>22 all of the scenarios, a photo, you were using a</p> <p>23 photo as the user defined data that's created in</p> <p>24 the first context; is that right?</p>
Page 771	Page 773
<p>1 information that you found using fire bug and</p> <p>2 the information that you received by creating a</p> <p>3 program using Facebook's API?</p> <p>4 A. Let's see if I can -- I want to.</p> <p>5 So the information about how things work is the</p> <p>6 work of everything that came before the report.</p> <p>7 So I worked with tools to actually</p> <p>8 understand how the user interacts with a website</p> <p>9 where the content is, how it's rendered. I</p> <p>10 analyzed the code. Then I wrote the report.</p> <p>11 And then I used these two</p> <p>12 particular tools to create these demonstratives</p> <p>13 that would help me describe what is the type of</p> <p>14 interaction of the user with the website.</p> <p>15 A. Of the user with the website,</p> <p>16 especially because there was no possibility of</p> <p>17 using the Internet so this is actually a good</p> <p>18 backup plan to show exactly how Facebook</p> <p>19 infringes the '761 patent.</p> <p>20 Q. But your use of Burp and Firebug</p> <p>21 didn't happen until after we took your</p> <p>22 deposition; correct?</p> <p>23 A. Sorry? I used those tools in my</p> <p>24 profession continuously.</p>	<p>1 A. I used photos a lot. I use some</p> <p>2 kind of photos in I think all three cases,</p> <p>3 that's correct.</p> <p>4 MS. KEEFE: Would you mind, I can</p> <p>5 approach or I can ask the witness to. I would</p> <p>6 like to put Claim 1 back up on the easel.</p> <p>7 THE COURT: Why don't you feel</p> <p>8 free to approach freely.</p> <p>9 MS. KEEFE: Thank you, Your Honor.</p> <p>10 THE COURT: Watch out for all the</p> <p>11 wires.</p> <p>12 THE WITNESS: Do you need help?</p> <p>13 MS. KEEFE: Thank you, Dr. Vigna.</p> <p>14 THE WITNESS: I can do it for you.</p> <p>15 MS. KEEFE: Thank you very much.</p> <p>16 I appreciate that.</p> <p>17 THE WITNESS: No problem.</p> <p>18 BY MS. KEEFE:</p> <p>19 Q. So all I want us to focus on right</p> <p>20 now, in fact -- thank you whoever put that up</p> <p>21 there. What I hope wanted to focus on right now</p> <p>22 just so we end up making sure we're talking</p> <p>23 about the same thing. So in Claim 1, there is a</p> <p>24 requirement that there be user defined data</p>

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<p>1 that's created in the first context. Right?</p> <p>2 A. Correct.</p> <p>3 Q. And, in fact, we see that in the</p> <p>4 claim language with user defined data created by</p> <p>5 user interaction of a first user in a first</p> <p>6 context?</p> <p>7 A. Correct.</p> <p>8 Q. Right.</p> <p>9 And in all of the scenarios that</p> <p>10 we saw, that user defined data created in the</p> <p>11 first context was a photo, just today, what we</p> <p>12 were seeing with all of that was the photo;</p> <p>13 right?</p> <p>14 A. That is correct.</p> <p>15 Q. So we can call the photo the first</p> <p>16 user defined data, that's the data, the photo</p> <p>17 itself?</p> <p>18 A. For those three use cases, yes.</p> <p>19 Q. Right.</p> <p>20 So for those use cases, the photo</p> <p>21 is the data. So if I say photo, I'm also saying</p> <p>22 user defined data?</p> <p>23 A. In the first context, that is</p> <p>24 correct.</p>	<p>1 Q. I need to be really, really</p> <p>2 particularly on this.</p> <p>3 A. Okay.</p> <p>4 Q. So the photo is stored on Facebook</p> <p>5 servers; is that right?</p> <p>6 A. That is correct.</p> <p>7 Q. And, in fact, I think there is</p> <p>8 something called a filer, and Facebook stores</p> <p>9 its photos in a filer; right?</p> <p>10 A. That's correct.</p> <p>11 Q. And separately, Facebook also</p> <p>12 stores metadata about that photo; right?</p> <p>13 A. Exactly. So Facebook has a</p> <p>14 metadata component that is stored on the server,</p> <p>15 so there is metadata that is on the server.</p> <p>16 Q. And when we were talking about the</p> <p>17 photo and the metadata about that photo, we were</p> <p>18 talking about some very specific information</p> <p>19 about that photo; right?</p> <p>20 A. So part of the metadata is the</p> <p>21 metadata about the photo. Correct.</p> <p>22 Q. And can you actually help, maybe</p> <p>23 you can help us by putting up on the screen the</p> <p>24 portion of the schema, that talks about the</p>
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<p>1 Q. In the first context. Very good</p> <p>2 point.</p> <p>3 So now if we look at the rest of</p> <p>4 the claim, we're going to take that photo and</p> <p>5 we're going to associate metadata with it; is</p> <p>6 that right?</p> <p>7 So we have the context component</p> <p>8 dynamically storing context information in</p> <p>9 metadata, that's what you have been talking</p> <p>10 about quite a bit?</p> <p>11 A. Yes.</p> <p>12 Q. The computer frame is going to</p> <p>13 figure out a way to put some context</p> <p>14 information, so information about the user or</p> <p>15 the place they are regarding that photo in</p> <p>16 metadata, associated with the photo; right?</p> <p>17 A. Yeah.</p> <p>18 Q. So we're talking about the photo,</p> <p>19 the data that has metadata about it?</p> <p>20 A. Yes.</p> <p>21 Q. And both of those things are</p> <p>22 stored in Facebook servers; right?</p> <p>23 A. They are stored in the metadata;</p> <p>24 correct, by the storage component.</p>	<p>1 photo metadata. I think it was in something you</p> <p>2 would insert into photo table.</p> <p>3 A. So, you want to show the piece of</p> <p>4 the code?</p> <p>5 Q. Yes, please.</p> <p>6 A. It happens actually in a number of</p> <p>7 files. Can you specify which one?</p> <p>8 Q. I think the easiest way, let me</p> <p>9 back up and make sure we're all on the same</p> <p>10 page. So the metadata about the photo is stored</p> <p>11 in Facebook servers in tables; right?</p> <p>12 A. Correct.</p> <p>13 Q. Correct.</p> <p>14 And you were actually showing us</p> <p>15 some code earlier today that told the system</p> <p>16 first how to create that table?</p> <p>17 A. Correct.</p> <p>18 Q. And then what information to put</p> <p>19 into that table; is that right?</p> <p>20 A. So, that was my question, you want</p> <p>21 to see the whole schema that shows everything,</p> <p>22 or you want to see where the information is</p> <p>23 inserted?</p> <p>24 Q. Let's do both. First show me</p>

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<p>1 the -- create the table part.</p> <p>2 A. Okay. So as I showed before, this</p> <p>3 is my sequel dump which represent a log of all</p> <p>4 the tables and the structure that they have of</p> <p>5 the database. What part of this do you want to</p> <p>6 see?</p> <p>7 Q. I want to see the part that</p> <p>8 creates the photo table, please.</p> <p>9 A. Okay. So this first two</p> <p>10 instructions that I point here, this is</p> <p>11 something that would delete a table if it exist,</p> <p>12 and create a new one. So those are the</p> <p>13 instructions that would actually create the</p> <p>14 photo table.</p> <p>15 Q. And all the drop table, if it</p> <p>16 exist, means is if somebody had already put</p> <p>17 something in there called a photo table, it</p> <p>18 means erase that?</p> <p>19 A. And create this new one.</p> <p>20 Q. Make a new one, make sure you have</p> <p>21 one table that's for photo information?</p> <p>22 A. Correct.</p> <p>23 Q. And when it says create table</p> <p>24 photo, it doesn't mean create a photo, it means</p>	<p>1 user, and, those are sort of the descriptions of</p> <p>2 the columns that will be part of this particular</p> <p>3 table.</p> <p>4 Q. Since I'm a lousy artist, I asked</p> <p>5 some people if they could help just draw one of</p> <p>6 those for me. Could you put up the photo table?</p> <p>7 So is this a decent representation of how you</p> <p>8 could possibly show graphically a table like the</p> <p>9 photo table that was described in that code you</p> <p>10 were just looking at?</p> <p>11 A. Yes, I think it's a decent</p> <p>12 representation.</p> <p>13 Q. And so what we have across the top</p> <p>14 are the kind of pieces of information that are</p> <p>15 being captured about that photo and put into the</p> <p>16 columns; is that right?</p> <p>17 A. I would describe that maybe like</p> <p>18 the type of information, so the kind of</p> <p>19 information or the particular aspect of</p> <p>20 information, the pieces I would say more the</p> <p>21 contents of the table itself.</p> <p>22 Q. Very good point.</p> <p>23 So this is the particular types of</p> <p>24 information that are being captured for that</p>
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<p>1 create a table that you're going to name photo;</p> <p>2 right?</p> <p>3 A. That's correct, this is creating a</p> <p>4 table that is part of the metadata that will</p> <p>5 contain data about photos.</p> <p>6 Q. And when we were talking about</p> <p>7 SQL, that crazy language, the sequel server, my</p> <p>8 sequel?</p> <p>9 A. It's actually less crazy than</p> <p>10 other languages, but yes.</p> <p>11 Q. It's often used to represent -- we</p> <p>12 talk a lot about tables, and just to make sure</p> <p>13 that we're all on the same page, I know when I</p> <p>14 think of a table, I tend to think of rows and</p> <p>15 columns. Is that a good way to think of tables?</p> <p>16 A. That's a very good way to think</p> <p>17 about tables.</p> <p>18 Q. So a row would be basically a line</p> <p>19 that goes horizontally, kind of like the horizon</p> <p>20 right like the sunset, and a column would be the</p> <p>21 ones that go up and down across the graph; is</p> <p>22 that right?</p> <p>23 A. Correct. Actually the name of the</p> <p>24 columns are described there like pid, tbid,</p>	<p>1 given particular photo?</p> <p>2 A. Absolutely.</p> <p>3 Q. Is that correct?</p> <p>4 A. Yes.</p> <p>5 Q. So really what we have got here is</p> <p>6 we have got album I.D. What type of information</p> <p>7 is an album I.D.?</p> <p>8 A. It's an identifier which uniquely</p> <p>9 identifies an album. So it's a string of</p> <p>10 numbers.</p> <p>11 Q. And an album FBI, that's just a</p> <p>12 special Facebook type album?</p> <p>13 A. Correct.</p> <p>14 Q. And then the user is the person</p> <p>15 who is uploading the photo?</p> <p>16 A. Or the user that owns the album.</p> <p>17 Q. The one that owns the album. And</p> <p>18 creating I.D., the one who made?</p> <p>19 A. Create the actual photo that is</p> <p>20 uploaded.</p> <p>21 Q. So all of these type, all of these</p> <p>22 columns have some form of information about the</p> <p>23 photo itself, types of information?</p> <p>24 A. That's context information, so</p>

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<p>1 when the photo is uploaded, a lot of information</p> <p>2 about when this event happens is captured and</p> <p>3 stored in this table which is part of the</p> <p>4 metadata.</p> <p>5 Q. So the table, the table itself</p> <p>6 contains metadata; correct?</p> <p>7 A. Yes.</p> <p>8 Q. And, in fact, the metadata that --</p> <p>9 well, let's take it step by step.</p> <p>10 So now, please show me the code</p> <p>11 that inserts -- that tells the Facebook system</p> <p>12 to insert information into that table?</p> <p>13 A. Okay. So I don't know if you have</p> <p>14 a particular preference for one of the</p> <p>15 particular use cases.</p> <p>16 Q. How about the one, let's just do a</p> <p>17 photo, uploading a profile photo.</p> <p>18 A. Okay. So let me -- I want to make</p> <p>19 sure that I give you the right file.</p> <p>20 Q. Absolutely.</p> <p>21 A. Nothing would be worse than me</p> <p>22 telling you the wrong file.</p> <p>23 Q. Too many letters and numbers, I</p> <p>24 prefer that you find the right one.</p>	<p>1 is that right?</p> <p>2 A. Yes.</p> <p>3 Q. And so when we see insert into</p> <p>4 photo, that means put information into the photo</p> <p>5 table; is that right?</p> <p>6 A. That is correct. Beside the fact</p> <p>7 that performing that sequel is the insertion of</p> <p>8 this context information that is being captured</p> <p>9 in the table that is part of the metadata.</p> <p>10 Q. So we're going to insert metadata,</p> <p>11 because each of those is a type of information</p> <p>12 about the data, we're going to insert metadata</p> <p>13 into the row of the table that we were just</p> <p>14 talking about?</p> <p>15 A. Correct.</p> <p>16 Q. Could you just show the one that I</p> <p>17 put some numbers into.</p> <p>18 So here is it without the metadata</p> <p>19 inserted into the row; right?</p> <p>20 A. Correct.</p> <p>21 Q. And then if the insert into</p> <p>22 command is called because a photo is uploaded,</p> <p>23 these are not real numbers, but something like</p> <p>24 this would potentially happen; is that right?</p>
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<p>1 A. I fully understand.</p> <p>2 So this could be the photos.php.</p> <p>3 Q. We're looking for an insert.</p> <p>4 There we go.</p> <p>5 A. Here it is.</p> <p>6 Q. So this, and there is actually</p> <p>7 some real life English up above it; right?</p> <p>8 A. Yes.</p> <p>9 Q. And what does that real life</p> <p>10 English, for computer programmers, what does that</p> <p>11 real life English mean?</p> <p>12 A. So whenever you see like either a</p> <p>13 double slash like in that case or some times</p> <p>14 something that looks like this, so with this</p> <p>15 format, those are comments, that means that the</p> <p>16 developers themselves have written some</p> <p>17 information to help other developers understand</p> <p>18 what goes on here.</p> <p>19 Q. So kind of a like note to self or</p> <p>20 note to person who comes by?</p> <p>21 A. Note to self or to others.</p> <p>22 Q. Here the note doesn't mean put the</p> <p>23 picture in here, again, it means put this</p> <p>24 information into the table in the right order;</p>	<p>1 A. That's correct.</p> <p>2 Q. That's correct. And so then that</p> <p>3 row with all of --</p> <p>4 MS. KEEFE: Your Honor, may I</p> <p>5 approach the screen, too?</p> <p>6 THE COURT: Yes may.</p> <p>7 BY MR. RHODES:</p> <p>8 Q. So that row, with all of these</p> <p>9 pieces of information and by pieces of</p> <p>10 information, this is why you made me be very</p> <p>11 careful, because the pieces of information are</p> <p>12 the bits or the numbers that are here as opposed</p> <p>13 to the type which is the column headers; right?</p> <p>14 A. Correct.</p> <p>15 Q. So when the photo is uploaded and</p> <p>16 the Facebook computer code says I have got a</p> <p>17 photo, now I need to insert into the photo table</p> <p>18 metadata about that photo; right?</p> <p>19 A. This is the context information</p> <p>20 that I referred to many times. So what the</p> <p>21 Facebook does when there is an upload, it looks</p> <p>22 to say, oh, for example, who created this photo,</p> <p>23 and when it was created. It's been modified and</p> <p>24 captures that information and stores it as</p>

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1 context information in the metadata.	1 Q. Good afternoon.
2 Q. Absolutely. So what we have is a	2 A. Good afternoon.
3 user created data, a photo?	3 Q. Thank you.
4 A. Correct.	4 Right before we broke for lunch,
5 Q. We have captured context	5 we were talking about the photo table. Do you
6 information about that photo, so who did it,	6 remember that?
7 where they did it, how big it is, et cetera, and	7 A. Yes.
8 we have captured that in metadata, data about	8 Q. And now in the photo table, there
9 the photo, and we have stored it in a unique row	9 actually fourteen different columns that will
10 in the photo table on the Facebook server?	10 contain different types of information. That's
11 A. Correct.	11 what we were talking about; right?
12 MS. KEEFE: Actually this is a	12 A. Yes.
13 fantastic time to break, Your Honor, if you	13 Q. And single individual users don't
14 would like.	14 have individual photo tables; right, there is --
15 THE COURT: I agree. We will let	15 Facebook has a photo table for which numerous
16 our jurors go for lunch and have you back here	16 entries about different photos can be entered;
17 in time for 1:30.	17 is that correct?
18 (Jury leaving the courtroom at	18 A. That is correct.
19 12:30 p.m.)	19 Q. So, for example, the first row may
20 THE COURT: We'll see you all	20 be metadata about the photo that I entered. So
21 again at 1:30.	21 my profile picture, and the very next row may
22 (A luncheon recess was taken.)	22 actually be the metadata about John Vineyard's
23 THE COURT: Good afternoon. Bring	23 photo; is that correct?
24 the jury in.	24 A. That's all metadata. It's all
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1 MR. RHODES: Your Honor, may we	1 part of the metadata that is stored on the
2 raise one very quick thing. This is the last	2 metadata storage component.
3 witness for their case in chief and they'll rest	3 Q. But in this particular instance,
4 in about twenty minutes, a half hour or so. I	4 it is the metadata about the photo in the
5 don't want you to have to pull the jury in and	5 particular row of the photo table; correct?
6 out. I will need to make a record of a motion,	6 To be -- just to be precise, that
7 I just wanted to flag it for you. Do you want	7 would be the context information that is
8 me to suggest a side-bar?	8 captured and it's stored as metadata --
9 THE COURT: Yes, just suggest a	9 A. That is correct.
10 side-bar and we'll do that very briefly.	10 Q. -- in that row of the photo table?
11 MR. RHODES: Thank you.	11 A. Absolutely.
12 THE COURT: That's it?	12 Q. Now, the database schema that you
13 MR. RHODES: Yes.	13 were looking at earlier, showing us earlier,
14 THE COURT: Okay. Bring the jury	14 tells us how to create -- sorry, not us. It
15 in.	15 tells Facebook how to create lots of different
16 (Jury entering the courtroom at	16 tables; is that correct?
17 1:41 p.m.)	17 A. That's correct.
18 THE CLERK: Please be seated.	18 Q. Could you actually pull up that
19 THE COURT: Good afternoon.	19 database schema code again, please?
20 Welcome back. We'll proceed with the	20 A. Of course.
21 cross-examination.	21 Q. The portion for create and please
22 MS. KEEFE: Thank you, Your Honor.	22 go to the very first page. Let's just see how
23 We recall Dr. Vigna to the stand, please.	23 we start learning how to do these.
24 BY MS. KEEFE:	24 A. That's the very first page.

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1 Q. Okay. So can you scroll down	1 A. Two.
2 until you find the instructions for creating a	2 Q. And what would my -- what would
3 table called add market?	3 the titles of my columns be?
4 A. Add market?	4 A. It would be ID and list.
5 Q. I think there's one in there for	5 Q. That's L-I-S-T?
6 that.	6 A. Yeah, like a list of ads.
7 A. What -- oh, typing in the wrong	7 Q. And then if the Facebook source
8 place. Now, I'm changing the schema of	8 code were to call on this table -- in other
9 Facebook. I don't want to do that,	9 words, if there was an insert into command, it
10 I don't want to do that. It's	10 would say insert information from the website
11 add_market?	11 into ads_disallow, ID, list?
12 Q. I believe so. If not, we can pick	12 A. Not necessarily. That -- one
13 another one.	13 possibility would be that. It would be a subset
14 A. I'll find it. Don't worry.	14 of those columns.
15 That's my job.	15 Q. But it's -- but this particular
16 It's not --	16 table would contain the particularized set of
17 Q. I think it might be A-D-D?	17 information that the source code required for
18 A. Oh, add market. Okay.	18 ads_disallow table with these columns?
19 Whoops. No.	19 A. Sorry. I don't understand when
20 Q. Okay. You know what --	20 you say source. It would require -- it's not --
21 A. What if I look for market?	21 so you mean that the source code would perform
22 Q. We can go ahead and go back up to	22 an operation?
23 the very top and find -- what's the first one?	23 Q. Yes.
24 A. Sorry.	24 A. It would insert some information
Page 791	Page 793
1 Q. I'm just trying to --	1 in that table?
2 A. This one is ads.	2 Q. Yes.
3 Q. And how many -- let's see how	3 A. Absolutely. Yes.
4 many -- that's a long one.	4 Q. And could you pull up the photo
5 How about a short one? Can you	5 table again?
6 find me a short one?	6 And while it's possible, for
7 A. This is pretty short.	7 example, the column headers between photo table
8 Q. Ads_disallow is a brilliant one.	8 and ads_disallow table, in this case, are
9 Let's try that one.	9 different; is that right?
10 A. Yeah.	10 A. That is correct.
11 Q. Okay. So I'm going to go over to	11 Q. And it's possible that sometimes
12 the white board, so I'm going to have to yell a	12 tables will include some of the same information
13 little bit. But actually I'm loud enough	13 in terms of the fact that there may be a column
14 probably.	14 that is similar, but that the totality of the
15 If I were to draw the table the	15 information in one table will be different from
16 way that the code tells me to for	16 the totality or the set of information in
17 ads_disallow --	17 another table; is that right?
18 A. Correct.	18 A. I would have to see what tables
19 Q. -- so we'll say this is the	19 you're talking about in order to be able to
20 ads_disallow. That's kind of our table; right?	20 answer, first of all.
21 A. Yes.	21 Q. Okay.
22 Q. So I would draw a box. How many	22 A. There is replication. But, for
23 columns would I put in the ads_market disallow	23 example, in this case, if I look at information
24 table?	24 in ads_disallowed and for table, they're

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<p>1 different tables.</p> <p>2 Q. And the information -- the subset</p> <p>3 of information -- so if you took just the</p> <p>4 information that had been stored into those</p> <p>5 tables, the metadata, --</p> <p>6 A. Correct.</p> <p>7 Q. -- it would be different from the</p> <p>8 metadata that was stored in the total set of</p> <p>9 metadata that was stored in the ads_disallow</p> <p>10 table?</p> <p>11 A. Well, I have to be careful</p> <p>12 answering here, because I don't think that it's</p> <p>13 metadata that's installed in that particular</p> <p>14 table.</p> <p>15 Q. Okay.</p> <p>16 A. I mean, let me explain.</p> <p>17 Relational database is one way to store</p> <p>18 information. So you can store -- it's like a</p> <p>19 file system.</p> <p>20 So it would be like a file system</p> <p>21 of a computer. On the disk, you can store</p> <p>22 anything. You can store pictures. You can</p> <p>23 store Word documents.</p> <p>24 And it's how you use it that gives</p>	<p>1 information in ads_disallow is going to be</p> <p>2 different from the information in photo table as</p> <p>3 a total set? Total set ads_disallow, if you put</p> <p>4 it here would be different from the total set of</p> <p>5 information for photo table put in here?</p> <p>6 A. Fantastic. If you want to</p> <p>7 clarify, if you write in the first row two</p> <p>8 numbers that are not appearing in the first row</p> <p>9 of photo table, I will be happy to say yes.</p> <p>10 Q. Okay.</p> <p>11 A. You can put alpha and beta. Yeah.</p> <p>12 Perfect. Now, I'm absolutely sure</p> <p>13 that those set of data aren't there.</p> <p>14 Q. Now, if we go back to your use</p> <p>15 case in the very beginning, I think of all the</p> <p>16 use cases, you had a profile photo being</p> <p>17 uploaded to John Vineyard's profile page; is</p> <p>18 that right?</p> <p>19 A. I'm not sure if that's true for</p> <p>20 use case number three, but I think you're right</p> <p>21 actually.</p> <p>22 Q. It's in the flow somewhere?</p> <p>23 A. Yeah. Yeah. Yeah. It is how it</p> <p>24 starts, because it's the first data. Yeah.</p>
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<p>1 meaning to the particular data that you store.</p> <p>2 So when you're talking about this storage</p> <p>3 component, it uses memory, the file system and</p> <p>4 the database.</p> <p>5 The type of data in this case, you</p> <p>6 show the photo table for me that is context</p> <p>7 information that stores metadata. I'm not sure</p> <p>8 what ads_disallow does.</p> <p>9 But if I have to perform a wild</p> <p>10 guess, it's to block certain ads from appearing,</p> <p>11 and to me is not metadata that is being captured</p> <p>12 as context information.</p> <p>13 Q. So if it were to be data that was</p> <p>14 stored in that table, it would be different data</p> <p>15 from the metadata in the photo table?</p> <p>16 A. Let's -- it could.</p> <p>17 Q. Okay.</p> <p>18 A. Okay. But for example, it could</p> <p>19 be a copy of the data. It could be the same.</p> <p>20 It's difficult to tell. You know,</p> <p>21 if you show me an instance and I have sufficient</p> <p>22 context, I would perfectly be able to tell. But</p> <p>23 it's a little hypothetical.</p> <p>24 Q. I only want to know if the</p>	<p>1 Q. Because you still have to bring</p> <p>2 that in as the first data, --</p> <p>3 A. Correct.</p> <p>4 Q. -- the user to find data?</p> <p>5 So this was the page that would</p> <p>6 show up after you had uploaded John Vineyard's</p> <p>7 photo; right?</p> <p>8 A. Right.</p> <p>9 Q. And again, sorry, I'm going to</p> <p>10 have to approach and put the claim up.</p> <p>11 A. That's fine. Let me do it for</p> <p>12 you.</p> <p>13 Q. Oh, thank you very much.</p> <p>14 A. Which one do you want.</p> <p>15 Q. Claim 1, please.</p> <p>16 Thank you, Doctor.</p> <p>17 Just because -- bring us back to</p> <p>18 the claim. That data, the photo that you had</p> <p>19 uploaded was the user created content, the user</p> <p>20 defined data.</p> <p>21 I think it's on the third line</p> <p>22 there --</p> <p>23 A. Yeah.</p> <p>24 Q. -- which you created in the first</p>

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<p>1 context in your profile page?</p> <p>2 A. That is correct.</p> <p>3 Q. And the metadata that captured</p> <p>4 context information about that photo was stored</p> <p>5 in the photo to the row of the photo table we</p> <p>6 had been talking about?</p> <p>7 A. It was stored in the metadata</p> <p>8 using the database.</p> <p>9 Q. In that row of the photo table;</p> <p>10 correct?</p> <p>11 A. Absolutely.</p> <p>12 Q. So now in the use case, John</p> <p>13 Vineyard can move from his profile page over to</p> <p>14 Mary Smith's profile page; is that right?</p> <p>15 A. That is correct.</p> <p>16 Q. Can we do that so John has just</p> <p>17 moved from John's page to Mary's page? So we've</p> <p>18 actually had, according to the claim, a change</p> <p>19 of the user from a first context to a second</p> <p>20 context; is that right?</p> <p>21 A. That is correct.</p> <p>22 Q. So in this case, the first context</p> <p>23 would be John's profile?</p> <p>24 A. Mm-hmm.</p>	<p>1 Q. What's the other part?</p> <p>2 A. Well, so as I explained, the</p> <p>3 cookie has an identifier that is incorporated in</p> <p>4 every request performed to the website. And by</p> <p>5 doing this, they're able to track where the user</p> <p>6 performs the request.</p> <p>7 But then they also track other</p> <p>8 action. So when the user performs an action,</p> <p>9 for example, it writes on the wall of Mary</p> <p>10 Smith. They track this action, okay, on the</p> <p>11 basis of the fact that they know who this person</p> <p>12 is, and they store the tracking information in</p> <p>13 the metadata, updating the metadata as a</p> <p>14 consequence.</p> <p>15 Q. For just the move -- just the move</p> <p>16 that John made over to Mary's site, the tracking</p> <p>17 component on the Facebook system, in your</p> <p>18 opinion, is the use of the user ID in the cookie</p> <p>19 that knows where you were and where you've moved</p> <p>20 to; is that correct?</p> <p>21 A. So if I understand what you're</p> <p>22 saying, the tracking component uses the cookie</p> <p>23 and that information in the request to track the</p> <p>24 fact that a user moved from one profile to</p>
Page 799	Page 801
<p>1 Q. And the second context would be</p> <p>2 Mary's profile?</p> <p>3 A. That is correct.</p> <p>4 Q. And you've told us that there is a</p> <p>5 tracking component on the Facebook website --</p> <p>6 A. Correct.</p> <p>7 Q. -- that watches this movement?</p> <p>8 A. That tracks the actions of the</p> <p>9 user. And as I explained, it does determine who</p> <p>10 you are, where you go and what you do.</p> <p>11 Q. And in fact --</p> <p>12 A. As a subset. Sorry.</p> <p>13 Q. No, please go ahead.</p> <p>14 A. As a subset that tracks that you</p> <p>15 move from one profile to the next.</p> <p>16 Q. And the tracking part -- sorry.</p> <p>17 Let me rephrase.</p> <p>18 And the tracking component tracks</p> <p>19 the user in Facebook by relying on information</p> <p>20 that is sent back and forth between the user's</p> <p>21 computer and Facebook in terms of the user ID in</p> <p>22 a cookie; is that correct?</p> <p>23 A. That is part of how tracking</p> <p>24 happens.</p>	<p>1 another?</p> <p>2 Q. Yes.</p> <p>3 A. That is correct.</p> <p>4 Q. Now, when John moves to Mary's</p> <p>5 profile, is it possible that John just sits</p> <p>6 there and does nothing? He can just look at the</p> <p>7 things on Mary's profile, realize that she's had</p> <p>8 kind of a boring day and then leave; is that</p> <p>9 possible?</p> <p>10 A. That is possible.</p> <p>11 Q. And so it's entirely possible that</p> <p>12 John can access the information on Mary's</p> <p>13 profile and do no action?</p> <p>14 In other words --</p> <p>15 A. What do you mean by "access the</p> <p>16 information"?</p> <p>17 Q. In other words, he can see the</p> <p>18 information that's on Mary's file just by moving</p> <p>19 there?</p> <p>20 A. Yes.</p> <p>21 Q. And in fact, John could navigate</p> <p>22 to Farmville from here and feed his sheep?</p> <p>23 A. I'm not familiar with Farmville,</p> <p>24 but I guess you know more than I do. Yeah, I</p>

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1 guess so.	1 It's equivalent in what other
2 Q. And then he can go back to his	2 people would say.
3 profile at the very end of the day just to see	3 Q. Now, when John posted that
4 if anything else has happened and then maybe go	4 information on Mary's wall, when you were
5 to bed, something like that?	5 talking about, I think it was Claim 7, you said
6 A. Correct.	6 that that Wall post, the exact words, How are
7 Q. Similarly, John can come to Mary's	7 you, that's also user created data; is that
8 profile, and he can choose to write like you	8 right?
9 discussed earlier in the box on her Wall; is	9 A. Can you bring up Claim 7?
10 that correct?	10 Q. It's right behind you. It's on
11 A. That is correct.	11 the board.
12 Q. And in order to accomplish the How	12 A. Oh, okay.
13 are you, he has to actually type into his	13 Q. So you have --
14 keyboard the words How are you; is that right?	14 A. Correct.
15 A. In this particular example, that's	15 Q. Okay. So the language, how are
16 what is suggested.	16 you is also user created data, this time in the
17 Q. And right now, again, sometimes	17 second context?
18 the phone rings, something goes crazy, John	18 A. Yes.
19 could get distracted and leave and not share the	19 Q. And that is information itself
20 Wall post; is that correct?	20 that will be stored somewhere on Facebook's
21 A. That is correct.	21 servers?
22 Q. And he may even decide, I don't	22 A. Correct.
23 want to write on Mary's wall today. I'm just	23 Q. Now, at the same time, Facebook
24 going to go talk to somebody else or go back to	24 also captures context information that is user
Page 803	Page 805
1 my profile page; is that right?	1 created data; is that right?
2 A. Absolutely.	2 A. That is correct.
3 Q. And if John does not push share,	3 Q. And if I remember right, that
4 is the phrase that he typed in stored anywhere	4 happens in the Wall table; is that correct?
5 on Facebook?	5 A. The context information about the
6 A. Not. At this point, no.	6 Wall post will be stored in the Wall table. I
7 Q. So now John decides, no, I really	7 think you're correct.
8 do want to talk to Mary. I do want to see how	8 Q. Can you go back to the source code
9 she's doing today.	9 for us, please?
10 In order to cause the information	10 A. Yes.
11 How are you to be sent to Facebook so that it	11 Q. The schema. And this time, go to
12 can be stored and people can access it, he has	12 the Create wall table, please.
13 to push the share button; is that right?	13 A. Okay.
14 A. That is correct.	14 Q. And here, these are the
15 Q. Okay. So let's push share.	15 instructions to create a table just like we've
16 And what we've seen here is that	16 been talking about, but this time for
17 John has now posted a comment, I think that's	17 information, context information about what has
18 the word they use at Facebook; right?	18 been created on the wall; is that correct?
19 He's posted a comment on Mary's	19 A. That is correct.
20 Wall?	20 Q. And I had a drawing of what the
21 A. Yes.	21 Wall table would look like because the headers
22 Q. Is that language that you're	22 on the columns are different.
23 familiar with?	23 So on the Wall table, again,
24 A. Yeah. Yeah.	24 create gave us the columns by giving us those

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<p>1 little bits of information; right?</p> <p>2 And those bits of information were</p> <p>3 each used to create different columns in the</p> <p>4 Wall table; is that correct?</p> <p>5 A. I'm so sorry. I missed it.</p> <p>6 Q. The same way that the photo table</p> <p>7 was created, you had the --</p> <p>8 A. Oh, yeah.</p> <p>9 Yeah. Absolutely.</p> <p>10 Q. -- the table and then the</p> <p>11 information?</p> <p>12 A. Sorry. I couldn't understand.</p> <p>13 Yes.</p> <p>14 Q. Same thing done here; right?</p> <p>15 A. Same thing.</p> <p>16 Q. And so here, we're now going to</p> <p>17 create Wall table using the command Create table</p> <p>18 with the columns that are specified; right?</p> <p>19 A. That is correct.</p> <p>20 Q. Now, in the photo table, I think</p> <p>21 we had 14 columns. Does that sound about right?</p> <p>22 A. Yeah.</p> <p>23 Q. And in the wall table, we have 1</p> <p>24 think it's eight?</p>	<p>1 A. Sorry. Can you repeat that?</p> <p>2 Q. The metadata here is the single</p> <p>3 row of information in the Wall table about that</p> <p>4 Wall post; correct?</p> <p>5 A. So when that metadata -- when the</p> <p>6 Wall is posted, they're actually two pieces of</p> <p>7 metadata that are created as execution of the</p> <p>8 code. There is the capturing of the context</p> <p>9 that I showed there as part of the metadata, and</p> <p>10 there's also the creation of tracking</p> <p>11 information that is also part of the metadata.</p> <p>12 And so this shows the context</p> <p>13 information that is captured by the context</p> <p>14 component.</p> <p>15 Q. And so the metadata about the Wall</p> <p>16 post captured in context information is here</p> <p>17 in the first row of the Wall table; correct?</p> <p>18 A. Right.</p> <p>19 Q. There is also metadata that is</p> <p>20 stored in the tracking metadata as reaction to</p> <p>21 posting this particular data.</p> <p>22 And that's the Minified Wall</p> <p>23 table, the Minified story table; is that right?</p> <p>24 A. That is correct.</p>
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<p>1 A. That is correct.</p> <p>2 Q. And so when the data was created</p> <p>3 on the Wall post in that second context,</p> <p>4 Facebook also captured context information about</p> <p>5 that Wall post and entered it into the Wall</p> <p>6 table; is that right?</p> <p>7 A. That is correct.</p> <p>8 Q. And was that also done using the</p> <p>9 other part of the code this time that said</p> <p>10 insert into Wall and then the string of column</p> <p>11 identifiers for the Wall?</p> <p>12 A. Yes. Correct.</p> <p>13 Q. And so here we would have metadata</p> <p>14 about the Wall post, so context information</p> <p>15 captured in metadata about the Wall post stored</p> <p>16 in a single row of the Wall table; is that</p> <p>17 right?</p> <p>18 A. So, it will be the context</p> <p>19 information that is captured by the context</p> <p>20 component and that is stored by the storage</p> <p>21 component in the metadata.</p> <p>22 Q. And the metadata here is the</p> <p>23 single row of the wall table which relates to</p> <p>24 the Wall post; correct?</p>	<p>1 Q. Okay. So can you find the source</p> <p>2 code for me that -- so this is the Wall table</p> <p>3 for the metadata about the user created data,</p> <p>4 which was the Wall post in the second context.</p> <p>5 And now the tracking information,</p> <p>6 can you pull up for me the code that sets up the</p> <p>7 Minified story's table, please?</p> <p>8 A. Absolutely. Let me find it super</p> <p>9 fast.</p> <p>10 Here it is. Let's see if I can</p> <p>11 find it.</p> <p>12 Here it is.</p> <p>13 Q. And again, that's fine. This is</p> <p>14 the second step; right?</p> <p>15 This is where the tables have</p> <p>16 already been created and now we have --</p> <p>17 A. Oh, sorry. Sorry.</p> <p>18 Q. No. No.</p> <p>19 No. It's okay.</p> <p>20 It's okay. I think we all know</p> <p>21 now you create it first.</p> <p>22 A. One click away.</p> <p>23 Q. Okay. So now we create it.</p> <p>24 And --</p>

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<p>1 (Discussion off the record.)</p> <p>2 MR. ANDRE: I beg the Court's</p> <p>3 indulgence. My eyes are not as good as they</p> <p>4 used to be, and this font is very small.</p> <p>5 BY MR. ANDRE:</p> <p>6 Q. Dr. Vigna, if you turn to the</p> <p>7 second page of Exhibit 190, do you see a</p> <p>8 reference to context switching there?</p> <p>9 A. Yes. It's the fourth bullet from</p> <p>10 the top. It says context switching, photo</p> <p>11 browsing is either not easy/obvious or not</p> <p>12 possible.</p> <p>13 Q. That's a photo in the current</p> <p>14 state, is that correct?</p> <p>15 A. I think what they're referring to</p> <p>16 is they would like a system where they could</p> <p>17 easily access same photo from different context.</p> <p>18 Q. And if you look at the next</p> <p>19 paragraph below that where it says improvements</p> <p>20 that we want to make to mitigate the above?</p> <p>21 A. Yeah, it describes several ways in</p> <p>22 which they would improve the website so actually</p> <p>23 one can see a picture in different context. And</p> <p>24 I think that this will be more apparent when I</p>	<p>1 provided these documents to counsel and they</p> <p>2 didn't lodge an objection at the time. And the</p> <p>3 deposition testimony confirmed that context</p> <p>4 switching was implemented at Facebook.</p> <p>5 THE COURT: The objection is</p> <p>6 overruled. It's admitted.</p> <p>7 BY MR. ANDRE:</p> <p>8 Q. If you go to Exhibit 208, PTX 208,</p> <p>9 Dr. Vigna, is this another document from</p> <p>10 Facebook's confidential internal wiki?</p> <p>11 A. Correct.</p> <p>12 Q. And what is this document showing?</p> <p>13 A. It talks about how photos are</p> <p>14 actually stored. And it's called a storage</p> <p>15 architecture. And in a way, it really shows how</p> <p>16 there was a general concept of a storage</p> <p>17 component, and how things can be done, different</p> <p>18 things can be done in different ways under the</p> <p>19 hood. But the basic concept is how are we going</p> <p>20 to store all these pictures. We want something</p> <p>21 where I can put a picture and when I need it</p> <p>22 later I can pick it up in, for example,</p> <p>23 different sizes because of thumbnails and things</p> <p>24 like that.</p>
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<p>1 describe how, for example, a picture of a user</p> <p>2 can be uploaded to a different album and these</p> <p>3 two different contexts can be accessed</p> <p>4 independently.</p> <p>5 Q. The fourth bullet point there that</p> <p>6 talks about every photo/video permalink page</p> <p>7 will have had all contexts in which the photo</p> <p>8 may be displayed, and a mechanism for switching</p> <p>9 to a new stream than the current context. Do</p> <p>10 you see that?</p> <p>11 A. Yes. In fact, I will later</p> <p>12 exemplify how I have actually a movie that shows</p> <p>13 you you can move from one context to another and</p> <p>14 show how the picture is related to both</p> <p>15 contexts.</p> <p>16 MR. ANDRE: Your Honor, I would</p> <p>17 like to move Exhibit PTX 190 into evidence.</p> <p>18 MS. KEEFE: Actually I would</p> <p>19 object to this document, Your Honor. This was</p> <p>20 -- these are all forward looking statements and</p> <p>21 I believe the deposition testimony about them</p> <p>22 indicate that.</p> <p>23 THE COURT: Mr. Andre.</p> <p>24 MR. ANDRE: Your Honor, we</p>	<p>1 So, for example, the first line</p> <p>2 sort of like summed it up, and each photo</p> <p>3 uploaded by a user is stored on disk as several</p> <p>4 files of different sizes.</p> <p>5 And, you know, then they talk</p> <p>6 about they're grouped logically into volumes,</p> <p>7 which are the basic unit of backend storage.</p> <p>8 And then all the stuff -- actually, can you pull</p> <p>9 it up, I don't care about the stuff below</p> <p>10 particularly, I mean, we can discuss it, but</p> <p>11 it's not very interesting.</p> <p>12 Another example is a content</p> <p>13 distribution network below that shows that these</p> <p>14 images are cached using a technique that makes</p> <p>15 it easier for people to access these pictures in</p> <p>16 a way there is closer to themselves, so that</p> <p>17 they optimize the way in which things are</p> <p>18 retrieve from the storage component.</p> <p>19 It is a very sophisticated largely</p> <p>20 distributed system whose overall goal is</p> <p>21 storage. So there are all these different ways,</p> <p>22 as we will see there is cache in memory, there</p> <p>23 is the storage architecture, the file system,</p> <p>24 the contribution system network, the volumes,</p>

Page 586	<p>1 all this is a technical detail to implement a</p> <p>2 basic concept, that is I want to put something</p> <p>3 in storage and I want to go be able to get it</p> <p>4 out whenever I want.</p> <p>5 Of course when you talk about</p> <p>6 billions of pictures, it's not going to be</p> <p>7 simple. You know, in a way, it's like when you</p> <p>8 want to store stuff in a storage place at a</p> <p>9 storage unit, you would put in the front of the</p> <p>10 unit the things that you use the most. You</p> <p>11 don't want to put, you know, I don't know, your</p> <p>12 favorite piece of luggage at the end of the</p> <p>13 storage place under your car tires. You want to</p> <p>14 have it in front of the doors so you can just</p> <p>15 pick it. This is the same idea. The overall</p> <p>16 storage component is the storage room, is a</p> <p>17 place where you can put stuff and you can take</p> <p>18 it out. Of course you organize it in different</p> <p>19 ways so the stuff that you need the most, you</p> <p>20 need the more frequently, you can access more</p> <p>21 easily.</p> <p>22 MR. ANDRE: Your Honor, may I</p> <p>23 approach the witness and put back up my board?</p> <p>24 THE COURT: You may. Do you</p>	Page 588	<p>1 Q. And what is your opinion?</p> <p>2 A. Well, the opinion is that Facebook</p> <p>3 infringes that particular element because it</p> <p>4 contains a context component that has the</p> <p>5 quality described there and contains also a</p> <p>6 storage component where that particular data</p> <p>7 described there, context information is stored</p> <p>8 as metadata.</p> <p>9 Q. And would you mind taking one of</p> <p>10 those markers and putting a check in the box to</p> <p>11 indicate that you have formed that opinion?</p> <p>12 A. No problem. If I don't kill</p> <p>13 myself getting in and out.</p> <p>14 Q. Tied up there with cables?</p> <p>15 A. Yeah.</p> <p>16 Q. Let's turn to the second element</p> <p>17 of Claim 1, the tracking component.</p> <p>18 A. Okay.</p> <p>19 Q. Can you describe what is a</p> <p>20 tracking component with regard to Claim 1 of the</p> <p>21 '761 patent?</p> <p>22 A. So, the Claim 1 describes a</p> <p>23 computer implemented tracking component of the</p> <p>24 network-based system for tracking a change of</p>
Page 587	<p>1 anticipate putting it up for long? I'm only</p> <p>2 worried for Ms. Keefe if she needs to pull a</p> <p>3 chair over.</p> <p>4 MS. KEEFE: I think I'll be okay,</p> <p>5 Your Honor.</p> <p>6 THE COURT: Okay.</p> <p>7 MS. KEEFE: Thank you.</p> <p>8 BY MR. ANDRE:</p> <p>9 Q. Dr. Vigna, we have looked at the</p> <p>10 source code, we have looked at a demonstrative</p> <p>11 of you showing how the website works with your</p> <p>12 interceptor program, the confidential internal</p> <p>13 wiki and the public documents that Facebook</p> <p>14 provided. Did you rely on any deposition</p> <p>15 testimony for forming your opinion?</p> <p>16 A. Yes. I also looked at deposition</p> <p>17 testimony that shows that, for example,</p> <p>18 describes how photos are uploaded and stored,</p> <p>19 and context captured.</p> <p>20 Q. And based on all that you've</p> <p>21 reviewed here today, do you have an opinion as</p> <p>22 to whether or not the Facebook website infringes</p> <p>23 the context component claim element of Claim 1?</p> <p>24 A. Yes, I have an opinion.</p>	Page 589	<p>1 the user from the first context to a second</p> <p>2 context of the network-based system and</p> <p>3 dynamically updating the stored metadata based</p> <p>4 on the change, wherein the user accesses the</p> <p>5 data from the second context.</p> <p>6 Q. Can you show the jury how this</p> <p>7 works using the flip pad and the markers that</p> <p>8 are up there, please?</p> <p>9 A. Yes. Let me see if I can do it in</p> <p>10 a way to show the jury without having to get a</p> <p>11 neck pain.</p> <p>12 So the main idea is the following.</p> <p>13 MS. KEEFE: Your Honor, can I.</p> <p>14 THE COURT: Feel free to move if</p> <p>15 you need to, Ms. Keefe.</p> <p>16 THE WITNESS: I will, also.</p> <p>17 THE COURT: I'm most concerned</p> <p>18 that the jury can see it.</p> <p>19 THE WITNESS: Okay. Can you see</p> <p>20 this? So.</p> <p>21 The basic idea is that, you know,</p> <p>22 we have a user and the user is sort of some data</p> <p>23 that want to -- that the user wants to share in</p> <p>24 this, you know, Facebook application.</p>

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<p>1 So the main idea is that the user 2 is within a context, and this context is, for 3 example, his profile page, and he's uploading 4 his new or her new profile page. And this 5 information, so the data, plus context 6 information as we have just seen is captured by 7 this, you know, context component. 8 Okay. And this context component 9 captures the data itself so the raw picture, 10 additional information, and stores it, stores 11 the context information as metadata in something 12 that is managed by a storage component. And we 13 saw what the storage component does and, you 14 know, it's a very simple idea. You put 15 something there, you get it back. But there is 16 metadata, so there is context information right 17 here. 18 But the cool idea of the patent 19 that is also in Facebook is that there is also a 20 tracking component. And what does this tracking 21 component do? The tracking component checks 22 different things, makes sure that, you know, 23 checks who you are when you go to the website, 24 so it identifies who you are, because actions</p>	<p>1 application, and this is data that I want to be 2 able to access. 3 And so this is both the context 4 information captured by the storing component 5 and the tracking information captured by the 6 tracking component are stored as metadata by the 7 storage component. 8 And we will see now how this 9 tracking, also similar to the storage component 10 where we saw that one single functionality, 11 storing something was actually a composition of 12 different mechanisms, we will see also that the 13 tracking component that is used to track people 14 is done using different mechanisms that when 15 come together provide the tracking functionality 16 that is implemented by Facebook. 17 Q. And is it your opinion that -- 18 strike that. 19 Does Facebook contain a tracking 20 component in your opinion? 21 A. Yes, it's my opinion that it does. 22 Q. Could you show us one using your 23 interceptor program, how that occurs? 24 A. Yes.</p>
Page 591	Page 593
<p>1 performed by me will have a different effect 2 than action performed by Paul or by other 3 people. 4 And where you are, so where you 5 are in the website, a little different context 6 or environments in which you can interact with 7 the application. And also what you do. 8 So again, this is a high level 9 component whose main task is to track what you 10 do with the website. And this is a very 11 important thing in collaboration tools because 12 the whole point is I want to know in a 13 collaboration if somebody took an action, 14 somebody modified some data, performed certain 15 operation on the website. 16 And so I want this tracking 17 component to be able to tell me who is doing 18 what to what when. Okay? The important stuff 19 that I'm interested in. 20 And, of course, this information 21 is also stored in the metadata as tracking 22 information. So this is stuff that tells you, 23 you know, that you are modifying the data, so 24 you're performing actions on the website, on the</p>	<p>1 So, for example, in -- I will for 2 example, use this. So before I do this. So in 3 this particular case, what happens is you see 4 here I just click -- sorry, let me -- okay. 5 Sorry. 6 In this particular case, I'm on my 7 profile page and you can see here at the bottom 8 I am going to go and visit Mary Smith. Okay? 9 Now -- 10 Q. I'm sorry to interrupt. I have 11 been hearing this term in this case, and I'm not 12 sure, what's a wall on Facebook? 13 A. Let me explain in a second because 14 I think I want to give you another piece of 15 background. 16 So, you know, there is this 17 context. What the tracking component does is 18 you're going to move from one context to a 19 different context. Okay? So the tracking 20 component will track the fact that a user moved 21 from one context to another. So that's the goal 22 of this tracking component, you were, for 23 example, watching your profile or your wall and 24 suddenly you're watching the profile or the wall</p>

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1 of another person.
 2 Now the wall, the wall is just --
 3 it's a natic. It's a component used by Facebook
 4 so that people can write on your wall and send
 5 you fundamentally a message that can be seen by
 6 many people. So if I have a friend and I can go
 7 to their wall and say, you know, oh, I just saw
 8 you at the concert, wasn't that concert great,
 9 everybody sees that message because I wrote it
 10 on her wall. Actually not everybody, there are,
 11 of course, privacy settings that determines who
 12 exactly sees the message. But I think you got
 13 the concept.
 14 So there is tracking, so as you
 15 will see, when you move from one to another, you
 16 perform certain actions and since you changed
 17 based on the fact that you are in a context that
 18 it's different, your actions will generate
 19 metadata that will go and update the metadata
 20 and at the same time for this action, there will
 21 be some data that has been uploaded in this
 22 context that's going to be also fetched and
 23 accessed in this second context.
 24 This is all very abstract, but I'm

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1 going to show you it's very simple when you see
 2 it in practice.
 3 Q. Does the wall also show recent
 4 activity of a user?
 5 A. Absolutely. As we will see, there
 6 are different components again to the tracking,
 7 there is something called the Mini-feed,
 8 something called Multi-feed, the news feed, and
 9 these can be seen in different ways. And I will
 10 show you some, but I'm sure that you will
 11 immediately get the basic idea behind it.
 12 So if you go back here and we go
 13 on, here you can see that I click on the image
 14 of my friend. And as a result, there is a
 15 request that is performed where -- where we are
 16 now under parameters.
 17 And again, you can see again there
 18 is the ID of the user. First thing that I show
 19 you up here is the ID of the user that I want to
 20 go to the profile of.
 21 But also you see this cookie that
 22 I mentioned before a little bit. This cookie is
 23 actually included in every request that a
 24 particular user performs to Facebook.

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1 And this value here, okay,
 2 uniquely identifies that particular user. So
 3 every time a Facebook, a request is made to
 4 Facebook, this particular piece of data is sent
 5 to Facebook to say, by the way, this request
 6 here, here who I am, and I am user John
 7 Vineyard. So Facebook can track for every
 8 request who you are.
 9 So in a way it's like sending with
 10 every phone call your caller ID. So instead of
 11 being anonymous, every time you make this phone
 12 call to Facebook asking for something, saying by
 13 the way, I'm John Vineyard.
 14 You don't see any of this because
 15 it happens under the hood, but in every request
 16 there is this value that is used to identify the
 17 user and to track how the user moves across a
 18 website.
 19 So we're going to send this
 20 request further. You see.
 21 And here we are in the wall of
 22 Mary Smith. And what you see up here is
 23 something.
 24 You know, it's like a piece of

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1 this particular context in which I can write
 2 something and I can publish on the wall of this
 3 user.
 4 So when I go there, I -- you know,
 5 what do you want to cook tonight? Since it's
 6 4:00 p.m., let's make food related.
 7 And you can see that as I press
 8 share, there is another request that is
 9 performed in this case to ajax/updatestatus.php
 10 okay.
 11 And this request, as you can see,
 12 has a number of parameters. It includes, for
 13 example, the type of action, profile update, the
 14 profile ID, the actual content that is provided
 15 by the user.
 16 The target ID. The display
 17 context, which is profile.
 18 And all this information is sent
 19 to the user. As a result, you can see that here
 20 a message is created and that message has my
 21 image with John Vineyard's image, which happens
 22 to be mine and the information that I just put
 23 into this particular thing.
 24 Okay. So this image that I

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<p>1 uploaded in my first context in the profile, 2 remember that I updated my image. I had a 3 different image before. 4 This is the new image that I just 5 uploaded in my first context. Now, I am in my 6 second context and this information is fetched. 7 Okay. 8 At the same time if now I go in 9 and I look at what this image is -- oops, sorry. 10 Let me get out of the way. 11 Here this is unfortunate because 12 it's -- I'm starting here. Sorry. 13 But what I just did, let me go 14 back. This is not -- I apologize. This is not 15 very clear. 16 So what I did here, I used another 17 tool. I told you that I would use two tools. 18 One is the one that catches 19 requests as they go by. The second tool is a 20 tool that allows me to inspect when -- you know, 21 when you look at this page, it's all pretty. It 22 has pictures and text. 23 But actually the code -- even 24 though this is considered code, there is a lot</p>	<p>1 Mary Smith's page the second context? 2 A. Correct. And now you can see 3 that, you know, I close this window. I go back 4 to my profile. 5 And when I go there and you can 6 see that something appeared in my own wall, and 7 there was something to say John wrote on Mary 8 Smith's wall. What this means actually that 9 somebody tracked me, that I went to Mary Smith. 10 Identify that I did something 11 there, created some kind of tracking metadata, 12 which is now showing up in my wall. 13 Okay. So it is obviously -- it is 14 obvious from this point of view that there is a 15 tracking component that is identifying what I'm 16 doing and who I am. 17 Q. And -- 18 A. I think that -- 19 Q. I think we probably have time for 20 this, but can you show me in the source code as 21 well as how it's -- 22 A. Yeah. 23 Q. -- evidenced in the code from 24 Facebook?</p>
Page 599	Page 601
<p>1 of stuff in the background that happens so that 2 this image can be displayed. So you see that 3 down here I have this inspect element. 4 This is a tool called fire bug 5 that I use to see what really is going on in 6 that particular element, which is my little 7 picture. And so the code that you will see here 8 shows that as part of the showing this page, 9 you'll see -- oh, God, this is actually not very 10 good. 11 But you can see that this 12 particular -- I would like to stop it, but -- 13 can I remove this? Oh, yeah. Oh. 14 Much better. I am sorry. 15 So you can see that -- you see 16 this URL, is actually a way to fetch exactly this 17 information that was uploaded in the first 18 context. So what the data that you see here, 19 that is not very pretty to look at, it actually 20 renders -- ends up being displayed this way. 21 And as part of displaying this, 22 you can see that there is the requesting all the 23 information loaded in the first context. 24 Q. So in that particular instance is</p>	<p>1 A. Yes. So one example -- so if you 2 remember, one request that I was performing here 3 is when I was writing on the wall, it was -- 4 this is -- oops. 5 Yeah. I'm looking at my screen 6 that you cannot see. But you see that top line 7 there says post/ajax/updatestatus.php. 8 And so I can go to a source code 9 and, of course, load into my editor the 10 ajax/updatestatus.php. 11 As you can see, this is yet 12 another incredibly non-descriptive piece of 13 code. But the important thing -- the important 14 thing here is that at certain point, this 15 particular file calls the function at wall post 16 that is defined in lib/wall.php. 17 So I'm going to load now another 18 piece of code called lib/wall.php. 19 This is called add wall post. And 20 you can see this is the function. Okay. 21 And right here after awhile it 22 does a number of operations. And you can see 23 here where the cursor is here, something that at 24 this point you will recognize as sequel codes,</p>

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<p>1 the other form of source code that says insert 2 into the wall object.</p> <p>3 Okay. A number of information is 4 to, from, the text, the time, action, the 5 application ID, a number of information into the 6 wall database. So this information is stored.</p> <p>7 After this happens, okay, there is 8 also the creation of metadata in the form of 9 this tracking information. And here I'll show 10 you, this ends up calling another function that 11 is defined in the user action file, which is in 12 f lib/user action/base -- sorry. I'm using 13 this -- okay.</p> <p>14 So, for example, here it says, you 15 know, at the very beginning it said feed-worthy. 16 feed-worthy.</p> <p>17 And we will see what -- you know, 18 feed is, you know, the information that people 19 want to know about what you're doing on the side 20 pretty much. Like adding photos and current -- 21 require multiple function calls to Mini Feed and 22 Falcon. These are other tracking components.</p> <p>23 But pretty much what here it says 24 is that you have to call this method publish on</p>	<p>1 dynamically updated, okay, right here in the 2 form of tracking information. And when this 3 happens, also data that was created in the first 4 context, my profile picture is dragged into the 5 second context and accessed there.</p> <p>6 Okay. And because of these -- all 7 these elements being there, there is 8 infringement for the element.</p> <p>9 Q. And the example that you just 10 showed was writing on someone's wall. Could you 11 show us in the few minutes we've got left here 12 just one more example of joining pages using 13 your interceptor.</p> <p>14 Q. And before you start that, what is 15 a page in Facebook?</p> <p>16 A. So a page in this particular case 17 is -- it's sort of like a way to promote, for 18 example, a business, an idea, or a group. Okay.</p> <p>19 So a page can be, for example, the 20 page for some football team that I am not a big 21 football fan. So probably the -- I don't know 22 -- the Giants; correct, for football?</p> <p>23 Q. New York Giants?</p> <p>24 A. New York Giants.</p>
Page 603	Page 605
<p>1 some kind of action you perform. And this will 2 create a record that action has been performed.</p> <p>3 So if we follow the code, we will 4 see that this published method is actually 5 invoked. And actually if we look at another 6 source code component, and I'm actually 7 simplifying this because there are a number of 8 functions that are called one after another, 9 which is not -- but this is feed 10 suspect/stories/add/insert.php.</p> <p>11 And for example, what we see here 12 is -- let's see if I can find it.</p> <p>13 Yeah. Look at this.</p> <p>14 I think now that you are possibly 15 experts in sequel. But you can see there is 16 another sequel to say enter into Mini Feed 17 stories.</p> <p>18 And here there is the tracking 19 information, a story that is storing part of the 20 tracking information, which is the Mini Feed 21 that says that this particular user performed a 22 certain action on the website.</p> <p>23 So we have a user to move from one 24 context to another. We have metadata being</p>	<p>1 So they will have a page of 2 Facebook and people can be fans of the Giants.</p> <p>3 Q. Philadelphia Eagles might be 4 better here.</p> <p>5 A. I will really -- I confuse 6 baseball with football, so I'm -- don't hold me 7 accountable for that stuff.</p> <p>8 Okay. So I will show you, for 9 example, that an example of fanning a page. So 10 becoming a fan of a page.</p> <p>11 Q. Would you switch your computer? 12 A. Yeah.</p> <p>13 Q. The screen? Thank you.</p> <p>14 A. So, for example, this particular 15 case, I'm on my page and I look for pages that I 16 might be interested in. For example, real 17 Italian pizza.</p> <p>18 Okay. I'm really into real 19 Italian pizza.</p> <p>20 So I like it. The moment I click 21 on that like it, again, a request is made to the 22 website. In this particular case, it's 23 something called post for the resource 24 ajax/pages/fanstatus.php. Okay.</p>

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1 And as you will see in a screenshot,
 2 if you look at the parameters, again, we have
 3 the idea of the page, but also the omnipresent
 4 cookie C_ user that is highlighted right there
 5 that tracks the fact that I am the user who said
 6 I want -- I moved to this page context and I say
 7 I like it.
 8 And when this happens, of course,
 9 I have to put, for security, some control words
 10 that are very, in this recession times, happens
 11 to be pay lowers. I submit this information.
 12 And as a result, a request is made
 13 to post ajax/page/fanstatus.php with similar
 14 parameters. The page ID, the user in the form
 15 of a cookie. And when this is forwarded, you
 16 can see that in this case, it is second context.
 17 My picture here appears, so data
 18 that was created in the first context is
 19 actually tagged and used in the second context,
 20 which is the real Italian pizza page.
 21 And if I look again using the
 22 bug, you will see -- oops. You will see again
 23 that this is information that is stored on the
 24 Facebook content distribution network as a JPEG.

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1 This -- so this is information that I uploaded
 2 that is there mentioned on the web page.
 3 And when I go back to my home, you
 4 can see that is -- I have become in this story
 5 the -- well, I have become an Italian food
 6 lover.
 7 And you can see here that I've
 8 been tracked. My action has been recorded,
 9 stored into metadata and is presented -- sorry,
 10 fade too fast. And is presented here.
 11 John likes real Italian pizza. So
 12 the fact that I joined that page, not only has
 13 created that page image with my profile image
 14 that was created, the first context. So we have
 15 first context, my profile.
 16 I upload my profile picture. Move
 17 from the fan page. I perform an action.
 18 And we have my picture after that
 19 in the second context. And in addition, we have
 20 a generation of metadata in the form of tracking
 21 information that is then appearing back here.
 22 MR. ANDRE: Your Honor, this is
 23 probably a good stopping point. I'd ask your
 24 permission to go remove my board so the jury can

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1 escape that of here.
 2 THE COURT: I think we would all,
 3 including the jury, appreciate that.
 4 THE COURT: While Mr. Andre
 5 returns, I'll remind our jurors that you are
 6 still not to talk about the case with anyone,
 7 don't be getting into any deliberations. If
 8 there is any media coverage of this case, don't
 9 look at it.
 10 Have a good night and be back here
 11 in time to start up at nine o'clock.
 12 THE CLERK: All rise.
 13 (Jury entering the courtroom at
 14 4:25 p.m.)
 15 THE COURT: Dr. Vigna, you can
 16 certainly step down carefully.
 17 Counsel, I have a criminal matter
 18 to attend to in about five minutes, but I did
 19 just want to discuss -- you can all sit down, by
 20 the way. Just get a sense of where we are time
 21 wise, what we anticipate to happen tomorrow in
 22 particular.
 23 MR. ANDRE: Your Honor, we'll be
 24 closing our case tomorrow with Dr. Vigna's

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1 conclusion of his testimony. It will be a
 2 couple more hours, I imagine.
 3 THE COURT: A couple more hours on
 4 direct?
 5 MR. ANDRE: Yes. So I'm hoping we
 6 will have it closed by -- him off the stand by
 7 lunch or shortly thereafter.
 8 THE COURT: There is
 9 cross-examination.
 10 MR. ANDRE: That's true. I figure
 11 it takes about five minutes.
 12 THE COURT: Doubtful. Okay.
 13 MS. KEEFE: You never know.
 14 THE COURT: You never know. And
 15 assuming we get to Facebook's case, you will be
 16 starting with Mr. Cox.
 17 MR. RHODES: Yes, Your Honor.
 18 Then it's Bosworth and the engineers, I think we
 19 have video of Lamb and Keanis, just remembered
 20 that we have video of Mr. McKibben, call
 21 Mr. McKibben live, and it's Greenberg.
 22 THE COURT: So it doesn't sound at
 23 all possible to get to Mr. Greenberg tomorrow;
 24 correct?

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1 MR. RHODES: I think that would be
 2 optimistic.
 3 THE COURT: Okay.
 4 MR. RHODES: Your Honor, may I
 5 have a word with you. We don't need to be on
 6 the record, but at a side-bar with Mr. Andre.
 7 THE COURT: Sure, but I'm going to
 8 bring the court reporter over.
 9 [Side-bar discussion:]
 10 MR. RHODES: I found out that
 11 there is going to be some kind of a TV special
 12 tomorrow.
 13 THE COURT: Why are you
 14 whispering? We can keep this portion of the
 15 transcript under seal.
 16 MR. RHODES: I found out that
 17 there is going to be some kind of TV coverage, I
 18 think it's going to be on Diane Sawyer's, she's
 19 got a nightly news program. I think she's going
 20 to be broadcasting tomorrow night from Facebook
 21 to deal with this certain milestone they reached
 22 with certain users. I thought Paul had a pretty
 23 good point last week to tell somebody not to
 24 look at something, maybe they will. I want you

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1 to know tonight, I just give you the information
 2 for whatever reason you might need it.
 3 THE COURT: At this point you're
 4 not making a request that I instruct the jury in
 5 any way about it?
 6 MR. RHODES: No, I just wanted to
 7 share that with you.
 8 THE COURT: Any comment,
 9 Mr. Andre?
 10 MR. ANDRE: I have no comment.
 11 Congratulations to Facebook.
 12 THE COURT: Thank you for advising
 13 us of it.
 14 (End of side-bar conference.)
 15 THE COURT: We'll be in recess and
 16 I'll see you in the morning.
 17 (Court recessed at 4:29 p.m.)
 18
 19
 20
 21
 22
 23
 24

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1 State of Delaware)
)
 2 New Castle County)
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 4
 5 CERTIFICATE OF REPORTER
 6
 7 I, Heather M. Triozzi, Registered
 8 Professional Reporter, Certified Shorthand Reporter,
 9 and Notary Public, do hereby certify that the
 10 foregoing record, Pages 309 to 612 inclusive, is a
 11 true and accurate transcript of my stenographic notes
 12 taken on July 20, 2010, in the above-captioned
 13 matter.
 14
 15 IN WITNESS WHEREOF, I have hereunto set my
 16 hand and seal this 20th day of July, 2010, at
 17 Wilmington.
 18
 19
 20
 21 Heather M. Triozzi, RPR, CSR
 22
 23
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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	Trial Volume 3
)	
)	
Plaintiff,)	
	)	C.A. No. 08-862-CJF-LPS
v.)	
)	
FACEBOOK, INC., a Delaware corporation,)	
)	
Defendant.)	

July 21, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
BY: JAMES HANNAH, ESQ.

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1 APPEARANCES CONTINUED:
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 4 BLANK ROME, LLP
 BY: STEVEN L. CAPONI, ESQ.
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 -and-
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 COOLEY, GODWARD, KRONISH, LLP
 7 BY: MICHAEL RHODES, ESQ.
 BY: HEIDI L. KEEFE, ESQ.
 8 BY: JEFFREY NORBERG, ESQ.
 9 Counsel for Defendant
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1 THE CLERK: All rise.
 2 THE COURT: Good morning,
 3 everybody.
 4 (Everyone said, Good morning.)
 5 THE CLERK: Be seated.
 6 THE COURT: I thought we could try
 7 to use these few things before I bring the jury
 8 in. I'm wondering if we might be able to
 9 anticipate any of the issues that may, if any,
 10 come up in the remaining of Dr. Vigna's direct,
 11 and see if we can deal with them now and smooth
 12 along the rest of the presentation.
 13 Mr. Andre or Ms. Keefe, any ideas
 14 here?
 15 MR. ANDRE: Your Honor, I don't
 16 know where the catch would be. I don't know if
 17 there's going to be anymore objections to the
 18 demonstratives he's using and the exhibits.
 19 So I think it will just be Dr.
 20 Vigna, you know, working his way through. It's
 21 logistically a little bit difficult to get it
 22 done quickly.
 23 I'm working through it.
 24 THE COURT: I'm less concerned

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1 with the speed than just the interruption, if
 2 there are things I might be able to handle
 3 before we bring the jury in.
 4 MS. KEEFE: I think I made my
 5 record at this point clearly. The only other
 6 thing I would do is insert an objection when the
 7 first viewing of the collaborative API comes up.
 8 But if Your Honor prefers, I can sit on the
 9 record that I've already made that we object to
 10 anything that's near.
 11 THE COURT: Yeah.
 12 MR. ANDRE: Just to make life
 13 easy, we've decided not to use the second
 14 demonstrative, the collaborative.
 15 THE COURT: Okay.
 16 MS. KEEFE: That's very helpful.
 17 MR. ANDRE: It's something. You
 18 Honor's admonition, that we aimed on the side of
 19 caution. We think that Dr. Vigna's testimony is
 20 persuasive enough the way it is. So we will not
 21 be using that demonstrative exhibit.
 22 MS. KEEFE: I don't anticipate any
 23 problems. If something comes up that's a
 24 standard objection, I will still have to make

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1 it. But nothing as to the demonstratives.
 2 THE COURT: Right. With respect
 3 to the demonstratives, I think I was thrown a
 4 little bit because you did have an objection to
 5 one of the -- this isn't the demonstratives.
 6 Excuse me.
 7 In the binder when we put the
 8 binder in front of the jury, I had understood
 9 there weren't going to be any objections to the
 10 documents and there was the one that had to do
 11 with perspective language, I think.
 12 MS. KEEFE: Yeah. I think in that
 13 one. There were no others.
 14 And in that one, it was because
 15 he's relying on a document that has
 16 forward-looking language to indicate that it
 17 exists, and that it's something that Facebook
 18 actually is doing. The testimony in the
 19 depositions was that Mulligan does not happen
 20 it's not a program that's being
 21 run by Facebook right now. And I think there's
 22 potentially some confusion about that.
 23 MR. ANDRE: We, obviously, contest
 24 that testimony. We have the testimony. It says

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<p>1 that Mulligan is running and any ways --</p> <p>2 THE COURT: Right. I'm less</p> <p>3 concerned with the substance at the moment than</p> <p>4 just the procedure of if you have that</p> <p>5 objection, to that document, we should have</p> <p>6 talked about that before we put the binder in.</p> <p>7 MS. KEEFE: Well, I apologize. I</p> <p>8 think that I couldn't know how they were going</p> <p>9 to use it.</p> <p>10 If there was some other purpose</p> <p>11 for the document, it may not have been</p> <p>12 objectionable. So I do apologize that I didn't</p> <p>13 anticipate that potential objection.</p> <p>14 THE COURT: Understood. Okay.</p> <p>15 And you expect we have a couple</p> <p>16 more hours possibly of the direct?</p> <p>17 MR. ANDRE: At least. I think</p> <p>18 we're still on Claim 1. So we've got -- we'll</p> <p>19 get through the later claims a little faster,</p> <p>20 obviously.</p> <p>21 THE COURT: And is he going to be</p> <p>22 using the source code more this morning?</p> <p>23 MR. ANDRE: He will be using the</p> <p>24 source code this morning. That's correct.</p>	<p>1 the case.</p> <p>2 Now, I just want to make the</p> <p>3 objection for the record. I know Your Honor has</p> <p>4 the admonition that they do so at their own</p> <p>5 risk. We just want to put that on the record.</p> <p>6 THE COURT: Okay.</p> <p>7 MR. ANDRE: The second and more</p> <p>8 problematic set of demonstratives are with their</p> <p>9 first fact witness, Mr. Cox. As Your Honor</p> <p>10 knows, back at the pretrial conference, we</p> <p>11 raised the issue that we believe that you're</p> <p>12 going to try to use their fact witnesses as</p> <p>13 experts and we raised it again during trial when</p> <p>14 they indicated Mr. Cox would be looking at</p> <p>15 source code which we checked out the source</p> <p>16 code, he didn't author any of the source code.</p> <p>17 They confirmed to me this morning</p> <p>18 that Mr. Cox is not going to be using source</p> <p>19 code, so that's -- so that's a moot issue at</p> <p>20 this point, I believe, based on Ms. Keefe's</p> <p>21 representation that he would not be using source</p> <p>22 code.</p> <p>23 But we did get a set of</p> <p>24 demonstratives they intend to use with Mr. Cox.</p>
Page 619	Page 621
<p>1 THE COURT: And is that segerable</p> <p>2 or is it going to come and go?</p> <p>3 MR. ANDRE: It's going to come and</p> <p>4 go, to some degree, just because of the nature</p> <p>5 of the claims and the way we're walking through</p> <p>6 the evidence. We're starting off with source</p> <p>7 code this morning, so it will come and go to</p> <p>8 some degree.</p> <p>9 I can -- I apologize if I didn't</p> <p>10 say this yesterday with the court reporter --</p> <p>11 let you know when we get off the source code and</p> <p>12 when we get back on. We can probably fix that</p> <p>13 after we get the final transcripts and such.</p> <p>14 THE COURT: Okay. That's fine.</p> <p>15 All right. Anything else that you</p> <p>16 wanted to raise before we bring the jury in?</p> <p>17 MR. ANDRE: We have some</p> <p>18 objections to demonstratives that was provided</p> <p>19 to us last night.</p> <p>20 THE COURT: Okay.</p> <p>21 MR. ANDRE: With respect to the</p> <p>22 demonstratives, for the expert witness, we are</p> <p>23 objecting that it is outside the scope of his</p> <p>24 expert report and contrary to his testimony in</p>	<p>1 and they are clearly inappropriate. They are</p> <p>2 not accurate representations of Facebook's</p> <p>3 website. I don't think they can authenticate</p> <p>4 them. And more importantly, they are identical,</p> <p>5 nearly identical, just different pictures, this</p> <p>6 is what they were using with their expert in</p> <p>7 their opening. This is what they were using</p> <p>8 with Mr. Cox. They're almost identical</p> <p>9 demonstratives, so there is no way that they can</p> <p>10 use these types of demonstratives with an expert</p> <p>11 and a fact witness with him giving the same</p> <p>12 opinion.</p> <p>13 On our meet and confer, Ms. Keefe</p> <p>14 said he's going to give his understanding of how</p> <p>15 the Facebook website works. I was on Facebook's</p> <p>16 website. Why I don't see this? It's not there.</p> <p>17 This is a cartoon depiction that's not accurate.</p> <p>18 The only way he can say it's accurate is if he</p> <p>19 gives an opinion, so they're trying to bring in</p> <p>20 this opinion testimony through a fact witness.</p> <p>21 And probably a little more</p> <p>22 problematic is this is a continuing theme in</p> <p>23 this case so far of having this kind of a double</p> <p>24 standard. Yesterday we had an objection of</p>

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<p>1 Mr. McKibben showing a photograph of his team. 2 seen though they weren't lodged yesterday 3 morning. And those photographs were produced in 4 the course of discovery.</p>	<p>1 vice-president of product, and product is the 2 website.</p>
<p>5 It just seems to me that these 6 type of demonstratives are clearly 7 inappropriate. So that's our objection, Your 8 Honor.</p>	<p>3 THE COURT: So he's not going to 4 talk about source code, but he is going to give 5 in your view a facsimil recitation of how the 6 website works?</p>
<p>9 THE COURT: Okay. Let me hear 10 from Facebook, please.</p>	<p>7 MR. RHOADES: Precisely, how the 8 accused device works. He was one of the 9 principal architects of the system, wrote most 10 of the code, oversaw many of the engineers' 11 projects and he's going to say if you do this in 12 the system what happens at the back end is this.</p>
<p>11 MR. RHOADES: Well, that's a 12 remarkable statement given we are listening to 13 an expert with an entirely new report and 14 entirely new demonstrative that we never saw 15 before.</p>	<p>13 THE COURT: To the extent 14 Mr. Andre thinks what he's going to say and what 15 the demonstrative show is not an accurate 16 representation of the website, he's free to 17 examine that on cross-examination.</p>
<p>16 The fact of the matter is what he 17 said was untrue. Mr. Cox was the twelfth 18 engineer of the company. He was the fortieth 19 employee of the company. He wrote most of the 20 source code and he will so testify under oath 21 today.</p>	<p>19 MR. RHOADES: Of course. And more 20 fundamentally, Your Honor, if you think about 21 it, a layperson can express opinion about 22 matters as to which they're fully informed.</p>
<p>22 He is here to establish what 23 Facebook does. The Facebook system is the 24 accused product. We are allowed to put on</p>	<p>22 Moreover under 701 if we were doing a car wreck 23 case and I said to the precipitant witness can 24 you go up to the board and draw us what you saw</p>
Page 623	Page 625
<p>1 engineers to say how does the accused product 2 work. If Mr. Andre wants to cross-examine him 3 and try to convince the jury that what we just 4 had him say on direct should not be believed 5 because he lacks personal knowledge, that's 6 fine.</p>	<p>1 and what happened, they could do that.</p>
<p>7 The exhibits in controversy are 8 essentially the ones that have been in front of 9 the jury now two or three times. He is going to 10 explain that when you do some action, what does 11 the system do. That's entirely appropriate.</p>	<p>2 This demonstrative is simply the 3 same demonstrative the parties have been using 4 to illustrate the three use cases in the case, 5 and what happens when you do those use cases. 6 This is not expert opinion. He just does not 7 want the jury to hear it.</p>
<p>12 And this is just another example 13 of trying to tie my hands and stand here and say 14 I have to listen to expert testimony I have 15 never heard before, never seen and can't put on 16 a defense. And fundamentally they didn't follow 17 the procedure. They sent these over two nights 18 ago, no objection. We got the objection last 19 night.</p>	<p>8 THE COURT: Mr. Andre, briefly.</p>
<p>20 Look, procedures, I will confess, 21 I have been somewhat confused about procedures 22 and we have had our issues on our side of the 23 table, but, you know, this is a guy who is 24 responsible for the product. His title is</p>	<p>9 MR. ANDRE: Your Honor, the jury 10 has heard this side of the story. The fact of 11 the matter is with respect to source code, we 12 searched all last night, we went and did a 13 search for Chris Cox's name. He was only there 14 for reviewing a small portion of the very 15 beginning of it, at least what we have.</p>
	<p>16 Now, as for the demonstratives, he 17 can testify how he thinks it works with words, 18 he doesn't need prejudicial demonstratives to do 19 that. That's my issue.</p>
	<p>20 Thank you, Your Honor.</p>
	<p>21 THE COURT: Thank you. I have 22 heard enough. Thank you. The objections to the 23 demonstratives are overruled. As I understand 24 the testimony that Mr. Cox is going to give,</p>

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<p>1 it's going to be fact testimony. It's 2 represented to me that he wrote large portions 3 of the source code. If that testimony is 4 impeachable, then I'm confident that Leader will 5 be able to impeach it. 6 The fact that the demonstrative is 7 identical or nearly identical to the 8 demonstrative previously put in front of the 9 jury is not unduly prejudicial in my view. 10 The procedure for demonstratives, 11 I could be wrong, it is as it's set out in the 12 pretrial order, but I think you all agreed that 13 you were going to get objections by the night 14 before and discuss them the night before, and 15 then put them in front of me the morning that 16 you reasonably believe they're going to be 17 offered. So it seems that that timing has been 18 complied with from what I hear. 19 MR. HANNAH: Your Honor, that was 20 a misrepresentation. The demonstratives sent 21 last night were the ones that say Christopher 22 Cox on them. The ones that were sent before 23 were for one of their experts and did not say 24 Christopher Cox and said they were going to be</p>	<p>1 MS. KEEFE: Thank you. 2 THE COURT: Okay. Let's bring the 3 jury in. 4 (Jury entering the courtroom at 5 9:08 a.m.) 6 THE CLERK: Be seated, please. 7 THE COURT: Good morning, ladies 8 and gentlemen of the jury. Welcome back. It's 9 a little bit chilly in here this morning. All I 10 can tell you is it may stay that way or it may 11 change. And we'll all stay tuned. 12 All right. Let's continue with 13 where we left off yesterday. 14 MR. ANDRE: May it please the 15 Court, Your Honor, we'd like to recall Dr. Vigna 16 to the stand. 17 THE COURT: Fine. 18 THE WITNESS: Good morning. 19 MR. ANDRE: Your Honor, may I 20 approach the witness to set up the board again? 21 THE COURT: Yes, you may. And 22 good morning, Dr. Vigna. 23 THE WITNESS: Oh, good morning. 24 BY MR. ANDRE:</p>
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<p>1 cross-examination demonstratives for Dr. Vigna. 2 As soon as they submitted it with 3 Christopher Cox's pictures and his name and 4 things like that on the demonstratives, that's 5 when we raised the objections. 6 THE COURT: But the objections 7 were raised last night? 8 MR. HANNAH: That's correct. 9 THE COURT: And here they are in 10 front of me now, so I think that's what our plan 11 and procedure is. Okay. 12 Ms. Keefe. 13 MS. KEEFE: Sorry. Just one 14 housekeeping. I think my learned counsel next 15 to me said that when I said I have no objections 16 to the exhibits in terms of the Burp and the 17 Firebug, I meant I won't stand up and make 18 anymore objections. I think my record is very 19 clear, so I just wanted to make sure that was 20 clear. 21 THE COURT: I think the record was 22 clear. Numerous objections have been made prior 23 to this very moment and no one is withdrawing 24 those objections.</p>	<p>1 Q. Good morning, Dr. Vigna. 2 A. Good morning. 3 Q. Is your computer up and running? 4 Are we ready to go? 5 A. Yeah. I think actually -- yes. 6 Yes, we are. 7 Q. Okay. So yesterday afternoon we 8 left off with you showing us the intercept -- 9 A. Correct. 10 Q. -- program on your computer for 11 joining the page; is that correct? 12 A. That is correct. 13 Q. Could you show in the Facebook 14 source code where those actions take place? 15 A. Yes. So just to recall in this 16 particular case, I was trying to show what 17 happens when a user goes from his profile to a 18 fan page and become a fan -- a fan of that page 19 And so in this case, let's see, 20 what happens. And I know that I'm not playing 21 the video, so -- but I'm going to show very -- 22 Q. You need to switch it back. 23 A. Yeah. Yeah. I'm sorry. 24 So what happened here is knowing</p>

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<p>1 that the user performed his action -- oops -- of</p> <p>2 liking a particular page, and you can see --</p> <p>3 where did I put my laser light safer? Here.</p> <p>4 There is this</p> <p>5 ajax/pages/fan_status.php that gets executed.</p> <p>6 So that resource is requested of Facebook.</p> <p>7 So if we look at that code and we</p> <p>8 want -- give me one second to get to the right</p> <p>9 drive. Facebook sources/ -- oh, it's Q. Sorry.</p> <p>10 It's changed from yesterday.</p> <p>11 So it's documents produced --</p> <p>12 computers sometimes do what they want.</p> <p>13 MR. ANDRE: Your Honor, while Dr.</p> <p>14 Vigna is getting the computer to work properly,</p> <p>15 we forgot to move an exhibit yesterday, Exhibit</p> <p>16 208 into evidence. We used it with Dr. Vigna.</p> <p>17 THE WITNESS: Okay. Sorry.</p> <p>18 Again, we go back to --</p> <p>19 THE COURT: Hold on a second,</p> <p>20 Doctor. Something else has been said.</p> <p>21 MS. KEEFE: No objection.</p> <p>22 THE COURT: Okay. It's admitted.</p> <p>23 MR. ANDRE: Thank you.</p> <p>24 THE COURT: Dr. Vigna, now you can</p>	<p>1 a fan of the page.</p> <p>2 And this action, as a result,</p> <p>3 caused this code to be executed, which it's not</p> <p>4 very expressive in this form. Of course, it's a</p> <p>5 very dry sequence of instruction that just says</p> <p>6 what the system should do.</p> <p>7 And the interesting part is that</p> <p>8 this code at a certain point inserts some</p> <p>9 information in the form of metadata that tracks</p> <p>10 what the user just did. And this is because</p> <p>11 this code calls other code that calls other code</p> <p>12 that calls other code. So it's sort of a</p> <p>13 cascade of calls.</p> <p>14 And the real interesting piece of</p> <p>15 code is actually under</p> <p>16 lib/feed/stories/add/insert.php where there is</p> <p>17 this code that says insert into Minifeed stories</p> <p>18 a set of information. The mid --</p> <p>19 Q. What's a mid?</p> <p>20 A. Oh, sorry. User, what type of</p> <p>21 action performed with respect to what type of</p> <p>22 objects.</p> <p>23 So in this case, it would be this</p> <p>24 user became a fan of this page. And this is how</p>
Page 631	Page 633
<p>1 continue now. Sorry.</p> <p>2 THE WITNESS: I'm sorry.</p> <p>3 BY MR. ANDRE:</p> <p>4 Q. I thought I gave you a little time</p> <p>5 out.</p> <p>6 A. No, it's fine. It's just finding</p> <p>7 the right drive because whenever they mount it,</p> <p>8 they mount it differently.</p> <p>9 So in this particular case, we're</p> <p>10 looking at this fan_status.php. I'm getting</p> <p>11 there super fast.</p> <p>12 Okay. And here it is. And so</p> <p>13 what happens here in the code is, as I showed</p> <p>14 yesterday, there are a number of instructions.</p> <p>15 And the matter of fact of this instruction is to</p> <p>16 make this user a fan of that particular page.</p> <p>17 So if you remember, there was</p> <p>18 first the idea that the user logs in and</p> <p>19 provides a profile picture, for example. And</p> <p>20 then there is the tracking from the initial</p> <p>21 context environment.</p> <p>22 So it's own profile to the new</p> <p>23 context, which is the fan page. And then there</p> <p>24 is an action that is performed that is becoming</p>	<p>1 the tracking information is stored.</p> <p>2 I mean, if you remember, this is</p> <p>3 sequel. It's a different type of language,</p> <p>4 different from PHP that is used with databases.</p> <p>5 So let me take a step back.</p> <p>6 Databases are one of the many forms in which you</p> <p>7 can store information. So as part of the</p> <p>8 storage component, you can store things in</p> <p>9 files. Like a picture that you just took and</p> <p>10 uploaded from your camera, it's going to be in a</p> <p>11 file. When you want to store structural</p> <p>12 information, one of the possible ways to do it</p> <p>13 is to use a database.</p> <p>14 A database is a series of tables</p> <p>15 that contain information. And, for example, in</p> <p>16 this particular case, the information could be</p> <p>17 the user that performed the action, when this</p> <p>18 action was performed, the type of action.</p> <p>19 So the story type, as you can see</p> <p>20 here, you can see the type of action, when this</p> <p>21 was updated. So, for example, if somebody makes</p> <p>22 a comment on this story, this metadata will be</p> <p>23 updated.</p> <p>24 The actual ID, so what is -- who</p>

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<p>1 actually performed this particular -- this 2 particular action. So all this information is 3 stored in this database, which is part of the 4 storage component and represents metadata which 5 tracks the user when the user performs an 6 action.</p> <p>7 And, of course, it takes into 8 account the fact that the user moved from its 9 profile to the fan page because, in fact, it 10 says, you know, it's the fan page that gets 11 liked by this user.</p> <p>12 Thank you.</p> <p>13 Q. And is that the extent of the code 14 for fanning a page?</p> <p>15 A. Sorry?</p> <p>16 Q. Is that all the codes you're going 17 to show us for fanning a page?</p> <p>18 A. Yes.</p> <p>19 Q. And then the third use case that 20 you've talked about is importing a photo into a 21 group?</p> <p>22 A. Right.</p> <p>23 Q. And can you -- could you show the 24 jury on your computer how that actually happens</p>	<p>1 generated and that's exactly what I show 2 afterwards. So it's a request for a group.php 3 passing \$ parameter.</p> <p>4 As you can see here, the ID of the 5 group. Okay.</p> <p>6 And then I will show you that, of 7 course, when I look at the parameters, you will 8 see that there is the ubiquitous C user here and 9 this identifier identifies uniquely the user. 10 So I can track the user going from his own 11 profile to the group's page.</p> <p>12 Okay. So that's the tracking, how 13 I keep track of who you are and where you are.</p> <p>14 Okay. Then -- so, there is this 15 information.</p> <p>16 The group ID as I told you, the 17 cookie. And so when this information is let go 18 to Facebook, as a result, here we are at the 19 Italian Food Lover group. We click on the photo 20 tab and again, as a result of clicking a new 21 request is performed, again, for the photo tab 22 of the group. We let this request go through 23 and we find that we have no photos. But we have 24 a button that allows us to add group photos.</p>
Page 635	Page 637
<p>1 on the Facebook website?</p> <p>2 A. Right. So if you remember the 3 previous step in this situation was when the 4 user goes to the profile and decides to upload 5 one of the pictures to one of his own files. 6 And it was the picture of this granita thing 7 that is like a Sicilian ice cream kind of thing 8 since we're talking about food.</p> <p>9 But in this case, the user this 10 time decides to go to the groups, and in 11 particular this Italian Food Lovers that the 12 user, John Vitteyard, is a member of. And as a 13 result, you can see a request is performed.</p> <p>14 Let me just stop really briefly. 15 So again, when the user -- since yesterday there 16 was a lot of stuff going on. Here is the -- 17 here is when the user clicks on that link 18 Italian Food Lovers as the user experience.</p> <p>19 This is the UI. This is the user 20 interface that the user interacts with Facebook. 21 Of course, the user just wants to click and go 22 to the group.</p> <p>23 What I'm showing is that when the 24 user clicks there, as a result, a new request is</p>	<p>1 And this let's me choose from -- 2 and let me just stop for a second. When I 3 decide to add a photo to this group that I want 4 to share with other people in the group, 5 Facebook offers me the possibility of uploading 6 one of my personal albums that contains my 7 pictures. And this is because this is the 8 picture that I uploaded in my personal page in 9 my first user environment.</p> <p>10 Now I'm accessing this information 11 from the second user environment which is the 12 group.php. So proceeding with example, this 13 request for photo select is performed, it's 14 another server side component that says, you 15 know, what is the object ID, what is the album 16 ID. And when the request is performed, I can 17 choose different pictures.</p> <p>18 In this particular case, I choose 19 the picture that I uploaded in the first 20 context, my, you know, ice cream depiction here</p> <p>21 When I choose the ice cream, I 22 said add selected photos. What happened? That 23 again, photo select is invoked and we will see 24 in detail what happens when this particular</p>

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<p>1 component is executed.</p> <p>2 But you can see that there is --</p> <p>3 all this is information that is captured as part</p> <p>4 of simply selecting this picture and saying I</p> <p>5 want to add this picture to this album in this</p> <p>6 particular group. So this is the request that</p> <p>7 is actually sent to Facebook.</p> <p>8 This is what happens under the</p> <p>9 hood. And as a result, here we are, we have</p> <p>10 some photos from Italian Food Lovers, the</p> <p>11 picture, and when I go back to -- whoops, fade</p> <p>12 out too fast.</p> <p>13 It's important to note that when I</p> <p>14 go back to my own profile this time, I see in</p> <p>15 this particular -- in my news feed a record that</p> <p>16 say, oh, John Vineyard actually added this</p> <p>17 picture to the group. And this is because they</p> <p>18 track me moving to the group. They track the</p> <p>19 fact that I added that picture. And now they're</p> <p>20 showing to me and to everybody who can be</p> <p>21 interested in this information that I performed</p> <p>22 this particular action.</p> <p>23 And I can switch to the code here</p> <p>24 if you want.</p>	<p>1 A. Thank you. We just look at the</p> <p>2 code and just move fast. Sorry about it.</p> <p>3 This is what gets actually invoked</p> <p>4 and you can see in the implementation, it says</p> <p>5 publishes the current photo upload story</p> <p>6 associated with this album/object ID. So this</p> <p>7 is the code that actually goes and updates the</p> <p>8 metadata that says this guy published a picture</p> <p>9 in this particular album, so that all the</p> <p>10 actions, I mean, important actions that are</p> <p>11 performed on the website are actually tracked in</p> <p>12 the metadata. And I'm done with this.</p> <p>13 MR. ANDRE: I think, Your Honor,</p> <p>14 we were finished with the code for the time</p> <p>15 being, so we can unseal the record.</p> <p>16 THE COURT: Fine. Let us know if</p> <p>17 and when we will seal it again.</p> <p>18 MR. ANDRE: We'll go back to codes</p> <p>19 periodically, but we'll let you know.</p> <p>20 Thank you.</p> <p>21 BY MR. ANDRE:</p> <p>22 Q. Dr. Vigna, I want to start showing</p> <p>23 you some public documents that Facebook produces</p> <p>24 and we'll start with Exhibit PTX 300.</p>
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<p>1 Q. That was my next question. Can</p> <p>2 you show us in the code where the activity you</p> <p>3 just described occurs?</p> <p>4 A. Again, I have to use my expert</p> <p>5 report. So as we were looking at the video that</p> <p>6 we were looking for photoslect.php. So we can</p> <p>7 start from there. And this is the source code</p> <p>8 of that particular application.</p> <p>9 And what happens here it's pretty</p> <p>10 much that at a certain point, this file does</p> <p>11 many things, so invokes other code, it invokes</p> <p>12 other code that includes the new picture in the</p> <p>13 album of the group. And at this point you can</p> <p>14 see here that it decide to -- we publish the</p> <p>15 current story, okay, and the actual effect of</p> <p>16 this particular piece of code, if you look at</p> <p>17 the implementation of that particular function</p> <p>18 is the following --</p> <p>19 Q. Dr. Vigna just so we have a nice</p> <p>20 record here on the case, can you just read the</p> <p>21 function call?</p> <p>22 A. Oh, the function call is add</p> <p>23 photos action publish current story.</p> <p>24 Q. Thank you.</p>	<p>1 A. Okay.</p> <p>2 Q. Dr. Vigna, do you recall looking</p> <p>3 at the Facebook page's March 2009 document?</p> <p>4 A. Yes.</p> <p>5 Q. If we can turn to the page with</p> <p>6 the Bates number ending in 900, about the sixth</p> <p>7 page into the document, and highlight the first</p> <p>8 paragraph there.</p> <p>9 A. Yeah. This is a rather</p> <p>10 interesting document because this pages are this</p> <p>11 fan's pages like the Giants or the Philadelphia</p> <p>12 Eagles.</p> <p>13 Q. The Eagles.</p> <p>14 A. The Eagles.</p> <p>15 And so what Facebook is telling</p> <p>16 customers in this particular case is that it is</p> <p>17 possible to actually track what users do. And</p> <p>18 in fact, we are using this Insights tool. And</p> <p>19 it says you would be able to see how many</p> <p>20 comments fans make on your post and you'll be</p> <p>21 able to track how many Facebook users start and</p> <p>22 stop viewing your posts in News Feed.</p> <p>23 And this is pretty good example of</p> <p>24 how Facebook uses this tracking information</p>

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<p>1 to -- you know, a number of different ways, so</p> <p>2 that it knows where people are, who they are,</p> <p>3 and what they do on the website.</p> <p>4 Q. When you talk about posting in</p> <p>5 news feeds, what's that referring to actually?</p> <p>6 A. So the news feeds is one of the</p> <p>7 tracking metadata that is maintained by</p> <p>8 Facebook. As I showed in my little schente</p> <p>9 there, the tracking information is performed --</p> <p>10 tracking is performed in a number of different</p> <p>11 ways. There is that cookies that I showed in</p> <p>12 the request that is showing the user as it moves</p> <p>13 through the site.</p> <p>14 And then there are minifeed and</p> <p>15 multifeed entries which technically speaking are</p> <p>16 just information that says this person did this</p> <p>17 particular action and it's stored in a number of</p> <p>18 different ways, tables in the database, memory</p> <p>19 cache, but mainly they're stored as metadata to</p> <p>20 represent what the user has done on the website.</p> <p>21 Q. And what does news feed look like</p> <p>22 to a user on the Facebook website?</p> <p>23 A. I showed it, actually I can show</p> <p>24 it -- this, for example, is the news feed. And</p>	<p>1 A. Yeah,</p> <p>2 So this particular sentence is</p> <p>3 describe how the news feed, so this information</p> <p>4 about what people do on the website can be used</p> <p>5 as a tool to, you know, connect many different</p> <p>6 people. So it says the news feed on user's home</p> <p>7 pages tells them what is happening around them</p> <p>8 on Facebook. Because they track all these</p> <p>9 actions. For example, when a user add you as a</p> <p>10 politician that they support, their friends on</p> <p>11 Facebook will hear about it in their own news</p> <p>12 feeds. Because this act that a person that</p> <p>13 decide is a fan of this particular politician,</p> <p>14 we will store in the metadata and then shared</p> <p>15 and used to connect different people through the</p> <p>16 news feed.</p> <p>17 MR. ANDRE: Your Honor, I would</p> <p>18 like to move Exhibit PTX 302 into evidence.</p> <p>19 MS. KEEFE: No objection.</p> <p>20 THE COURT: It's admitted,</p> <p>21 BY MR. ANDRE:</p> <p>22 Q. Next, I would like to turn to one</p> <p>23 more public document, PTX 1001. Dr. Vigna, do</p> <p>24 you recall seeing this document?</p>
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<p>1 it shows that the news feed on the website is a</p> <p>2 selection of this metadata that is presented to</p> <p>3 the user.</p> <p>4 In this particular case, I am on</p> <p>5 John Vineyard's profile. And this tracking</p> <p>6 metadata is selected. And the event that I add</p> <p>7 a photo nine seconds ago is presented on that</p> <p>8 particular page.</p> <p>9 Q. I would like to turn your</p> <p>10 attention to --</p> <p>11 MR. ANDRE: Your Honor, I would</p> <p>12 like to move PTX 300 into evidence.</p> <p>13 MS. KEEFE: No objection.</p> <p>14 THE COURT: It's admitted.</p> <p>15 BY MR. ANDRE:</p> <p>16 Q. I would like to turn your</p> <p>17 attention to PTX 302.</p> <p>18 Dr. Vigna, do you recall looking</p> <p>19 at this document entitled Politician Users Guide</p> <p>20 to Facebook?</p> <p>21 A. Yes, I think there is an</p> <p>22 interesting part on the second page.</p> <p>23 Q. On the second page, under point</p> <p>24 three, here?</p>	<p>1 A. Yeah, that's the Facebook privacy</p> <p>2 policy.</p> <p>3 Q. If you go to the second page.</p> <p>4 Under the information. I know this is hard to</p> <p>5 read.</p> <p>6 A. So this is something that say the</p> <p>7 information that they collect when you interact</p> <p>8 with Facebook. And it says we keep track of the</p> <p>9 actions that you take on Facebook such as adding</p> <p>10 a friend, becoming a fan of a Facebook page, et</p> <p>11 cetera, et cetera, et cetera.</p> <p>12 So this is sort of like a clear</p> <p>13 evidence that they keep track of the actions of</p> <p>14 other people. So there is definitely a tracking</p> <p>15 component.</p> <p>16 Q. What's this referring to here,</p> <p>17 access device and browser information?</p> <p>18 A. They also collect -- they collect</p> <p>19 information about the type of system that you</p> <p>20 use to access the website.</p> <p>21 Q. And finally this last portion, the</p> <p>22 cookie information, what's that referring to?</p> <p>23 A. Yeah. So this is that see user</p> <p>24 information that is used to see where you are on</p>

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<p>1 the website, so this is the use of a cookie 2 which is this little piece of information that 3 is sent back and forth to the user every time it 4 access the website. 5 And they say that they use this 6 particular type of technology to identify if 7 you're logged into Facebook and where you send 8 your request. 9 MR. ANDRE: I would like to move 10 document PTX 1001 into evidence. 11 MS. KEEFE: I note for the record 12 that it's not the correct version, but otherwise 13 I have no objection. 14 THE COURT: It's admitted. 15 BY MR. ANDRE: 16 Q. Go back up to the exhibit, would 17 you, please, just based on the objection. Would 18 you go to the bottom corner here. Down here, 19 the date of the printing of this document. 20 Dr. Vigna, when was this document printed? 21 A. It looks like April 8, 2010. 22 Q. Thank you. 23 Now, I would like to turn your 24 attention to some of the confidential documents</p>	<p>1 MS. KEEFE: No objection. 2 THE COURT: It's admitted. 3 BY MR. ANDRE: 4 Q. Dr. Vigna, I'd like to turn your 5 attention to PTX-191. 6 Are you familiar with this 7 document, Dr. Vigna? 8 A. Yes. 9 Q. What's this document about? 10 A. So this document describes 11 Multifeed or Multifeed, which is one of the ways 12 in which things are tracked. If you remember, 13 the published current story in documentation. 14 It would say this is how you 15 publish to Multifeed. So as Facebook uses 16 different mechanisms to track different types of 17 actions, and altogether they represent a 18 tracking component. 19 One of these subcomponents of the 20 tracking system is the Multifeed. And this is 21 very technical and maybe -- can you highlight 22 point two and this thing about the leaves? 23 The leaves is a technical term. 24 It's not important.</p>
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<p>1 regarding the tracking component. If we go to 2 PTX 180. Up here at the top in particular, Dr. 3 Vigna, are you familiar with this document? 4 A. Yeah, so this is a document that 5 describe the login process, so how people. So 6 how people initially engage with the Facebook 7 site, and in particular describe cookies and how 8 cookies are used. And you can see that the 9 first entry, there's a -- three critical 10 cookies. 11 And the first one is actually the 12 C user, the current user, which is a user ID of 13 the user, which is only set when the user is 14 actually logged in. So the moment you're logged 15 into the website, this cookie set is used to 16 track every single interaction with the website, 17 so that they always know who you are and where 18 you are on the web site. 19 Q. And Dr. Vigna, is this one of the 20 documents from Facebook's confidential internal 21 wiki? 22 A. That is correct. 23 MR. ANDRE: Your Honor, I'd like 24 to move into evidence Exhibit PTX-180.</p>	<p>1 But it says the server stores in 2 memory all the recent actions for some subset of 3 the users and loads the action off of log file 4 and then receives new action via RPC. 5 There is a lot of technical terms 6 here that are difficult to explain in a simple 7 way. But the basic idea is that this component 8 is responsible for tracking the actions of users 9 on the website. 10 Q. And when it talks about stores in 11 memory all the recent actions for some subset of 12 the users on the site, what's that referring to? 13 A. So this is referring to the 14 storage component and how, for example, storage 15 can be done in different ways. And I was making 16 that analogy with the storage in a storage unit 17 where you put stuff that you use frequently in a 18 way that you can access easily. 19 So also the metadata that is used 20 to track is stored in database, some of that, 21 for example, the Minifeed is stored in the user 22 database. And other information like the 23 Multifeed is actually stored in a memory cache. 24 That's still storage, so there's</p>

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<p>1 still -- the concept is you put there something 2 and later you will be able to take it out. It's 3 just implemented using a slightly different 4 technology. 5 MR. ANDRE: Your Honor, I'd like 6 to move PTX-191 into evidence. 7 MS. KEEFE: No objection, Your 8 Honor. 9 THE COURT: It's admitted. 10 BY MR. ANDRE: 11 Q. Just for the record, Dr. Vigna, 12 the PTX-191, was that from the confidential 13 internal Facebook wiki? 14 A. Yes. 15 Q. I'd like to show you what's been 16 marked as Exhibit PTX 341. 17 Dr. Vigna, are you familiar with 18 this document? 19 A. Yeah. So this is a very -- again, 20 a very technical document that exists by the 21 internal -- by the developers, the engineers, 22 developers of Facebook and explains how to log a 23 new action. 24 So suppose that Facebook currently</p>	<p>1 MS. KEEFE: No objection, Your 2 Honor. I would also like to note for the record 3 they do have the material that's behind the 4 redacted. 5 THE COURT: Thank you. That's not 6 necessary. It's admitted. 7 BY MR. ANDRE: 8 Q. I'd like to turn your attention to 9 PTX-269, please. 10 Dr. Vigna, are you familiar with 11 this document? 12 A. Yes. So this document is a way to 13 describe how you can access all the action of a 14 particular user. 15 So it's called activity stream 16 which is sort of the composition of all the 17 actions that have been performed by a certain 18 user. And since there are many uses for this 19 one that I -- suppose that I want to perform 20 statistics on where people go, so that I know 21 exactly what their behavior is. 22 I can use this particular API to 23 go to Facebook and say, Okay, give me all the 24 activity stream for this particular user. And</p>
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<p>1 tracks you when you fan a page, when you upload 2 a photo, when you become a friend of somebody. 3 What if some new functionality comes out and 4 suddenly I want to track? 5 For example, if you decide to -- I 6 don't know -- go away from a group. When you 7 detach from a group, I'm sure that it's already 8 logged, but just to give an example something 9 that wasn't logged before and that it wants to 10 log now. And this document explains how to add 11 a new event so that it gets logged. 12 And some of the information is 13 being redacted and removed. But the basic idea 14 explains you have to go to this particular file 15 and modify it so that you can log also this 16 event which is additional additive. That is, 17 they track and they have an active mechanism 18 that can even be extended to track the actions 19 of the users. 20 Q. And is this also from the internal 21 Facebook confidential wiki? 22 A. That's correct. 23 MR. ANDRE: Your Honor, I'd like 24 to move into evidence Exhibit PTX-341.</p>	<p>1 you can see that in the third line, it say, you 2 know, for information about streams, say, using 3 the stream in API, this is another document 4 which -- but this is the technical part that 5 describes how one can go to Facebook and say, 6 Please give me a list of all the actions that 7 this user performs. So the stream of actions 8 that have been tracked. 9 Q. When it talks about here, it says, 10 Facebook syndicates users' streams including 11 from both the News Feed and the Wall. 12 When they say Wall, can you 13 refresh our memory what that is again? 14 A. Yeah. As I was saying, there are 15 different components that may make together the 16 tracking component. 17 The News Feed and the Wall are how 18 this tracking information is presented to the 19 user. And they're mapped to, for example, the 20 Multifeed that we discussed before. And the 21 Minifeed, that is another way of tracking 22 information. 23 And what this is saying is that 24 third-party applications can go to Facebook and,</p>

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<p>1 under an agreement, can say, Okay. I want to 2 know what Giovanni -- all the stream of action 3 that Giovanni recently performed on the website. 4 And by following this protocol, they can get 5 that information. 6 Q. And if you go down to the next 7 paragraph where it says, reading, the stream 8 here, does that actually give the actual 9 instruction right here as to how the user would 10 do that? 11 A. Yeah. This is sort of technical, 12 but if you highlight the second line, it 13 explains, sorry, the third line. 14 I left that out. So this explains 15 exactly how to put together a request similar to 16 the request that I showed you in my intercepter. 17 So that that particular stream and that 18 particular user can be queried and that 19 information obtained. 20 Q. Is this document also from the 21 confidential internal Facebook wiki? 22 A. I think so, in my recollection. 23 But it should be up in the right corner. 24 Yeah, I think so.</p>	<p>1 claim and the element. 2 Q. And that's the tracking component 3 element? 4 A. Correct. 5 Q. Could you put a red check in that 6 box over on the board next to you? 7 A. All right. One down, 20 to go. 8 Q. I want to show you what's marked 9 as Exhibit PTX-942 now. 10 A. Yes. 11 Q. Dr. Vigna, do you have a -- do you 12 have the jury binder up there, by any chance? 13 A. No. You want me to have those 14 exhibits? 15 Q. Yeah. That's fine. 16 A. I have PTX-942. 17 Q. Could you just flip through that 18 and tell us what we're looking at in this 19 exhibit? 20 A. Yeah. So this is a sort of heavy 21 exhibit, but it's a series of snapshots that in 22 a way reproduces the use cases that I showed you 23 before. 24 So, for example, this very</p>
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<p>1 MR. ANDRE: Your Honor, I'd like 2 to move in PTX-269 into evidence? 3 MS. KEEFE: No objection, Your 4 Honor. 5 THE COURT: It's admitted. 6 BY MR. ANDRE: 7 Q. Dr. Vigna, yesterday we saw 8 videotape depositions of Mr. Wiseman, Wang, Rose 9 and Bosworth. Did you rely on the testimony of 10 those engineers in formulating your opinion? 11 A. Yes, I did. 12 Q. And how did you do that? 13 A. I read their depositions. 14 Q. And did that inform your opinion 15 as to how the Facebook website operates? 16 A. Yes. 17 Q. Dr. Vigna, based on everything 18 you've shown us yesterday afternoon and this 19 morning, do you have an opinion as to whether or 20 not the Facebook website infringes the second 21 element of Claim 1? 22 A. Yes. I have an opinion. 23 Q. And what's your opinion? 24 A. The opinion that it infringes the</p>	<p>1 beginning one is where John Vineyard actually 2 subscribed to the website. And if you can go 3 next, and that is just the process of actually 4 subscribing and creating accounts on the 5 website. 6 So this is what you would go 7 through if you decide to join Facebook. Go 8 ahead. 9 And the user logs in and it's sent 10 to his own page. 11 Q. Okay. So does Exhibit -- 12 A. 942. 13 Q. -- 942. Does Exhibit 942 14 represent every figure -- I mean, every screen 15 shot that you've demonstrated on your 16 intercepter program the last two days? 17 I mean, with the exception of the 18 behind the hood. 19 A. Yeah. Yeah. 20 That is very similar to what I 21 showed there -- 22 Q. Okay. 23 A. -- in my demonstrations. 24 Absolutely.</p>

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<p>1 And if you go on, I will show you</p> <p>2 that this is how the other user connects. So</p> <p>3 Mary Smith, that was the other friend, also</p> <p>4 becomes a member of the website.</p> <p>5 Go forward. Here it shows how a</p> <p>6 user --</p> <p>7 Q. I'm sorry. I want to walk you</p> <p>8 through the claims of this, if you don't mind.</p> <p>9 A. Okay. We can do that.</p> <p>10 Q. Using the screen shots you have in</p> <p>11 Exhibit 942, could you put up Claim 1? Now, the</p> <p>12 first part of the claim, the preamble here, it</p> <p>13 says a computer-implemented network-based system</p> <p>14 that facilitates management of data.</p> <p>15 Do you see that?</p> <p>16 A. Yes.</p> <p>17 Q. Is the Facebook website such a</p> <p>18 computer-implemented network-based system that</p> <p>19 facilitates management of data?</p> <p>20 A. Yes, it is.</p> <p>21 Q. Now, walking through Exhibit 942,</p> <p>22 could you show us where each of these parts of</p> <p>23 the context component is located?</p> <p>24 A. Yes.</p>	<p>1 After that, the context component</p> <p>2 dynamically storing the context information in</p> <p>3 metadata associated with the user-defined data,</p> <p>4 the user-defined data and metadata stored on a</p> <p>5 storage component of the network-based system.</p> <p>6 And we have seen how pictures or</p> <p>7 data provided by the user and the context</p> <p>8 information are stored on the context component.</p> <p>9 Q. On the storage component?</p> <p>10 A. Yes, on the storage component.</p> <p>11 Thank you.</p> <p>12 And if you go next, you can see</p> <p>13 that this is actually the other user. We will</p> <p>14 see now some slides in which the user become</p> <p>15 friend of each other, it's not important, it's</p> <p>16 just to create a connection.</p> <p>17 You can see you go forward, Mary</p> <p>18 Smith finds John Vineyard, oh, I know this guy,</p> <p>19 I would like to be a friend, so sends a friend</p> <p>20 request. And next. And John Vineyard finds the</p> <p>21 request from Mary Smith and there is that button</p> <p>22 at the top that says confirm friend and they</p> <p>23 become friends.</p> <p>24 So next. So now you can see that</p>
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<p>1 So if we go back to -- let's see.</p> <p>2 If I stay here, maybe I can look at two things</p> <p>3 at the same time. Sorry.</p> <p>4 So we just look at the</p> <p>5 computer-implemented network-based system that</p> <p>6 facilitates management of data. Now we need a</p> <p>7 computer-implemented context component of the</p> <p>8 network-based system for capturing context</p> <p>9 information associated with user-defined data</p> <p>10 created by user interaction of a user in a first</p> <p>11 context of the network-based system.</p> <p>12 Here the user uploads a profile</p> <p>13 feature. If you go to the next slide you can</p> <p>14 see that the picture has been updated. As I</p> <p>15 showed you yesterday, when this happens behind</p> <p>16 the hood, this context information is captured</p> <p>17 and stored as metadata.</p> <p>18 And if you go -- and if you</p> <p>19 remember, the particular metadata was in the --</p> <p>20 those SQL queries that would update this data</p> <p>21 about the picture with additional information</p> <p>22 such as the time, the album I.D. and the year,</p> <p>23 so that's the context information that is</p> <p>24 captured and stored in the metadata.</p>	<p>1 at the bottom there is the picture of Mary</p> <p>2 Smith, which are now friends, and this actually</p> <p>3 also information that is tracked. But the</p> <p>4 important thing is if you go to the next one.</p> <p>5 Q. Dr. Vigna, just so we can have a</p> <p>6 record, this is the slide that we're talking</p> <p>7 about before was 157098?</p> <p>8 A. Yes.</p> <p>9 Q. It's for the court reporter, it's</p> <p>10 easier to find in the record?</p> <p>11 A. Sorry. Sorry. Thank you. Thank</p> <p>12 you very much.</p> <p>13 So at this point there is an</p> <p>14 important point because the user moved to the</p> <p>15 second context. So the user, John Vineyard,</p> <p>16 goes to visit the profile of Mary Smith, okay,</p> <p>17 his friend. And it is tracked when moved from</p> <p>18 the second -- from the first context to the</p> <p>19 second context. Okay?</p> <p>20 Next, what the user is going to do</p> <p>21 is going to write something on the wall of the</p> <p>22 user, particularly going to say how are you.</p> <p>23 And when this share button is pressed, next,</p> <p>24 what happens is that this information is printed</p>

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<p>1 in the wall.</p> <p>2 And you can see that when this</p> <p>3 happen, and I showed you this yesterday by</p> <p>4 showing you the code and what happens under the</p> <p>5 hood, but when the share button is pressed,</p> <p>6 there is tracking information in the form of a</p> <p>7 story that says this person wrote on this</p> <p>8 person's wall, that is the track happened</p> <p>9 because they tracked that you went from one</p> <p>10 profile to another. And when an action is done,</p> <p>11 automatically the metadata is updated with</p> <p>12 tracking information that says this person wrote</p> <p>13 on this other person's wall. And also when this</p> <p>14 happens, the user access the data from the</p> <p>15 second context.</p> <p>16 And you can see that in the second</p> <p>17 context the information that was uploaded in the</p> <p>18 first context, my profile is accessed. If you</p> <p>19 remember yesterday, I showed you with that --</p> <p>20 the code that would show how that particular</p> <p>21 element is actually associated with the</p> <p>22 retrieval of that picture from Facebook, the</p> <p>23 picture that was uploaded in the first context.</p> <p>24 Q. Just for the record, that is slide</p>	<p>1 component element where it talks about</p> <p>2 dynamically updating the stored metadata based</p> <p>3 on the change, where it the user accesses the</p> <p>4 data from the second context, do you see that?</p> <p>5 A. Yes.</p> <p>6 Q. From an expert opinion and</p> <p>7 technical perspective, do you understand what</p> <p>8 that's referring to?</p> <p>9 A. Yes.</p> <p>10 Q. Can you please describe what that</p> <p>11 is talking about to the jury?</p> <p>12 A. Okay. Dynamically means</p> <p>13 automatically and in response to the preceding</p> <p>14 event. So going back to one of the examples,</p> <p>15 the moment the users share in the how are you</p> <p>16 message in response to that event, automatically</p> <p>17 a story is created in the metadata. Now this</p> <p>18 story is based on the fact that you change from</p> <p>19 the profile to another. So it takes that fact</p> <p>20 into account.</p> <p>21 In fact, if you would write the</p> <p>22 story on your own wall it would be a different</p> <p>23 story. Instead the story is you went to Mary's</p> <p>24 wall and wrote how are you. So the idea is that</p>
<p>Page 663</p> <p>1 number LTI 157101; correct?</p> <p>2 A. That is correct.</p> <p>3 If you go next, I think that what</p> <p>4 it shows is that back in my first profile, this</p> <p>5 metadata about John writing on Mary Smith is</p> <p>6 presented in my own wall. Thank you.</p> <p>7 Q. And based on that, go back to the</p> <p>8 claim. We lost our highlighting on that.</p> <p>9 So is it your understanding that</p> <p>10 each one of these elements, both elements of the</p> <p>11 claim have been met by the screen shots you just</p> <p>12 demonstrated?</p> <p>13 A. Yes.</p> <p>14 Q. Now, you said earlier that you</p> <p>15 relied upon the Court's claim construction order</p> <p>16 in this case; correct?</p> <p>17 A. That is correct.</p> <p>18 Q. Dr. Vigna, do you understand that</p> <p>19 the Court has construed the term dynamically to</p> <p>20 mean automatically and in response to the</p> <p>21 preceding event?</p> <p>22 A. Correct.</p> <p>23 Q. If you go back to the claim</p> <p>24 language again. If you look at the tracking</p>	<p>Page 665</p> <p>1 when these actions are taken, the metadata, the</p> <p>2 tracking metadata that is right here, that's</p> <p>3 automatically updated with a story that takes</p> <p>4 into account the fact that you changed from one</p> <p>5 place to another.</p> <p>6 In a way this is an important</p> <p>7 aspect of this system, the fact that what you do</p> <p>8 is based in how you change your access in the</p> <p>9 system. You go to one profile to another, the</p> <p>10 fact that you found the Giants' page and not the</p> <p>11 Philadelphia Eagles is taken into account. So</p> <p>12 the metadata is based on this particular change</p> <p>13 in access.</p> <p>14 And it's automatically updated as</p> <p>15 a response to your action. And why you do that</p> <p>16 in addition, the user access the data from the</p> <p>17 second context.</p> <p>18 So when you do this action after</p> <p>19 you move, there is this data that you created in</p> <p>20 the first context that is also used in the</p> <p>21 second context. And we have seen this, for</p> <p>22 example, when the little picture appears in the</p> <p>23 wall post.</p> <p>24 We also have seen it, for example,</p>

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<p>1 when a picture has been added to the album of 2 the Italian Food Group, you can see that the 3 picture that was uploaded in the first context 4 is now used in the second context. Still in that 5 particular case, it's sort of like a different 6 walk through, but the user uploaded the picture 7 of the Sicilian ice cream, then moved to the 8 group and decided to include that picture. 9 And when that -- when that action 10 was performed, tracking information was 11 dynamically updating the metadata. And when 12 that happened, the data that was created in the 13 first context will also be brought in the second 14 context, because the picture that was in my 15 recipe became a picture of the Italian Food 16 Lovers group. 17 Q. Thank you for that explanation. 18 Did you find that every element in 19 Claim 1 is infringed by the Facebook website? 20 A. Yes. 21 Q. Do you have an opinion as to 22 whether the Facebook infringes Claim 1 under the 23 Doctrine of Equivalents? 24 A. Yes, I do.</p>	<p>1 substantially the same function as a tracking 2 component of Claim 1? 3 A. Yes. 4 MS. KEEFE: Leading. Objection. 5 Leading. 6 THE COURT: I'm going to overrule 7 it. 8 MR. ANDRE: Thank you, Your Honor. 9 THE WITNESS: Yes. 10 BY MR. ANDRE: 11 Q. Why is that? 12 A. Well, because it is Facebook is 13 obviously tracking, it has a component to track 14 the change of a user from a first context to a 15 second context and dynamically updates the 16 stored metadata based on the change when the 17 user accesses the data from the second context. 18 Q. At the very least, does the 19 Facebook website perform in substantially the 20 same way as the context component of Claim 1? 21 A. You mean to achieve the same 22 result? 23 Q. No, the same way, function, way, 24 result.</p>
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<p>1 Q. And what is your opinion? 2 A. Well, my opinion is that Facebook 3 directly and literally infringes Claim 1, and 4 since -- and at least it infringes it under the 5 Doctrine of Equivalents because it does 6 substantially the same thing in the same way to 7 achieve the same result. 8 Q. And I apologize. This is going to 9 be a little bit tedious, but we have to make a 10 record of this. 11 So specifically at the very least 12 does the Facebook website perform substantially 13 the same function as the context component of 14 Claim 1? 15 A. Yes. 16 Q. Could you explain why you think it 17 would perform substantially the same function? 18 A. Because it captures context 19 information associated with user-defined data, 20 and created by interaction of the user with the 21 system and stored this context information with 22 the data in metadata using a storage component. 23 Q. And specifically, at the very 24 least, does the Facebook website perform</p>	<p>1 A. Yeah, it does. 2 Q. And what do you base that on? 3 A. Well, the fact that the system 4 results in having the context information 5 collected and stored as metadata and the 6 tracking information being automatically updated 7 in the metadata. 8 Q. At the very least does the 9 Facebook website perform in substantially the 10 same way as the tracking component of Claim 1? 11 A. Yes. 12 Q. And why is that? 13 A. Because it is tracking the user 14 from one context to another context and 15 dynamically update the stored metadata based on 16 the change when the user access the data from 17 second context. 18 Q. And at the very least does the 19 Facebook website yield the same results as the 20 context component of Claim 1? 21 A. The same results of the context 22 component, yeah, because context information is 23 collected and stored as metadata. 24 Q. At the very least does the</p>

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1 Facebook website yield the same results as the	1 And it says that the context
2 tracking component of Claim 1?	2 information includes a relationship between the
3 A. Yes. The result is that the user	3 user and at least one of an application,
4 gets tracked and the tracking information is	4 application data, and a user environment. Okay?
5 recorded as part of the metadata.	5 And in this particular case, for
6 Q. So is it your opinion that Claim 1	6 example, in use case number one, I showed you
7 is infringed literally or at the very least	7 how the context component captures all the
8 under the Doctrine of Equivalents --	8 information and then stores it. And the actual
9 A. That's correct.	9 file that performs that function is HTML, this
10 Q. -- by Facebook's website?	10 particular file, pic nload.php.
11 A. That is correct.	11 And this in particular is the file
12 Q. Could I get you to put a check box	12 that receives all the information from the user
13 at the top of Claim 1, then?	13 and transforms the information and processes it
14 A. All right. (Witness complying.)	14 and invokes other function, other files, until
15 Q. Let's turn to the two dependent	15 it gets into lib photos.php, another file. And
16 claims of Claim 1 and Claim 4.	16 this particular file has as this function to say
17 Do you have an opinion as to	17 insert into photo the AID, the album FID, the
18 whether or not the Facebook website infringes	18 user, the creator ID and so forth.
19 the dependent Claim 4 of the '761 patent?	19 And you can see that the context
20 A. Yes, I do.	20 information, which is all this information that
21 Q. What is your opinion?	21 is added, that is captured whenever the photo is
22 A. That it infringes.	22 up -- when the photo is uploaded and stored in
23 Q. And could you show us in the	23 the metadata, includes a relationship between
24 source code --	24 the user. In fact, we even have a user
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1 MR. ANDRE: And, Your Honor, I	1 component right up here.
2 would seal the record for this portion.	2 And at least one of the
3 BY MR. ANDRE:	3 application, application data and user
4 Q. Could you show us in the source	4 environment. And for example, in the user
5 code where Claim 4 or the elements of Claim 4	5 environment, we have the particular album ID,
6 are found in the Facebook website?	6 which this photo is uploaded.
7 A. Yes.	7 Q. And based on the evidence you've
8 THE COURT: Do you have to switch	8 just identified and the previous documents and
9 from the Elmo?	9 evidence you've shown in the last couple of
10 A. So give me one minute. So, for	10 days, do you have an opinion as to -- does that
11 example, in the example that I show where the	11 support your opinion that Facebook's website
12 user was uploading his own profile picture, we	12 infringes Claim 4?
13 can see that in, for example, the function used	13 A. Yes, it does.
14 upload the picture itself, which is --	14 Q. Could you put a check box in --
15 Q. Before you show that, can you	15 check in the box next to Claim 4?
16 describe generally what Claim 4 is referring to?	16 A. Yes.
17 A. Sorry. Yeah. So the claim, the	17 MR. ANDRE: Your Honor, we can
18 Claim 4 describes a system that is a system of	18 unseal the record at this point.
19 Claim 1, and in addition, the context	19 BY MR. ANDRE:
20 information that is captured. So if you	20 Q. Dr. Vigna, if you'll turn to the
21 remember, if you remember here there is the	21 next dependent claim, Claim 7. Do you see that?
22 user, the data and there is a context component	22 A. Yeah.
23 that captures in addition to the data context	23 Q. Do you have --
24 information to be stored in the metadata.	24 MR. ANDRE: Your Honor, just one

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1 housekeeping matter. I'd like to move Exhibit	1 A. Yeah.
2 PTX-942 into evidence as well.	2 Q. What type of a claim is Claim 9?
3 MS. KEEFE: No objection.	3 A. This is a method claim.
4 THE COURT: It's admitted.	4 Q. And when you say a method claim,
5 BY MR. ANDRE:	5 what are you referring to?
6 Q. Now, let's go to Claim 7. Do you	6 A. So it's a claim that describes how
7 have an opinion as to whether the Facebook	7 certain procedures is performed through certain
8 websites infringes Claim 7 of the '761 patent?	8 steps.
9 A. Yes, it does.	9 Q. So Claim 1 was -- what type of
10 Q. What's that opinion?	10 claim was Claim 1?
11 A. That the Facebook site infringes	11 A. So Claim 1, it was describing
12 Claim 7.	12 components of the server. This is more
13 Q. Could you briefly describe what	13 describing a process that is followed to achieve
14 Claim 7 is referring to?	14 a certain goal.
15 A. So it is describing the system of	15 Q. And have you formed an opinion as
16 Claim 1, plus the fact that data created in the	16 to whether or not the Facebook website infringes
17 first context is associated with data created in	17 Claim 9 of the '761 patent?
18 the second context. And if you put, for	18 A. Yes, I did.
19 example, the slide where the user has written on	19 Q. And what is your opinion?
20 the friend's wall.	20 A. And my opinion is that Facebook
21 Q. Go to PTX-942 with Bates Number	21 infringes Claim 9.
22 LTF 157101?	22 Q. And what evidence did you rely
23 A. That is correct. Correct.	23 upon to form that opinion?
24 So this case, for example, without	24 A. I relied upon help files, source
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1 going through the source code, it's pretty easy	1 code, my own experience with the website, the
2 that I wrote. How are you in the second context?	2 deposition of the employees of Facebook that
3 And there is a direct association of that	3 used the website routinely.
4 content that I introduced in the second context	4 Q. Did you rely on the confidential
5 with my profile picture, which is the data that	5 documents as well?
6 I introduced in the first context.	6 A. Yes.
7 So it is a pretty clear	7 Q. Let me direct your attention to
8 association of the two.	8 PTX-145. Dr. Vigna, are you familiar with this
9 Q. And based on the testimony you	9 document?
10 provided about Claim 7 and the previous	10 A. Yes.
11 testimony and evidence you provided, does that	11 Q. What is this document?
12 support your opinion that Facebook's website	12 A. So this platform White paper that
13 infringes Claim 7?	13 describes how testing is performed when new
14 A. Yes.	14 functionality is introduced on the website. And
15 Q. Could you put a check in the box	15 I think that interesting -- yeah, that paragraph
16 next to Claim 7?	16 is particularly interesting. It says that every
17 MR. ANDRE: Your Honor, may I	17 time that they want to add some functionality,
18 approach the witness? I want to switch my	18 they have the engineers bang on that particular
19 boards.	19 piece of code in every way possible.
20 THE COURT: Yes, you may.	20 So this explains that they have
21 THE WITNESS: Can you guys see it?	21 their own employees go through the steps of
22 BY MR. ANDRE:	22 performing particular actions such as fanning
23 Q. Dr. Vigna, I'd like to turn your	23 the page or uploading a photo internally to make
24 attention to Claim 9 of the '761 patent.	24 sure that a functionality works correctly.

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1 Q. So does PTX-145 support your
 2 opinion that the Facebook employees actually
 3 practice the methods of Claim 9?
 4 A. Yes.
 5 MR. ANDRE: Your Honor, I'd like
 6 to move PTX-145 into evidence.
 7 MS. KEEFE: No objection, Your
 8 Honor.
 9 THE COURT: It's admitted.
 10 BY MR. ANDRE:
 11 Q. Also, I'd like to turn your
 12 attention to PTX-1000. Dr. Vigna, are you --
 13 and I am sorry, let's go back to PTX-145 real
 14 quick. I'm sorry.
 15 Dr. Vigna, go up to the top here.
 16 Is this a -- PTX-145, is this a confidential
 17 internal document of Facebook's wiki?
 18 A. Yes.
 19 Q. Thank you.
 20 Now, let's go to PTX-1000.
 21 Dr. Vigna, are you familiar with
 22 what's been marked as PTX-1000?
 23 A. Yeah. It's the Statement of
 24 Rights and Responsibilities.

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1 Q. And who is this directed to?
 2 A. This is directed to users of the
 3 website.
 4 Q. And if you scroll down this page
 5 just a little bit, you see all these you will,
 6 you will, you will and you will not?
 7 A. Yes.
 8 Q. Does that inform your opinion that
 9 Facebook directs or controls the actions of the
 10 users?
 11 A. Yes.
 12 Q. How does it do so?
 13 A. Because it tells the user what
 14 they can and cannot do.
 15 Q. Dr. Vigna, in your own personal
 16 experience, have you witnessed individuals
 17 posting to walls and/or uploading photographs?
 18 A. Yeah. I mean, I do that routinely
 19 on my own Facebook page. So I've done it
 20 several times.
 21 I've done it, for example, for
 22 preparing the exhibits, of course, that I showed
 23 you. I had to post things.
 24 And I've witnessed many, many

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1 times friends, students, colleagues performing
 2 those steps.
 3 MR. ANDRE: Your Honor, I'd like
 4 to move PTX-1000 into evidence.
 5 MS. KEEFE: No objection.
 6 THE COURT: It's admitted.
 7 BY MR. ANDRE:
 8 Q. All right. Let's turn to the
 9 elements of Claim 9.
 10 You notice there are four elements
 11 of this claim; is that correct?
 12 A. That is correct.
 13 Q. On the first claim element,
 14 creating data within a user environment. Do you
 15 see that?
 16 A. Yes.
 17 Q. Can you describe generally what
 18 that is referring to?
 19 A. So this is describing a method for
 20 creating data, you know, sort of user
 21 environment by interacting with the platform
 22 using an application and the data that is
 23 exchanged as files and documents.
 24 Q. And does Facebook inform its users

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1 how to do this action?
 2 A. Yeah. The Facebook provides when
 3 the users go to the website, for example, and
 4 perform the task of uploading a note, document
 5 or uploading a file in a form of a picture, they
 6 go through the steps of this method to achieve
 7 the goal of creating this data.
 8 Q. Could you go to PTX-886?
 9 Can you go to the how do I change
 10 my profile picture? Is that an example of how
 11 Facebook instructs or directs its users how to
 12 upload a photo?
 13 A. Yeah. These are help files that
 14 clearly describe to users how to perform series
 15 of tasks in order to achieve a particular goal.
 16 In this case, to add or change a profile
 17 picture.
 18 Q. And Dr. Vigna, based on this
 19 document and the previous testimony you provided
 20 regarding this subject, do you have an opinion
 21 as to whether or not the Facebook website
 22 infringes the first element of Claim 9?
 23 A. I do.
 24 Q. And what's your opinion?

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<p>1 A. That it infringes.</p> <p>2 Q. Would you put a check in the box</p> <p>3 next to Claim 9, the first element?</p> <p>4 MR. ANDRE: Your Honor, I'd like</p> <p>5 to move PTX-886 into evidence.</p> <p>6 MS. KEEFE: No objection.</p> <p>7 THE COURT: It's admitted.</p> <p>8 BY MR. ANDRE:</p> <p>9 Q. I'd like to run to the second</p> <p>10 claim element of Claim 9. Dr. Vigna, do you</p> <p>11 have an opinion as to whether the Facebook</p> <p>12 website infringes the second element of Claim 9?</p> <p>13 A. Yes, I do.</p> <p>14 Q. And what's that opinion?</p> <p>15 A. That Facebook infringes that</p> <p>16 element.</p> <p>17 Q. Could you describe, generally</p> <p>18 speaking, what this element is talking about?</p> <p>19 A. So this is a method for</p> <p>20 dynamically associating metadata with the data</p> <p>21 where both the data and metadata are stored in a</p> <p>22 storage component of the computing platform, and</p> <p>23 the metadata includes information related to the</p> <p>24 user, the data, the application and the user</p>	<p>1 as context information.</p> <p>2 And you can see, for example, that</p> <p>3 there is the album ID, which would be the user</p> <p>4 environment, a reference to the user, a</p> <p>5 reference to the data. It would be linked to a</p> <p>6 source, which is the data, and when the data was</p> <p>7 created, which is information that is captured</p> <p>8 by the application saying, You uploaded this</p> <p>9 information at this time in this application.</p> <p>10 MR. ANDRE: You can take that</p> <p>11 down. We can unseal the record, Your Honor.</p> <p>12 BY MR. ANDRE:</p> <p>13 Q. Based on that portion of the</p> <p>14 source code, as well as other previous testimony</p> <p>15 you provided this morning and yesterday</p> <p>16 afternoon related to this topic, do you have an</p> <p>17 opinion as to whether Facebook's website</p> <p>18 infringes the second element of Claim 9?</p> <p>19 A. Yes. My opinion is that Facebook</p> <p>20 infringes that element.</p> <p>21 Q. Would you please put a check in</p> <p>22 the box next to the second element of Claim 9?</p> <p>23 Turn to the third element of Claim</p> <p>24 9. Dr. Vigna, have you formed an opinion as to</p>
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<p>1 environment.</p> <p>2 Q. So is this similar to what you</p> <p>3 talked about earlier today or yesterday?</p> <p>4 A. Yes. What we have seen before is</p> <p>5 that when a user, for example, uploads a</p> <p>6 picture, there are a number of actions that are</p> <p>7 generated because of these actions of the user.</p> <p>8 And in particular, we have seen that we have</p> <p>9 stored tracking information in the metadata and</p> <p>10 this tracking information contains the user</p> <p>11 information about the user, the data, the</p> <p>12 application and the user environment.</p> <p>13 Q. And could you --</p> <p>14 MR. ANDRE: So I'd like to seal</p> <p>15 the record at this point.</p> <p>16 BY MR. ANDRE:</p> <p>17 Q. Can you show the source code?</p> <p>18 A. Yeah.</p> <p>19 Q. Where this element found?</p> <p>20 A. Yeah. So, for example, when we --</p> <p>21 when we load the photo, this is actually the</p> <p>22 context information that is stored in the</p> <p>23 metadata. And in this particular -- in this</p> <p>24 particular case, this is metadata that is stored</p>	<p>1 whether the Facebook website infringes the third</p> <p>2 element of Claim 9?</p> <p>3 A. Yes, I do.</p> <p>4 Q. And what's your opinion?</p> <p>5 A. My opinion is that Facebook</p> <p>6 infringes this particular element.</p> <p>7 Q. Okay. Could you generally</p> <p>8 describe what is being referred to in the third</p> <p>9 element of Claim 9?</p> <p>10 A. So I'm sure that we're all</p> <p>11 familiar with this at this point, but this is</p> <p>12 about tracking the movement of the user from the</p> <p>13 first environment of the first computing</p> <p>14 platform to a second environment. And as the</p> <p>15 user decides to move from its own profile, its</p> <p>16 own profile to the profile of friend, for</p> <p>17 example.</p> <p>18 Instructions are executed to track</p> <p>19 the user from one environment to another.</p> <p>20 Q. We'll turn to PTX-920, please.</p> <p>21 Dr. Vigna, are you familiar with</p> <p>22 this exhibit?</p> <p>23 A. Yeah.</p> <p>24 Q. And what type of document is this?</p>

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<p>1 A. It's a help file.</p> <p>2 Q. If you go down, scroll down the</p> <p>3 page a little bit where it says how to publish</p> <p>4 right here.</p> <p>5 Dr. Vigna, does what's in Exhibit</p> <p>6 PTX-920 support your opinion regarding the third</p> <p>7 element of Claim 9?</p> <p>8 A. Yeah. In a way tells the user</p> <p>9 that they can go to another profile, move to</p> <p>10 another user and, for example, publish</p> <p>11 information on their wall.</p> <p>12 Q. And how does that support your</p> <p>13 opinion about the tracking?</p> <p>14 A. That it is actually infringing.</p> <p>15 Q. And just so we're clear, what</p> <p>16 exactly is a help file?</p> <p>17 A. So a help file is information that</p> <p>18 is publicly available that helps users perform</p> <p>19 certain actions and directs them or encourages</p> <p>20 them to perform certain operations.</p> <p>21 MR. ANDRE: Your Honor, I would</p> <p>22 like the move PTX 920 into evidence.</p> <p>23 MS. KEEFE: No objection.</p> <p>24 THE COURT: It's admitted.</p>	<p>1 how metadata is dynamically updated with an</p> <p>2 association of the data, the application and the</p> <p>3 second user environment when the user employs a</p> <p>4 left one of the application and the data from</p> <p>5 the second environment.</p> <p>6 Q. So this is worded a little</p> <p>7 differently than Claim 1. Can you generally</p> <p>8 describe how this dynamically updating the</p> <p>9 stored metadata occurs in Claim 9?</p> <p>10 A. Yeah. In this particular case</p> <p>11 it's, you know, it's a variation in a way on the</p> <p>12 concept. The idea is that whenever the user</p> <p>13 okay, employs one application and the data from</p> <p>14 the second environment, whenever that is used,</p> <p>15 for example, the user uploads the picture from</p> <p>16 his album to the new album. The metadata is</p> <p>17 updated automatically with that association of</p> <p>18 the second user environment, the data and the</p> <p>19 application.</p> <p>20 Q. Thank you.</p> <p>21 And could you show us in the --</p> <p>22 MR. ANDRE: I'm sorry, Your Honor.</p> <p>23 We have to close the record.</p> <p>24 Q. Could you show us in the source</p>
Page 687	Page 689
<p>1 BY MR. ANDRE:</p> <p>2 Q. And based on this document, the</p> <p>3 source code you have shown us and the various</p> <p>4 other evidence you have shown us in the last two</p> <p>5 days, does that support your opinion that</p> <p>6 Facebook infringes the third element of Claim 9?</p> <p>7 A. My opinion is that Facebook</p> <p>8 infringes that element.</p> <p>9 Q. Would you put a check in the third</p> <p>10 element box.</p> <p>11 A. (Witness complying.)</p> <p>12 Q. Turn to the fourth element of</p> <p>13 Claim 9.</p> <p>14 Dr. Vigna, do you have an opinion</p> <p>15 as to whether or not the Facebook website</p> <p>16 infringes the fourth element of Claim 9?</p> <p>17 A. Yes.</p> <p>18 Q. What is your opinion?</p> <p>19 A. That Facebook infringes that</p> <p>20 particular claim element.</p> <p>21 Q. And could you generally describe</p> <p>22 what we're talking about in the fourth element</p> <p>23 of Claim 9?</p> <p>24 A. Yeah. So here we're talking about</p>	<p>1 code where we would find the element of Claim 4,</p> <p>2 of Claim 9?</p> <p>3 A. Yeah.</p> <p>4 Q. Let me put that in English this</p> <p>5 time. Could you show us in the source code</p> <p>6 where we would find the fourth element of Claim</p> <p>7 9?</p> <p>8 A. Okay. So, for example, again,</p> <p>9 going to the case of uploading the picture, we</p> <p>10 have seen that a number of files are executed,</p> <p>11 and when upload photos is executed, eventually</p> <p>12 the -- I might even have it here. No, that's a</p> <p>13 new file. Sorry.</p> <p>14 So the picture -- the file</p> <p>15 executed is /lib/feed/stories/add/insert.php.</p> <p>16 And you can see, for example, that in this</p> <p>17 particular case, the metadata in the form of a</p> <p>18 tracking story that says this user has been</p> <p>19 writing on the wall of another user -- I'm</p> <p>20 getting tired, too -- it contains references to</p> <p>21 the second user environment, and in case this</p> <p>22 will be, for example, this user (J.D.) will be the</p> <p>23 user on which you wrote, on whose wall you wrote</p> <p>24 the message. So it's the reference of the</p>

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<p>1 second environment. There are reference to the 2 application, for example, the story type. 3 And there are references to the 4 data, for example, the data story, database I.D. 5 And there are actual reference to the user in 6 the first place as the actor I.D. 7 Q. And does that support your opinion 8 that the fourth element of Claim 9 is infringed 9 by the Facebook website? 10 A. Yes. 11 Q. And based on that -- 12 MR. ANDRE: Your Honor, we can 13 unseal the record. 14 THE COURT: Okay. 15 BY MR. ANDRE: 16 Q. Based on that portion of the 17 source code and your previous testimony 18 regarding this topic, do you have an opinion as 19 to whether the Facebook website infringes the 20 fourth element of Claim 9? 21 A. Yes, I do. 22 Q. What is that opinion? 23 A. It is that it infringes. 24 Q. Would you put a check in the box,</p>	<p>1 providing a series of -- they're really, you 2 know, commands in a way, that you can send to 3 Facebook target information that is stored 4 within Facebook. 5 So, for example, I can say please 6 give me all the users of John Vineyard, and they 7 say, okay, here are all the users. 8 Tell me what John Vineyard has 9 been doing recently. And Facebook goes into his 10 own data, the metadata or the stored pictures or 11 whatever information is requested, gathers this 12 information and sends it back. 13 All this possible operation that 14 Facebook allows you to do from the outside, all 15 these together compose an API. So you can see 16 that it's an application programming interface. 17 So the idea is that it interfaces 18 developers with the content of Facebook. So 19 this is an interface. It's something that 20 allows you to interact with the content that is 21 stored on Facebook. And of course, it's an 22 application programming into Facebook because 23 these requests are actually made by an 24 application.</p>
Page 691	Page 693
<p>1 please. 2 A. Yes. (Witness complying.) 3 Q. Dr. Vigna, in your opinion, does 4 Facebook encourage or participate with 5 developers and users in the infringement of 6 Claim 9? 7 A. Yes. 8 Q. Have you ever created an 9 application to run the Facebook website? 10 A. Yes, I did. 11 Q. And when you created that 12 application, what documents did you use to 13 create it? 14 A. I used public documents of 15 Facebook that describe the API of the Facebook. 16 Q. What is API again? 17 A. Can I stop for a second and go to 18 the board? 19 Q. Sure. 20 A. So it's sort -- so the idea is 21 that if you look at Facebook sort of like an 22 entity here. Facebook will offer to third party 23 the ability to access all kind of data that is 24 managed by Facebook. And it does this by</p>	<p>1 An application is nothing but a 2 code that performs some operations. So what I 3 did as part of, you know, understanding what 4 Facebook was doing and what operations were 5 possible and what data was collected and was 6 available to third parties, I developed an 7 application of mine, a very simple application, 8 and I tested what information could be accessed. 9 And, for example, I performed, for 10 example, an upload of a photo. I performed from 11 my application the ability to write on the wall 12 of another user. So this API is a way in which 13 Facebook allows other people to perform actions 14 on their site and execute steps of the method. 15 Q. And just to give by way of example 16 some of the more popular third-party 17 applications like FarmVille and Mafia Wars and 18 those type of stuff? 19 A. Yeah, those are applications that 20 are typically integratable to Facebook. From my 21 application there are only two users. 22 Q. And are the APIs that Facebook 23 publishes for the third-party developers, are 24 those specific to Facebook?</p>

EXHIBIT 28

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,	)	Trial Volume 1
)	
Plaintiff,)	
	)	C.A. No. 08-262-JJF-LPS
v.)	
)	
FACEBOOK, INC., a Delaware corporation.)	
)	
Defendant.)	

July 19, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & KORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING, LLP
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
BY: JAMES HANNAH, ESQ.

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715 North King Street - Wilmington, Delaware 19801
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<p style="text-align: right;">Page 242</p> <p>1 both a fair shake.</p> <p>2 And I know you can do it. I have</p> <p>3 every confidence in you.</p> <p>4 I represent Facebook. I'm</p> <p>5 assuming that you know what Facebook is.</p> <p>6 Facebook is a social network. And</p> <p>7 the evidence is going to show you that</p> <p>8 Leader-to-Leader is a business and enterprise</p> <p>9 software company. Social networking, business</p> <p>10 and enterprise software.</p> <p>11 During the entirety of the trial,</p> <p>12 it's going to be one version and another</p> <p>13 version. I'll give you two simple ideas. You</p> <p>14 can adapt them if you want, if you don't come up</p> <p>15 with your own.</p> <p>16 Generalities, specifics.</p> <p>17 Confusion, clarity. You choose.</p> <p>18 As you listen to the arguments of</p> <p>19 the lawyers and this overwhelming evidence,</p> <p>20 think for yourself, listen to what I say.</p> <p>21 Please take it into consideration, but you think</p> <p>22 for yourself.</p> <p>23 You make up your own minds about</p> <p>24 what that patent covers, what Facebook does and</p>	<p style="text-align: right;">Page 244</p> <p>1 to show that Facebook practices the invention?</p> <p>2 The power of the patent holder is to exclude</p> <p>3 anyone from using it. That's a weighty</p> <p>4 decision. That's a weighty decision.</p> <p>5 If Facebook infringes the patent,</p> <p>6 it cannot use that invention. Please give us</p> <p>7 your full, and fair and undivided attention,</p> <p>8 I think it's going to be an</p> <p>9 interesting week for you. This is the patent.</p> <p>10 I know you've seen it, but I want to actually</p> <p>11 take some time to go through it.</p> <p>12 That's a big number. You know</p> <p>13 what that number means? Seven million other</p> <p>14 patents out there.</p> <p>15 Remember the video where you saw</p> <p>16 the guy run it through the mail room of the</p> <p>17 patent office, stuff was everywhere. It's a</p> <p>18 busy office. There's a lot of things that have</p> <p>19 been invented.</p> <p>20 This is the title of the patent.</p> <p>21 And as I was listening to the tape, I wrote this</p> <p>22 down. The man on the tape said a title that</p> <p>23 describes the invention.</p> <p>24 Look at the title. Nothing about</p>
<p style="text-align: right;">Page 243</p> <p>1 whether that patent is valid. Because we</p> <p>2 believe and we will attempt to show you that</p> <p>3 Facebook does not infringe the patent.</p> <p>4 Remember the video they showed you</p> <p>5 where the man expressed the idea of a patent</p> <p>6 being like a deed. We sometimes use a surveying</p> <p>7 term, the metes and the bounds of the patent.</p> <p>8 Well, if you have a corner lot and</p> <p>9 kids run over the corner of your lot all the</p> <p>10 time, you have a right, as the property owner,</p> <p>11 to control that. But the deed confines your</p> <p>12 property rights to the deed. That's what a</p> <p>13 patent is like.</p> <p>14 And everything Mr. Andre said</p> <p>15 could be true about the inventive process on</p> <p>16 their side of the house. But it could be just</p> <p>17 as true that we do not trespass on that</p> <p>18 property.</p> <p>19 So the question you're going to</p> <p>20 have to be grappling with is, not listening to a</p> <p>21 bunch of snippets of things thrown at you: What</p> <p>22 does the patent cover? What does Facebook do?</p> <p>23 And are you satisfied at the end</p> <p>24 of the day that they have carried their burden</p>	<p style="text-align: right;">Page 245</p> <p>1 networking. It refers to the Dynamic</p> <p>2 Association of Electronically Stored Information</p> <p>3 with Iterative Workflow Changes.</p> <p>4 That describes what this invention</p> <p>5 is about. It says nothing about social</p> <p>6 networking.</p> <p>7 There are the two inventors, Mr.</p> <p>8 McKibben and Mr. Lamb. There are these figures</p> <p>9 in the patent, and they are intended to show you</p> <p>10 the logic, if you will, of the invention or the</p> <p>11 way you could put together a system or a method.</p> <p>12 And as you listen to the evidence</p> <p>13 come in, think about when you go deliberate</p> <p>14 looking back at this evidence and looking at</p> <p>15 these figures for yourself and looking for</p> <p>16 things.</p> <p>17 As the Court has instructed you,</p> <p>18 the next section of the patent is called a</p> <p>19 specification. Now, this is where they describe</p> <p>20 what was leading to the invention, what the</p> <p>21 background is, how they got there, what they</p> <p>22 were trying to accomplish, another good place to</p> <p>23 look.</p> <p>24 And then as you heard, there are</p>

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	Trial Volume 2
)	
)	
Plaintiff,)	
	)	C.A. No. 08-062-JJF-LPS
v.)	
)	
FACEBOOK, INC., a)	
Delaware corporation,)	
)	
Defendant.)	

Tuesday, July 20, 2010
9:00 a.m.

BEFORE: THE HONORABLE LEONARD P. STARK
United States District Court Magistrate

APPEARANCES:

POTTER, ANDERSON & CORROON, LLP
BY: PHILIP A. ROVNER, ESQ.

-and-

KING & SPALDING
BY: PAUL ANDRE, ESQ.
BY: LISA KOBIALKA, ESQ.
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1 And that changed over time, too,
 2 as we came up with other applications that we
 3 built into that, we added that to the mental
 4 pictures of what Leader2Leader was in the
 5 product.
 6 Q. Sometimes when you talked about
 7 Leader2Leader during your time at Leader, did
 8 that include things like LeaderPhone?
 9 A. Yeah, so LeaderPhone was one of
 10 the products I developed, helped develop, led
 11 the team in developing at Leader Technologies.
 12 Q. Is there any other names that come
 13 to mind that would have --
 14 MS. KEEFE: Objection. Beyond the
 15 scope.
 16 THE COURT: Overruled.
 17 THE WITNESS: Smart Camera was
 18 another application that stood out as something
 19 that we didn't conceive of when we originally
 20 started, but then later on, hey, this would be a
 21 cool addition to throw that in.
 22 Q. Turning to the technology that you
 23 developed that you understand is the invention
 24 of the '761 patent, when you implemented it, did

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1 it have the ability to share photos?
 2 A. Yes.
 3 Q. Did it have the ability to share
 4 videos?
 5 A. Yes.
 6 Q. And how do you know this?
 7 A. It had the ability to share any
 8 file by design. It was intentionally trying to
 9 not just solve the problems that we knew of at
 10 that point, but every, you know, every data
 11 problem ever, so if someone came up with a new
 12 video format or a new image format or a new 3D
 13 we didn't have to know, we built it to handle
 14 any of that stuff so all of the stuff that
 15 existed at the time, images, photos, video would
 16 all have been supported by the file application.
 17 Q. Now, just turning to your
 18 deposition, you mentioned that you have made
 19 some clarifications?
 20 A. Yes.
 21 Q. What made you think you could make
 22 clarifications or corrections to your
 23 deposition?
 24 A. At the deposition, the Facebook

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1 lawyer that took my deposition instructed me
 2 that I could review it and make those
 3 corrections. So when I read it, saw it in
 4 print, felt that that clarification was more
 5 accurate, I felt that made sense to do that.
 6 Q. So did you just want to make sure
 7 your system testimony was really accurate and
 8 precise?
 9 A. Yes.
 10 MS. KEEFE: Objection.
 11 THE COURT: I'll strike that
 12 answer. The objection is sustained.
 13 MS. KOBIALKA: I have no further
 14 questions.
 15 THE COURT: Okay. Thank you. You
 16 may step down.
 17 THE WITNESS: Thank you.
 18 MR. ANDRE: Your Honor, at this
 19 time, we were going to be playing some videotape
 20 deposition. I don't know if you want to start
 21 this up before lunch or take the lunch break
 22 early.
 23 THE COURT: We'll keep going until
 24 12:30, so you can go ahead and play what you

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1 need to play.
 2 MR. ANDRE: At this time, ladies
 3 and gentlemen, we're going to be showing you a
 4 videotape deposition of one of Facebook's senior
 5 engineers by the name of Josh Wiseman.
 6 He's going to talk about the
 7 Facebook technology for the first time.
 8 (Beginning of videotape excerpt of
 9 Joshua Wiseman.)
 10 Q. Would the court reporter please
 11 swear in the witness?
 12 Q. Good morning.
 13 A. Good morning.
 14 Q. Can you please state your full
 15 name and address for the record?
 16 A. Yes. It's Joshua Wiseman. And my
 17 address is 1523B Church Street, San Francisco,
 18 California 94131.
 19 Q. Are you currently employed,
 20 Mr. Wiseman?
 21 A. Yes.
 22 Q. Where are you employed?
 23 A. At Facebook.
 24 Q. And how long have you been working

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<p>1 at Facebook?</p> <p>2 A. I've been there for a little over</p> <p>3 three years.</p> <p>4 Q. And what is your current title at</p> <p>5 Facebook?</p> <p>6 A. My current title is engineering</p> <p>7 manager.</p> <p>8 Q. Do you understand today that in</p> <p>9 addition to your personal testimony, you'll be</p> <p>10 testifying on behalf of Facebook for certain</p> <p>11 technical topics?</p> <p>12 A. Yes.</p> <p>13 Q. Facebook maintains a website; is</p> <p>14 that right?</p> <p>15 A. Correct.</p> <p>16 Q. And that website is found at</p> <p>17 www.facebook.com; is this correct?</p> <p>18 A. Yes, that's the URL.</p> <p>19 Q. If I was on the internet, correct</p> <p>20 in a computer and I went www.facebook.com, what</p> <p>21 would happen?</p> <p>22 A. So if you enter www.facebook.com</p> <p>23 into a web browser, you would arrive at the</p> <p>24 Facebook website.</p>	<p>1 The Witness: So they would see --</p> <p>2 on the top, they would see the Facebook logo.</p> <p>3 They would see a number of navigational links.</p> <p>4 Similarly on the left, they would</p> <p>5 see navigational links to reach various portions</p> <p>6 of the site. In the mainframe of the page, they</p> <p>7 would see what we call our News Feed, and on the</p> <p>8 right side of the page they would see various</p> <p>9 advertising units and other features of the</p> <p>10 site.</p> <p>11 By Mr. Hannah:</p> <p>12 Q. And what is the -- what is the</p> <p>13 code that is used to generate the Facebook home</p> <p>14 page?</p> <p>15 The Witness: So the code that is</p> <p>16 used to generate the home page is, again, what</p> <p>17 we call our web code. So it's mostly a PHP code</p> <p>18 that's processing the request and spitting out</p> <p>19 the home page.</p> <p>20 By Mr. Hannah:</p> <p>21 Q. Can you recall any specific files</p> <p>22 that are used to generate the Facebook home</p> <p>23 page?</p> <p>24 A. Yes.</p>
Page 475	Page 477
<p>1 By Mr. Hannah:</p> <p>2 Q. And what would be displayed?</p> <p>3 A. So if you are arriving for the</p> <p>4 first time, you would see what we call our</p> <p>5 log-in screen, which presents you with a prompt</p> <p>6 to enter your email and password. On subsequent</p> <p>7 visits you might be -- you might be within a</p> <p>8 logged in experience, which would be accustomed</p> <p>9 to whatever user you are.</p> <p>10 Q. And if a user enters a user name</p> <p>11 and password, then what happens?</p> <p>12 A. Then they are taken to what we</p> <p>13 call the Facebook home page.</p> <p>14 Q. So you said after a user logs in,</p> <p>15 then they're taken to the Facebook home page; is</p> <p>16 that right?</p> <p>17 A. Yes.</p> <p>18 Q. And what does a user see on the</p> <p>19 Facebook home page.</p> <p>20 The Witness: A user on the -- when</p> <p>21 they're looking at the Facebook home page would</p> <p>22 see various pieces of content that are relevant</p> <p>23 to that user within the Facebook experience.</p> <p>24 Q. Like what pieces of content?</p>	<p>1 Q. And what are those?</p> <p>2 A. So one that I can recall is</p> <p>3 HTML/Home.PHP.</p> <p>4 Q. Any others?</p> <p>5 A. That's the most clear one that I</p> <p>6 can remember off the top of my head.</p> <p>7 Q. All right. From the user's home</p> <p>8 page, you mentioned that there was several</p> <p>9 different areas that a user can go to; is that</p> <p>10 right?</p> <p>11 A. Correct.</p> <p>12 The Witness: Yes.</p> <p>13 By Mr. Hannah:</p> <p>14 Q. And is one of those profile?</p> <p>15 A. Yes.</p> <p>16 Q. What happens if a user clicks on</p> <p>17 the profile tab?</p> <p>18 The Witness: There is no profile</p> <p>19 tab on -- on the home page. There's a profile</p> <p>20 link or button?</p> <p>21 By Mr. Hannah:</p> <p>22 Q. Okay. So what happens when you</p> <p>23 click on the link or button?</p> <p>24 A. You are taken to what we call the</p>

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1 profile page, which is another rendering of your
 2 information on the site.
 3 Q. And what is displayed to a user on
 4 the profile page?
 5 The Witness: So like the home
 6 page, there is a top navigational element you
 7 can use to get to other parts of the site. You
 8 will also see what we call a profile picture, a
 9 photo of the person whose profile you're looking
 10 at.
 11 There is a tabbed interface for
 12 browsing to various subparts of the profile.
 13 And depending on whose profile you're looking
 14 at, there will be different information
 15 displayed by default on that page.
 16 By Mr. Hannah:
 17 Q. What code is used to generate
 18 the profile page?
 19 The Witness: So, again, like the
 20 home page, our web code, our PHP code is used to
 21 generate the profile.
 22 By Mr. Hannah:
 23 Q. Do you recall any specific PHP
 24 files?

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1 A. Yes.
 2 Q. What are those?
 3 A. HTML/Profile.PHP is the main file
 4 used for rendering the profile.
 5 Q. You mentioned there was a photo on
 6 your profile page that's displayed; is that
 7 right?
 8 A. Correct.
 9 Q. How does a user upload a profile
 10 photo?
 11 The Witness: There are several
 12 ways a user can upload a profile photo. They're
 13 all accessed by -- in a current interface by
 14 hovering over the profile photo with your mouse.
 15 There's a drop-down menu where you
 16 can choose from a few different options.
 17 By Mr. Hannah:
 18 Q. So what are those options?
 19 A. Let's see. So you can -- one
 20 option is called something like upload a photo,
 21 which will allow you to upload a single photo
 22 from your hard drive. There is an option to
 23 take a photo, which is referring to like a
 24 webcam functionality.

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1 There is an option to choose an
 2 existing photo from one of your photo albums --
 3 actually, I believe it's only from your profile
 4 photo album, which is a special album of
 5 existing profile photos.
 6 Q. So if a user clicks on the upload
 7 a profile picture link, what happens?
 8 The Witness: If -- okay. So if a
 9 user clicks on the upload link in that -- in
 10 that -- in that hover menu, they'll be presented
 11 with a browser file chooser, which will allow
 12 them to choose a file on their -- on their file
 13 system.
 14 By Mr. Hannah:
 15 Q. And, presumably, that file would
 16 be a picture; right?
 17 The Witness: In the file chooser
 18 that is displayed shows you potentially every
 19 file in your file system, but it's restricted to
 20 only allow you to select one of several common
 21 image formats.
 22 By Mr. Hannah:
 23 Q. If a user selects an image format
 24 and uploads it, then what happens?

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1 The Witness: So they are not
 2 selecting an image format, but --
 3 Q. Oh, sorry. If they select a file
 4 which is in an image format, what happens?
 5 A. So if they select a file and using
 6 whatever file system chooser is presented, they
 7 click that.
 8 Okay. That file would then be --
 9 would go through a multistep process to upload
 10 it to our servers and then return the result to
 11 the browser.
 12 Q. And what is that multistep
 13 process?
 14 The Witness: So the file is part
 15 of an HTML post request to our server. So the
 16 bytes of the file itself are piggybacked on an
 17 HTML request, which arrives at our web code that
 18 processes photo uploads.
 19 From there, the photo is stored in
 20 our -- in our -- one of our file systems that
 21 -- that stores the actual bytes persistently.
 22 The data about the photo is stored
 23 in one of our databases. And then the URL to
 24 the image on -- which will be served from one of

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<p>1 our content distribution networks, like</p> <p>2 basically one of our web caching partners, will</p> <p>3 be returned to the user, such that the profile</p> <p>4 picture on their profile can be replaced with a</p> <p>5 new one.</p> <p>6 Q. You mentioned the photo is stored.</p> <p>7 Where is the photo stored at?</p> <p>8 The Witness: So the photo itself</p> <p>9 is stored in essentially a big file system on --</p> <p>10 in our -- one of our data centers.</p> <p>11 By Mr. Hannah:</p> <p>12 Q. Is it fair to call that the photo</p> <p>13 database?</p> <p>14 The Witness: That's not what we</p> <p>15 would call it. We would call it a filer.</p> <p>16 By Mr. Hannah:</p> <p>17 Q. The photo filer?</p> <p>18 A. Correct.</p> <p>19 Q. You also mentioned that data about</p> <p>20 the photo was stored; is that right?</p> <p>21 The Witness: Correct.</p> <p>22 By Mr. Hannah:</p> <p>23 Q. And where is that stored?</p> <p>24 A. So the data about the photo is</p>	<p>1 A. Yes.</p> <p>2 Q. What are those?</p> <p>3 A. There are fields that can be</p> <p>4 stored for other types of photos. So not --</p> <p>5 they wouldn't be used for profile photos, but</p> <p>6 they might be used for some other type of photo.</p> <p>7 Q. The handle, the photo ID, the</p> <p>8 width and height, the technology through which</p> <p>9 it's uploaded, the owner ID, are those the only</p> <p>10 fields that are stored with the profile photos?</p> <p>11 The Witness: No. It is also</p> <p>12 possible to store a caption with a photo, but</p> <p>13 the -- through the interface I explained,</p> <p>14 there's no way to enter that caption in the UI.</p> <p>15 There is a way to enter that on other parts of</p> <p>16 the site.</p> <p>17 By Mr. Hannah:</p> <p>18 Q. Any other fields that relate to</p> <p>19 the profile photos?</p> <p>20 The Witness: So there is -- and</p> <p>21 there is an album ID field in this table I'm</p> <p>22 describing in the database. I'm not sure</p> <p>23 whether or not it's used for profile photos.</p> <p>24 By Mr. Hannah:</p>
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<p>1 stored in one of our user databases.</p> <p>2 Q. What data about the photo is</p> <p>3 stored in the user database?</p> <p>4 The Witness: So in the user</p> <p>5 database, we will store the -- we will store a</p> <p>6 handle to - that will allow us to reference the</p> <p>7 actual file in the filer. We will store an ID</p> <p>8 that represents that photo, a unique ID.</p> <p>9 We will store the width and height</p> <p>10 of the photo. And we will store a --</p> <p>11 essentially, a number that tells us through</p> <p>12 which technology the photo was uploaded. So be</p> <p>13 it a file chooser or our Java uploader, which we</p> <p>14 use for other parts of the site, in this case</p> <p>15 for a profile photo, it would just be the file</p> <p>16 chooser as the main option.</p> <p>17 Q. How is the photo associated with</p> <p>18 the user that uploaded the photo?</p> <p>19 The Witness: So we also store</p> <p>20 the -- what we call the owner ID of the photo as</p> <p>21 well on the database. That was a field I forgot</p> <p>22 to mention.</p> <p>23 By Mr. Hannah:</p> <p>24 Q. Are there any other fields?</p>	<p>1 Q. Any other fields you can think of?</p> <p>2 A. Yes. There is a time field as</p> <p>3 well which we used to store the time at which</p> <p>4 the photo was uploaded.</p> <p>5 Q. Any others?</p> <p>6 A. I think that's it.</p> <p>7 Q. You mentioned earlier that there</p> <p>8 are two different types of photos. There is a</p> <p>9 profile photo and there's other types of photos;</p> <p>10 is that right?</p> <p>11 The Witness: So profile photos are</p> <p>12 a type of photo and there are other types of</p> <p>13 photos.</p> <p>14 By Mr. Hannah:</p> <p>15 Q. So what are the other types of</p> <p>16 photos?</p> <p>17 A. There are photos which are placed</p> <p>18 in other contexts around the site. So an album</p> <p>19 would be one example.</p> <p>20 Q. How would a user upload a photo to</p> <p>21 a regular album using the create album photo</p> <p>22 path?</p> <p>23 The Witness: So you can create an</p> <p>24 album, again, from -- from several locations I</p>

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<p>1 mentioned. So the first one I mentioned was</p> <p>2 the -- from the photos application, there is a</p> <p>3 create -- I can't remember exactly what the text</p> <p>4 is, but something along the lines of create</p> <p>5 album or upload photos.</p> <p>6 Once you enter that flow, you</p> <p>7 enter the album details, such as the album name</p> <p>8 and then after filling out those details, you</p> <p>9 have a choice to use either our robust uploader</p> <p>10 or our simple file chooser uploader.</p> <p>11 Q. Sure. We can just do the simple</p> <p>12 uploader.</p> <p>13 The user clicks on a file and</p> <p>14 chooses to upload an image file off their hard</p> <p>15 drive, then what happens?</p> <p>16 The Witness: So upon submitting</p> <p>17 that file in the UI, the file will -- the bytes</p> <p>18 of the file will be sent along with a -- like</p> <p>19 HTML, post request to our servers. One of our</p> <p>20 photo-related PHP end points will get that</p> <p>21 request.</p> <p>22 It will be able to parse the file</p> <p>23 as well as the information on the request, which</p> <p>24 would be the user ID of the person uploading.</p>	<p>1 By Mr. Hannah:</p> <p>2 Q. And the technology associated with</p> <p>3 it?</p> <p>4 A. Correct.</p> <p>5 Q. How does the flow change if you</p> <p>6 upload a photo using a group, for instance?</p> <p>7 The Witness: So are you referring</p> <p>8 to when you upload a photo directly to a group?</p> <p>9 By Mr. Hannah:</p> <p>10 Q. Right. Does it change? Does the</p> <p>11 flow change?</p> <p>12 The Witness: The photo upload code</p> <p>13 will be very similar. The context that is</p> <p>14 passed in the request will contain the group ID</p> <p>15 rather than, say, the album ID.</p> <p>16 I'm not actually familiar with the</p> <p>17 exact details of the database entry that's</p> <p>18 created, but I know that there will be a</p> <p>19 database entry for the photo that is similar to</p> <p>20 the other entries that we talked about.</p> <p>21 By Mr. Hannah:</p> <p>22 Q. And that would be stored in the</p> <p>23 user database as well?</p> <p>24 A. Correct.</p>
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<p>1 And -- and depending on what context you're</p> <p>2 using might have some other information.</p> <p>3 It will take the bytes of the file</p> <p>4 and store them in our photo filer. And then it</p> <p>5 will create a database entry that represents</p> <p>6 that photo.</p> <p>7 By Mr. Hannah:</p> <p>8 Q. You said depending on the context,</p> <p>9 different things might happen. What do you mean</p> <p>10 by that?</p> <p>11 A. So in the example we were talking</p> <p>12 about, you're uploading to a new photo album.</p> <p>13 So the ID of that album would be on that request</p> <p>14 as well.</p> <p>15 Q. Any other information?</p> <p>16 A. Can you clarify?</p> <p>17 Q. Sure. You said that the user ID,</p> <p>18 the album ID would be -- would be stored. Is</p> <p>19 there any other information regarding the photo</p> <p>20 that would be stored?</p> <p>21 The Witness: Yes, that we would</p> <p>22 store the width of the photo, the height of the</p> <p>23 photo, whether the user entered a caption on the</p> <p>24 photo.</p>	<p>1 Q. Can a user import a photo from the</p> <p>2 regular photo album into a group?</p> <p>3 A. Yes.</p> <p>4 Q. And how does that happen?</p> <p>5 The Witness: Are you referring --</p> <p>6 are you referring to the UI or in the code?</p> <p>7 By Mr. Hannah:</p> <p>8 Q. Well, let's start with the UI.</p> <p>9 A. Okay. So when you're looking at a</p> <p>10 group profile, there is a photo section and you</p> <p>11 can click a link to add photos to that group.</p> <p>12 Upon clicking that link, you have a choice</p> <p>13 between uploading photos in -- from your file</p> <p>14 system, from your hard drive or choosing an</p> <p>15 existing photo.</p> <p>16 If you choose an existing photo,</p> <p>17 you're presented with an interface that allows</p> <p>18 you to browse all of the photos in your albums</p> <p>19 and then you can select the one or more photos</p> <p>20 you want to add to that group.</p> <p>21 Q. And then if I select a photo and</p> <p>22 add it to the group, what happens on the user</p> <p>23 interface?</p> <p>24 The Witness: On the user</p>

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<p>1 interface, after that request is issued to our 2 servers and returned, you will see that photo 3 shows up in the photo section of the group. 4 By Mr. Hannah: 5 Q. Now, what happens in the code? 6 A. So in the code, there is a PHP end 7 point which receives those types of requests. 8 The requests will contain, again, the user ID, 9 the group ID. In this case, it would also 10 contain the photo ID since it's an existing 11 photo. 12 The code would -- the database 13 entry of the photo wouldn't be touched at all. 14 The code would store in a separate table. It 15 would store the user ID or the photo ID and the 16 group ID, such that when you're viewing the 17 group, it will look in that table to find out 18 which photos have been attached to the group. 19 Q. And would that be stored in the 20 user database? 21 A. Yes. 22 Q. Mr. Wiseman, if a user imports a 23 photo from a regular photo album into a group, 24 does that generate a story?</p>	<p>1 group ID, and it inserts it as an entry into the 2 Mini Feed table? 3 By Mr. Hannah: 4 Q. Do you know where each of these 5 databases is located? 6 The Witness: You mean where 7 they're physically located? 8 By Mr. Hannah: 9 Q. Physically located, yes. 10 A. Yes. I know where the data 11 centers that house all of our -- our -- our 12 databases are. 13 Q. Where is that at -- or where are 14 they? 15 A. We have several data centers on 16 the West Coast of the U.S., several on the East 17 Coast. And, yes, all our databases are spread 18 between those -- those two areas. 19 Q. They are all in the United States? 20 The Witness: All of our databases 21 are in the United States, yes. 22 By Mr. Hannah: 23 Q. How about your files, where are 24 those located?</p>
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<p>1 The Witness: Do you mean a News 2 Feed story? 3 By Mr. Hannah: 4 Q. Yes. 5 A. Yes, it does. 6 Q. And how does it do that? 7 A. In the PHP -- in the PHP request 8 that processes that action, similar to the way 9 all other News Feed stories work, we create a 10 set of data which contains all the relevant IDs 11 for that action. So the user ID, the group ID, 12 and in this case the photo ID, as well as the 13 time and the type of action that it was, in this 14 case adding a photo from an existing album into 15 a group. 16 We package that data and send it 17 in a single request to the News Feed service, 18 which can then serve as a story later. 19 Q. Does that action also generate a 20 story for Mini Feed? 21 A. Yes. 22 Q. And how does it do that? 23 The Witness: It uses that same set 24 of data with the user ID, the photo ID, the</p>	<p>1 The Witness: They are similarly 2 spread between the East Coast and the West Coast 3 of the United States. 4 By Mr. Hannah: 5 Q. They're all in the United States, 6 though? 7 A. As far as I know, yes. 8 (Conclusion of videotape excerpt 9 of Mr. Wiseman.) 10 MR. ANDRE: Your Honor, that 11 concludes the videotape deposition of Josh 12 Wiseman. 13 THE COURT: I take it the next 14 videotape would last longer than two minutes. 15 MR. ANDRE: I believe so, yeah. 16 THE COURT: Then we'll let the 17 jury go for lunch now and I'll remind the jurors 18 not to, during the break, discuss the case and 19 return in time to be back in your seats at 1:30. 20 THE CLERK: All rise. 21 (Jury leaving the courtroom) at 22 12:27 p.m.) 23 THE COURT: And we will stand in 24 recess until 1:30.</p>

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1 excerpts. You're seeing only portions of the	1 Q. How many times have you done that?
2 deposition. And, therefore, these materials	2 A. Hundreds, maybe thousands.
3 have been edited so that you can see the	3 Probably hundreds.
4 portions that I am permitting you to see. And	4 Q. When's the last time you wrote on
5 that explains the I suppose jerky nature of what	5 somebody's wall?
6 you're seeing and you can expect to see more of	6 A. Probably a couple days ago.
7 that as we go forward.	7 Q. What happens from a user
8 Mr. Andre.	8 perspective when you write on someone's wall?
9 MR. ANDRE: Thank you, Your Honor	9 The Witness: From a user
10 We're going to be playing another video excerpt	10 perspective, I then see my wall post published
11 of a Facebook engineer by the name of James	11 on that person's wall, and then I -- I may or
12 Wang.	12 may not see a story on my own wall that just
13 (Videotape deposition.)	13 shows recent activity that I wrote on this other
14 Q. Good morning, Mr. Wang.	14 person's wall.
15 A. Morning.	15 By Mr. Hannah:
16 Q. Can you please state your full	16 Q. Well, let's start with a user at
17 name and address for the record?	17 the home page. How would a user go and write on
18 A. James Howard Wang. I live at 24	18 somebody else's wall?
19 Walter Street, San Francisco, California, 94114.	19 The Witness: If I knew the person
20 Q. Are you currently employed,	20 that I wanted -- whose wall I wanted to write on
21 Mr. Wang?	21 -- first of all, they need to be my friend. But
22 A. Yes.	22 so then I would go and I would go to my search
23 Q. Where are you employed?	23 box and start typing their name, and because we
24 A. I'm employed at Facebook.	24 have a search type ahead that looks first at
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1 Q. How long have you been employed at	1 your friends, they probably show up in one of
2 Facebook?	2 those boxes and then I would click that box.
3 A. A little over four years.	3 It would navigate me to their
4 Q. And what is your current job title	4 profile. I would go to their wall table, and at
5 at Facebook?	5 the top, I would type my message into the
6 A. My current title is engineering	6 computer interface and then I would hit post.
7 manager.	7 By Mr. Hannah:
8 Q. Do you understand that you are	8 Q. Do you know what happens from a
9 testifying today as a fact witness on your own	9 technical perspective?
10 behalf?	10 The Witness: Are you speaking
11 A. A fact witness?	11 about the -- at the PHP script level or from the
12 Q. Fact witness.	12 database level?
13 A. Fact witness. Yes.	13 By Mr. Hannah:
14 Q. And you also understand that	14 Q. Well, start with the PHP script
15 you've been designated for certain technical	15 level.
16 topics on behalf of Facebook?	16 A. Okay.
17 A. Yes.	17 The Witness: So this is -- I don't
18 Q. When did you start working at	18 own this code. I didn't write this code, but
19 Facebook?	19 I'm pretty sure that what goes on is you -- you
20 A. I believe my start date was in	20 make a form submission, so you make a -- you
21 February of 2006.	21 make a post request.
22 Q. Have you ever wrote on someone's	22 And actually no, I -- that's one
23 wall?	23 implementation. I think now it uses
24 A. Yes.	24 asynchronous requests. So the page doesn't

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<p>1 refresh, but under the hood we're still sending 2 a web request in a Facebook end point, which 3 contains all the relevant data in the post query 4 parameters that includes the content of the data 5 that's being submitted. 6 Also, because I'm a logged in 7 user, it's submitting all my user cookies that 8 tells Facebook who I am, so then when Facebook 9 receives this incoming asynchronous request, 10 it's got the user that's logged in, it's got the 11 variables for who -- you know, for the message 12 itself. It's got the target user ID whose wall 13 I'm writing on. 14 It's also got some additional 15 security checks to make sure that this request 16 isn't spoofed, and then -- and then, basically 17 the script processes it, it calls a function 18 that -- that is in charge of logging and storing 19 the wall post, and then, you know, the 20 appropriate entries into the database are 21 written and then the function returns. 22 By Mr. Hannah: 23 Q. Do you know what's written into 24 the database?</p>	<p>1 story, the time stamp of the action, and -- and 2 then, I think, in the -- there's like a 3 free-form section that has additional data, 4 would probably include the target -- the 5 recipient of the wall post ID. I think that may 6 be it. 7 Again, I would defer to the code. 8 (Conclusion of the videotape 9 deposition excerpt of Mr. Wang.) 10 MR. ANDRE: That concludes Mr. 11 Wang's videotape deposition. We're going to 12 show you a couple more small clips. 13 The next clip is of a Facebook 14 vice president and it will be very short, about 15 a two-minute clip. 16 (Beginning of videotape deposition 17 excerpt of Mr. Dan Rose.) 18 The Videographer: Would the court 19 reporter please swear in the witness? 20 Q. Could you please state your full 21 name and address for the record? 22 A. Dan Rose, 448 Addison Avenue, Palo 23 Alto, California 94301. 24 Q. When did you start working at</p>
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<p>1 The Witness: So I believe that -- 2 and this is like -- and I defer to the code, but 3 I believe what's written on the target user's 4 database is in their wall table we have the 5 "from" the ID of the user that wrote the wall 6 post, we have the time stamp of the wall post 7 and we have the content of the wall post, and we 8 probably also have a unique identifier for that 9 wall post, a global unique identifier. 10 And then on the user who wrote the 11 wall posts, in their own database, as mentioned 12 earlier, we'll probably have an entry in their 13 -- in their Mini Feed table of the action they 14 performed. And we went over the metadata that 15 was stored there. 16 By Mr. Hannah: 17 Q. Just so the record is clear, what 18 metadata would be stored there? 19 The Witness: So the data that I 20 believe is stored on the Mini Feed data -- the 21 Mini Feed table of the home user's database 22 would be their own user ID, a unique identifier 23 for that Mini Feed story, the story ID type, 24 which you know, identifies this as a wall post</p>	<p>1 Facebook? 2 A. 2006. 3 Q. What was your title? 4 A. What is my title? 5 Q. What was your title in 2006? 6 A. I joined the company as director 7 of business development. 8 Q. Did that title -- has that title 9 changed since to the present? 10 A. Yes. 11 Q. What is it changed to? 12 A. Vice president of the business 13 development and monetization. 14 Q. When did that title change? 15 A. It changed to vice president of 16 business development in 2006, and it changed to 17 the current title in 2008. 18 Q. Does Facebook collect any kind of 19 information regarding its users and what they 20 are doing on the website in terms of clicks that 21 they might have, making connections, becoming a 22 fan? 23 The Witness: When a user becomes a 24 fan of a page, we -- that information gets added</p>

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1 to their profile. So, by definition, we're	1 those technical topics is the News Feed system?
2 tracking once people become fans of pages.	2 A. Yes.
3 By Ms. Kobialka:	3 Q. You stated News Feed launched in
4 Q. Are there any other examples that	4 the fall of 2006; is that right?
5 you track what a user is doing on the Facebook	5 The Witness: Yes. Does fall begin
6 website that you can think of?	6 October, September? Let's say in the last --
7 The Witness: We -- when something	7 last third of the year of 2006.
8 shows up on the website, by definition we're	8 By Mr. Hannah:
9 tracking it. We have to track it in order for	9 Q. So at the time that Multi Feed was
10 it to show up on the website.	10 launched in June 2008, can you describe to me
11 I don't know what you're referring	11 how News Feed as a service operated?
12 to by tracking, but logging an action in a	12 A. Sure. So, again, with the ongoing
13 database somewhere so that we can present that	13 caveat that to be 100 percent certain of this, I
14 action on the website is something that --	14 would have to look at code.
15 that's what we do. That's what the site does.	15 To the best of my knowledge, the
16 (Conclusion of videotape	16 way it would have operated was that actions
17 deposition excerpt of Mr. Dan Rose.)	17 that -- that actions users took, that generated
18 MR. ANDRE: That concludes the	18 Falcon log events, would be logged via Falcon
19 videotape deposition of Dan Rose. And our final	19 and stored in the Falcon logs. Aggregated --
20 videotape deposition clip is of another Facebook	20 not aggregated, but collected in the Falcon
21 engineer by the name of Andrew Bosworth.	21 logs.
22 (Beginning of videotape deposition	22 Multi Feed would then be tailing
23 excerpt of Andrew Bosworth.)	23 those logs and loading the logs into memory,
24 The Videographer: Would the court	24 essentially creating a memory log as opposed to
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1 reporter please swear in the witness?	1 a non-disk log. And at that point, when some
2 By Mr. Hannah:	2 user -- you land on a page that prompted
3 Q. Can you please state your full	3 generation of stories, such as their home page,
4 name and address for the record?	4 they would go -- the News Feed code in the front
5 A. Andrew Garrod Bosworth, 120	5 end would query to Multi Feed via RCP, receive
6 Kingsley Avenue, Palo Alto, California 49301.	6 data in return, apply privacy to that data to
7 Q. Are you currently employed, Mr.	7 make sure that all of the things that can -- it
8 Bosworth?	8 could possibly show would be shown.
9 A. Yes.	9 So, you know, already ranked in
10 Q. Where are you employed?	10 relevance, now it's going to apply privacy.
11 A. Facebook.	11 Having gotten to this core set of stories that
12 Q. How long have you been working at	12 it's going to display for each story, given the
13 Facebook?	13 core data, would go and fetch the additional
14 A. To what degree of specificity?	14 data required to display that story to the user.
15 Four years, two months, a day.	15 And then go about the business of
16 Q. And what is your current title at	16 rendering, as we've discussed kind of a couple
17 Facebook?	17 of times.
18 A. Manager of engineering.	18 Q. And when you say rendering, that's
19 Q. Do you understand that in addition	19 displaying it to the user?
20 to your personal testimony today, you have been	20 A. Specifically, rendering is
21 designated for certain technical topics for --	21 generating the HTML and text and CSS such that
22 on behalf of Facebook?	22 when the browser receives it, it's able to parse
23 A. I do understand that.	23 it and format that data to the user and proper
24 Q. Do you understand that one of	24 setting and also fetch any images that are

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<p>1 specified by that HTML.</p> <p>2 Q. And what is your understanding of</p> <p>3 how the News Feed service operates today?</p> <p>4 A. So, pretty much identical. The</p> <p>5 only exception being that rather than</p> <p>6 exclusively tailing the Falcon logs, logs can</p> <p>7 also be loaded directly -- you can also load</p> <p>8 logs directly into memory from user actions</p> <p>9 basically, if that makes any sense.</p> <p>10 Q. And then -- and then what happens?</p> <p>11 A. So from there, the same process</p> <p>12 that I have just described applies again. Do</p> <p>13 you want me to go over it again?</p> <p>14 Q. Sure.</p> <p>15 A. Fair enough. Some user lands on a</p> <p>16 page that prompts the generation of News Feed</p> <p>17 It's their home page.</p> <p>18 That -- the News Feed code that</p> <p>19 exists in their kind of PHP layer will then</p> <p>20 fetch the RPC for Multi Feed data that's</p> <p>21 relevant and ranked and ready to go.</p> <p>22 Apply privacy to that data to</p> <p>23 ensure that the user does not see anything that</p> <p>24 they're not supposed to see. At which point, it</p>	<p>1 time ago.</p> <p>2 By Mr. Hannah:</p> <p>3 Q. How did Mini Feed operate in</p> <p>4 October 2006?</p> <p>5 The Witness: Again, what level --</p> <p>6 what are we dealing with here, what level of</p> <p>7 answer would you like? From a product</p> <p>8 perspective?</p> <p>9 By Mr. Hannah:</p> <p>10 Q. Yeah, technical perspective.</p> <p>11 A. Technical perspective. So not a</p> <p>12 product perspective.</p> <p>13 Q. Let's start with a product</p> <p>14 perspective then --</p> <p>15 The Witness: From a product</p> <p>16 perspective when any user would view a profile</p> <p>17 that they had the permission to view, according</p> <p>18 to privacy, they would see a series of recent</p> <p>19 actions taken by that user, provided, of course,</p> <p>20 that each individual action was also a publicly</p> <p>21 visible kind of creation of some new content.</p> <p>22 By Mr. Hannah:</p> <p>23 Q. And how did it work from a</p> <p>24 technical perspective?</p>
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<p>1 will then endeavor to fetch additional data</p> <p>2 required to render and display the story in its</p> <p>3 full kind of rich glory.</p> <p>4 I'm getting better at answering</p> <p>5 this question the fourth or fifth time, start</p> <p>6 using flourishes. And then, having -- that data</p> <p>7 will go about the business of rendering HTML,</p> <p>8 CSS in such a way and text, in such a way that</p> <p>9 when the browser receives that, it will be able</p> <p>10 to display in rich fashion the story to the</p> <p>11 user.</p> <p>12 Q. Are you familiar with Mini Feed.</p> <p>13 The Witness: Yes.</p> <p>14 By Mr. Hannah:</p> <p>15 Q. When was Mini Feed first available</p> <p>16 to users?</p> <p>17 The Witness: It was first</p> <p>18 available at the same time as News Feed.</p> <p>19 By Mr. Hannah:</p> <p>20 Q. That was the fall of 2006 or</p> <p>21 October 2006?</p> <p>22 The Witness: I believe the answer</p> <p>23 is October 2006, but, yes. The last half of</p> <p>24 2006. I was there. I just -- it was a long</p>	<p>1 The Witness: When a user took an</p> <p>2 action is on the site that was something we felt</p> <p>3 could be displayed -- well, had, you know, kind</p> <p>4 of a public aspect to it that could be</p> <p>5 discovered, we would log to that user's</p> <p>6 database, that action, with data similar, though</p> <p>7 not necessarily identical to what was discussed</p> <p>8 earlier for logging to Falcon.</p> <p>9 So that would be at that point in</p> <p>10 that table. At some point later, some other</p> <p>11 user, really any other user that had access to</p> <p>12 that profile, could come to that profile and</p> <p>13 upon arriving would trigger the generation now</p> <p>14 of Mini Feed stories.</p> <p>15 And, again, the story describes</p> <p>16 what is displayed to the user. The data behind</p> <p>17 it is the kind of data I mentioned in the Mini</p> <p>18 Feed table of that user's database. So when</p> <p>19 some user, any other user arrives at that</p> <p>20 profile, the Mini Feed code would fetch from</p> <p>21 that user's Mini Feed table, the data, which is</p> <p>22 just kind of a little data, as little as</p> <p>23 necessary, using that -- or apply privacy, make</p> <p>24 sure it's allowed to be seen.</p>

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<p>1 And then go and fetch whatever 2 additional information is needed in order to 3 display that to the user.</p>	<p>1 professor at the University of California in 2 Santa Barbara. In 2004, I became an associate 3 professor at the same university. And in 2009, 4 I became a full professor at that university.</p>
<p>4 And again, the display is rich, 5 ntedia rich, so the rendering of it is HTML, CSS, 6 links to HTML, links -- links to intages, which 7 when the browser receives them, it will go and 8 fetch that image and render it onto the screen 9 for the user.</p>	<p>5 Q. Do you have any awards or honors 6 for your research? 7 A. I have several that are based 8 partly on my research and partly on my teaching. 9 I have best paper awards or awards due to how my 10 work was influential in certain areas. And also 11 I got teaching awards, for example, from the 12 Academic Senate, University of California Santa 13 Barbara.</p>
<p>10 So that's -- that's how it works. 11 Q. Had there been significant changes 12 to the Minified since its launch?</p>	<p>10 work was influential in certain areas. And also 11 I got teaching awards, for example, from the 12 Academic Senate, University of California Santa 13 Barbara. 14 Q. Have you received any funding for 15 your research? 16 A. That's part of my job is to get 17 funding so I can pay students who do research 18 for me, I should say with me. And I received 19 around \$10 million in funding so far.</p>
<p>13 A. Not that I know of. 14 (End of videotape.)</p>	<p>14 Q. Have you received any funding for 15 your research? 16 A. That's part of my job is to get 17 funding so I can pay students who do research 18 for me, I should say with me. And I received 19 around \$10 million in funding so far.</p>
<p>15 MR. ANDRE: Your Honor, that 16 concludes the videotape deposition of 17 Mr. Bosworth.</p>	<p>16 A. That's part of my job is to get 17 funding so I can pay students who do research 18 for me, I should say with me. And I received 19 around \$10 million in funding so far. 20 Q. And do you have any publications 21 relevant to the computer science industry? 22 A. Yes. I have a number of 23 publications. I have journal publication, I 24 have conference publication, around sixty, that</p>
<p>18 THE COURT: You may call your next 19 witness.</p>	<p>20 Q. And do you have any publications 21 relevant to the computer science industry? 22 A. Yes. I have a number of 23 publications. I have journal publication, I 24 have conference publication, around sixty, that</p>
<p>20 MR. ANDRE: Your Honor, we'll be 21 calling Dr. Giovanni Vigna. He's out of the 22 courtroom. Can we pass out jury binders? 23 MS. KEEFE: Go ahead. I was going 24 to say subject to our previous objection, it's</p>	<p>24 have conference publication, around sixty, that</p>
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<p>1 fine. 2 THE COURT: You have may do so. 3 Thank you.</p>	<p>1 are the main way in which we publish our 2 research and our results. I have book chapters 3 and workshop publications.</p>
<p>4 THE WITNESS: My name is Giovanni 5 Vigna. G-I-O-V-A-N-N-I, V-I-G-N-A.</p>	<p>4 Q. And have you given any tutorials 5 on the computer science industry outside of your 6 classroom work? 7 A. Yes, several times I have been 8 asked to give tutorials on different topics 9 within computer science.</p>
<p>7 GIOVANNI VIGNA, Ph.D., 8 the deponent herein, having first 9 been duly sworn on oath, was 10 examined and testified as follows: 11 THE COURT: Good afternoon. 12 THE WITNESS: Good afternoon 13 DIRECT EXAMINATION 14 BY MR. ANDRE:</p>	<p>7 A. Yes, several times I have been 8 asked to give tutorials on different topics 9 within computer science. 10 Q. And are you a member of any 11 professional organizations related to computer 12 science? 13 A. I am a member of the IEEE which is 14 the Institute of Electronic and Electrical 15 Engineers. I am a ntenber of the ACM, which is 16 the Association For Computing Machinery. I am 17 member of USENIX and a member of The Computer 18 Society.</p>
<p>15 Q. Good afternoon, Dr. Vigna. Would 16 you please give us your educational background. 17 A. I received a masters in electronic 18 engineering and a Ph.D. in electronic 19 engineering in 1994 and 1998 respectively from 20 the Politecnico Milano in Italy.</p>	<p>13 A. I am a member of the IEEE which is 14 the Institute of Electronic and Electrical 15 Engineers. I am a ntenber of the ACM, which is 16 the Association For Computing Machinery. I am 17 member of USENIX and a member of The Computer 18 Society. 19 Q. Do you have any editorships? 20 A. I was on the editorial board on a 21 number of journals in my field. And I also 22 edited proceedings of conferences and books. 23 Q. Which technical program committees 24 have you been involved with?</p>
<p>17 Q. What has been your employment 22 history since that time period? 23 A. So I was post doc for two years at 24 UCSB and then in 2000 I became an assistant</p>	<p>19 Q. Do you have any editorships? 20 A. I was on the editorial board on a 21 number of journals in my field. And I also 22 edited proceedings of conferences and books. 23 Q. Which technical program committees 24 have you been involved with?</p>

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1 A. Well, I have been involved with
 2 very many as a committee member, as a chair of
 3 committee, I have been involved with three,
 4 namely RAID and NDSS and IEEE Security and
 5 Privacy which is the main conference in my
 6 field.
 7 Q. Have you been on any committees at
 8 the University of California?
 9 A. Yeah, I have been on several
 10 committees, both at the departmental level and
 11 at the college level.
 12 Q. What type of classes have you
 13 taught at the University of California?
 14 A. I have taught sort of a range of
 15 classes in computer science such as natural
 16 computing, operating systems, computer security,
 17 analysis, things like that.
 18 Q. How many graduate students do you
 19 supervise?
 20 A. Currently I directly supervise six
 21 Ph.D. students. I also have two post docs, so
 22 they are students that after the Ph.D. continue
 23 their research work with me. And sometimes I
 24 work with undergrad students.

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1 MR. ANDRE: Your Honor, at this
 2 point we would like to tender Dr. Vigna as an
 3 expert in computer science.
 4 MS. KEEFE: No objection.
 5 THE COURT: He is so recognized.
 6 MR. ANDRE: Thank you, Your Honor.
 7 BY MR. ANDRE:
 8 Q. Dr. Vigna, you have been retained
 9 by Leader Technologies to provide an opinion in
 10 this case; is that correct?
 11 A. That is correct.
 12 Q. And what were you retained to do
 13 by Leader?
 14 A. So I was asked as an expert to
 15 determine whether or not Facebook was infringing
 16 the '761 patent.
 17 Q. And before you were asked to be an
 18 expert in this case, did you have any opinions
 19 on this topic?
 20 A. No, absolutely not.
 21 Q. And what did you rely upon in
 22 forming your opinion?
 23 A. Well, I relied on a number of
 24 things. Of course I examined directly the

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1 Facebook website. Then I was given access to
 2 the Facebook source code. I had access to
 3 documentation, public documents that are
 4 available to everybody, help files, for example,
 5 description of the API with which people can
 6 interact with the website. And the deposition
 7 of key people within Facebook. And I would say
 8 that's pretty much it. I might have left
 9 something out.
 10 Q. Did you read the construction
 11 order?
 12 A. Absolutely I did.
 13 Q. When you're talking about the
 14 different types of documents that you are
 15 talking about, were you able to look at some
 16 developer documents as well?
 17 A. Correct. So I had access both at
 18 publicly available documents and at documents
 19 that were used internally to describe particular
 20 aspects of the Facebook websites to the
 21 developers at Facebook.
 22 Q. And based on all that you
 23 reviewed, what did you come to the conclusion
 24 of?

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1 A. Well, my conclusion was that
 2 indeed Facebook infringes on the '761 patent.
 3 Q. Before we get started, could you
 4 explain to the Court the setup you have in here
 5 in front of you. A lot of computers going on.
 6 Can you explain what's happening?
 7 A. Yeah, especially the cables, there
 8 is way too many cables. This is a setup that I
 9 will use during my testimony to sort of explain
 10 why Facebook infringes in my opinion. There are
 11 two computers. There is a computer down here
 12 whose display will appear here and of course in
 13 front of you as well.
 14 And this computer contains
 15 Facebook's source code, so the source code that
 16 actually makes the website work and do whatever
 17 it does. This is my personal computer, and I
 18 have some material on it that I will use to
 19 demonstrate several aspects of this issue.
 20 And since we don't have internet,
 21 I will actually show you some movies that I
 22 recorded when I did have internet, and I used in
 23 this particular case a couple of tools to make
 24 apparent what goes on under the hood in a way.

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<p>1 When users interact with a website 2 like Facebook, they usually have a browser. And 3 the browser presents some kind of pretty picture 4 of what the website wants the user to see. Of 5 course, there is a lot that goes on in the 6 background in terms of the information that is 7 captured and exchanged with the website. 8 And thank God we don't see that, 9 because it's not pretty. And in general we 10 should not be concerned with that part. 11 In fact, in this particular 12 technical matter, we want to understand exactly 13 what happens between the browser and the server. 14 And, therefore, I create a setup where there is 15 an interceptor, it's like a component that sits 16 between the browser, that is the tool used by 17 the user, and the Facebook side. So that every 18 time an operation happens, this interceptor can 19 stop the request going to the Facebook website, 20 allow us to see what is going on really under 21 the hood, and then let it go and perform the 22 actual portion. 23 So it's sort of like taking a 24 snapshot of something that would otherwise move</p>	<p>1 And in particular, we will see a lot of PHP 2 code. It's one type of code. There are many 3 languages that are used in computer science. In 4 this particular case the source code that we 5 will review is PHP. So this is the code that 6 actually implements the behavior of the Facebook 7 application. 8 So at the very end is the data 9 that represent the executable behavior of the 10 application. 11 Q. And we've heard some terminology 12 here. I would like you to explain it as well. 13 What is a UI? 14 A. A UI is a user interface. So as I 15 said before, there is a lot that goes in the 16 background, we don't want to know, we would 17 never like hey, you want to float a picture up 18 two on a web application, look at this code. 19 Nobody wants to do that. I don't care about 20 that. So the UI is the user interface that is 21 the only thing that the user uses in order to 22 interact with the application. 23 And usually the prettier the UI, 24 the easier to use, the better. And whatever</p>
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<p>1 very fast away and would not allow us to 2 understand what is going on. 3 In addition, I will use something 4 that allows us to inspect the exact code in 5 terms of HTML code that is sent to the user. 6 And I will, of course, explain to the best of my 7 capability everything when we get there. 8 THE COURT: Hold on. Ms. Keefe is 9 on her feet. 10 MS. KEEFE: Your Honor, at this 11 time I would like to reflect for the record this 12 objection that we made earlier this morning and 13 just maintain that. 14 THE COURT: That objection is on 15 the record, but my ruling stands. Go ahead. 16 MS. KEEFE: Thank you. 17 BY MR. ANDRE: 18 Q. Just before we get started, could 19 you just give an understanding, a description of 20 source code that we can probably understand, 21 what is source code? 22 A. Yes. Well, source code is a 23 series of instructions in a specific language 24 that tell a computer what to do fundamentally.</p>	<p>1 happens in the background is for the user 2 irrelevant. 3 Q. And what is an API? 4 A. The API is more complex to 5 describe. It's an application programming 6 interface. So the idea is that there are 7 applications that provide some kind of 8 functionality. And at a certain point they will 9 use this functionality internally, but they 10 might want other people to use it. So how 11 should other people use this functionality. 12 Well, in a stylish practice in computer science 13 is to create one of these API and say okay, 14 these are all the way in which you can use my 15 application. 16 To make an example with the 17 Facebook website, suppose that I want somebody 18 to be able to come to my personal account and 19 find out about all my friends. Well, Facebook 20 provides a function so that you can find all the 21 friends of a specific user given the particular 22 ID of the user. So it's like a way to -- a 23 well-defined way to interact with an 24 application, for example, Facebook to get</p>

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<p>1 information out of it.</p> <p>2 Q. Now, I would like to draw your</p> <p>3 attention to PTX 1, the '761 patent. And can</p> <p>4 you generally just tell me what the '761 patent</p> <p>5 discloses?</p> <p>6 A. So the '761 patent describes sort</p> <p>7 of a collaboration tool in which users can share</p> <p>8 data, sort of they have a share of the world,</p> <p>9 and when users do things in this world, they are</p> <p>10 tracked. And there is information that is</p> <p>11 maintained about these users so that they can</p> <p>12 interact with each other and share data</p> <p>13 effectively.</p> <p>14 Q. And what is an online</p> <p>15 collaboration tool generally speaking?</p> <p>16 A. Well, generally speaking it is</p> <p>17 anything that allows multiple people to do</p> <p>18 things they want to do together. They want to</p> <p>19 share pictures, they want to send messages to</p> <p>20 each other, that's a collaboration tool.</p> <p>21 Q. And generally, what is the</p> <p>22 Facebook website?</p> <p>23 A. Well, the Facebook website is a</p> <p>24 collaboration tool, and it performs the</p>	<p>1 picture that is captured. This is context</p> <p>2 information that, for example, is the album</p> <p>3 where this picture should appear, the name of</p> <p>4 the year, the ID of the creator and so forth.</p> <p>5 And this information is captured and is stored</p> <p>6 in metadata as context information.</p> <p>7 Go to the next.</p> <p>8 And as a side effect, for example,</p> <p>9 my picture is now uploaded to the site and</p> <p>10 appears there and can be accessed whenever I</p> <p>11 access my profile.</p> <p>12 Then I can move from one</p> <p>13 environment to another. For example, in this</p> <p>14 case, I -- if you go to the next, you will see</p> <p>15 that I moved to the page of a friend, in this</p> <p>16 case Mary Smith, and we're friends of each</p> <p>17 other.</p> <p>18 Actually it's difficult to see in</p> <p>19 this particular case, but there are little</p> <p>20 pictures down there of each other. I have a</p> <p>21 laser pointer. Let's see if I can do this</p> <p>22 without hurting anybody. This is the picture of</p> <p>23 me, and this is the picture of her. And we're</p> <p>24 friends. So I can move and go to a different</p>
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<p>1 functions described in the '761 patent.</p> <p>2 Q. You prepared some demonstratives.</p> <p>3 And I would like for you just to walk through</p> <p>4 with the jury and explain how the system</p> <p>5 captures the context and tracking information,</p> <p>6 how Facebook system captures context and</p> <p>7 tracking information?</p> <p>8 A. Okay. So we will revisit this</p> <p>9 concepts a number of times, so if something is</p> <p>10 not clear, I'm sure that we will repeat a number</p> <p>11 of times.</p> <p>12 But the main idea is that there is</p> <p>13 the concept of an account and a particular</p> <p>14 context or environment in which a user operates.</p> <p>15 And, for example, in this particular case we're</p> <p>16 in the home page of John Vineyard, which happens</p> <p>17 to be the English translation of my Italian</p> <p>18 name.</p> <p>19 And go to the next one. In this</p> <p>20 case, for example, I want to upload some user</p> <p>21 defined data. For example, there is a picture</p> <p>22 of me that I want to upload to the website.</p> <p>23 And you can see that there is</p> <p>24 additional information in addition to the</p>	<p>1 context, a different environment which is the</p> <p>2 profile of this other user.</p> <p>3 And, for example, I can perform</p> <p>4 some actions in that second environment, for</p> <p>5 example, I can post on the wall that person a</p> <p>6 message that says, "How are you?"</p> <p>7 When I do that, what happens is</p> <p>8 for content, it was created in the first</p> <p>9 environment is used in the second environment.</p> <p>10 You can see here, for example, that in this</p> <p>11 second environment, the content that I just</p> <p>12 introduced in this first environment is used</p> <p>13 together with the data that I just introduced,</p> <p>14 the comment how are you.</p> <p>15 And this is also generating</p> <p>16 tracking information that says that something</p> <p>17 happened. And this is stored in the metadata</p> <p>18 down here. The tracking information contains</p> <p>19 several kind of data, like the user ID, the type</p> <p>20 of event or type of story that is being created</p> <p>21 and so forth.</p> <p>22 So the aspect of the patent is</p> <p>23 that there is this concept of capturing context</p> <p>24 information that is stored in the metadata,</p>

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<p>1 tracking a user as it moves around, and then 2 generating tracking information as whenever 3 certain actions happen, like writing on the 4 wall, joining a group, uploading a photo to an 5 album and so forth. 6 Next. And you can see that this 7 tracking information is also reflected had back 8 in the original account because there is a news 9 feed and a Minifeed which is two ways which this 10 information is presented to this user. In this 11 particular case in my original file a note 12 appears that John wrote on Mary Smith's wall. I 13 think we're done. 14 Q. Now, let me ask you some even more 15 fundamental questions. How do you get to the 16 Facebook website? 17 A. How do you get there? 18 Q. Yes. 19 A. You open a browser and you type a 20 URL in the browser, and you actually are sent to 21 the website. 22 Q. Do you know the website address? 23 A. It's www.Facebook.com. 24 Q. And how do you get to an account?</p>	<p>1 Q. First of all, is your 2 understanding that in order for a product to 3 infringe, it must meet all the elements of the 4 claim? 5 A. Yes. 6 Q. Is also your understanding that 7 you only look to the claims to determine 8 infringement? 9 A. Yes. 10 Q. If you look at the Claim 1, 11 element one, the context component; do you see 12 that? 13 A. Yes. 14 Q. Can you put the screen up? 15 Sorry. I realized that she was 16 standing there. I thought she was going to sit 17 back down. 18 MS. KEEFE: I thought you were 19 going to do something with it. 20 THE COURT: I think if she -- if 21 you believe she's going to need to stand, if 22 you're going to direct us to the board, feel 23 free to bring a chair over so that you can -- 24 you don't have to stand for the whole time.</p>
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<p>1 A. Well, usually when you start 2 interacting with the Facebook website, if you 3 don't have an account, if you have never been on 4 it, or maybe you have an account but you're not 5 logged in, and therefore you will get a page 6 that invites you to either join Facebook and 7 create a new account or to log in with the 8 account that you already created. 9 MR. ANDRE: Your Honor, at this 10 time I'd like to go set up a white board next to 11 the witness. May I approach? 12 THE COURT: Yes, you may approach. 13 MR. ANDRE: Thank you. Is that 14 okay? 15 THE COURT: Yeah, as long as the 16 jury can see it. And Ms. Keefe, if you need to 17 move so you can get a better view, that's fine. 18 MS. KEEFE: I'll have to move. 19 Too many things in the way, Your Honor. Sorry 20 BY MR. ANDRE: 21 Q. All right. Dr. Vigna, let's look 22 at the claims of the '761 patent that's been 23 asserted against Facebook. 24 A. Yes. Okay.</p>	<p>1 MS. KEEFE: Thank you, Your Honor 2 BY MR. ANDRE: 3 Q. Dr. Vigna, would you please 4 briefly describe the elements of Claim 1? 5 A. So the first element says that 6 there is a computer-implemented context 7 component of the network-based system for 8 capturing context information associated with 9 user-defined data created by user interaction of 10 a user in a first context of the network-based 11 system, the context component dynamically 12 storing the context information in metadata 13 associated with the user-defined data, the 14 user-defined data and metadata stored on a 15 storage component of the network-based system 16 Q. Could you give us a -- your 17 understanding of what that claim element is 18 referring to? 19 A. So this claim element describes in 20 very technical terms basic concept that there is 21 a context component. Whenever a user wants to 22 provide some data, it will capture that data, 23 plus other data, some context information. 24 Take both these things and store</p>

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<p>1 them in a storage using a storage component into</p> <p>2 metadata which is additional data about a</p> <p>3 certain data. Okay.</p> <p>4 So it is rather abstract. So it</p> <p>5 describes a generic component like that can be</p> <p>6 implemented in many different ways, but the gist</p> <p>7 of it is that there is some data of a user, for</p> <p>8 example, a personal picture and there is</p> <p>9 something else that is captured of that</p> <p>10 particular environment, which that data is</p> <p>11 entered and this information is stored as</p> <p>12 metadata on a storage component.</p> <p>13 Q. Now, I'd like to show you the</p> <p>14 court order for the claim interpretation in this</p> <p>15 case. I want to direct your attention to the</p> <p>16 term component.</p> <p>17 Do you see that?</p> <p>18 A. Yes.</p> <p>19 Q. Do you recognize this as the order</p> <p>20 from the Court interpreting the claims?</p> <p>21 A. Yes.</p> <p>22 Q. And could you read what the term</p> <p>23 component means?</p> <p>24 A. So in this document, it say the</p>	<p>1 It could be an array of disks. It</p> <p>2 could be a network system like a distributed</p> <p>3 system. It could be even spread across the</p> <p>4 nation.</p> <p>5 That would be hardware. It's --</p> <p>6 it's a composition of hardware elements.</p> <p>7 Q. And when you see one skilled in</p> <p>8 the art when they see that the word in</p> <p>9 combination of hardware and software, what would</p> <p>10 that mean to you?</p> <p>11 MS. KEEFE: Same objection, Your</p> <p>12 Honor. I mean --</p> <p>13 THE COURT: We will see counsel at</p> <p>14 side-bar.</p> <p>15 MS. KEEFE: Your Honor, it's the</p> <p>16 Court's claim construction. The Court's claim</p> <p>17 construction is what it is.</p> <p>18 And it seems like we're trying to</p> <p>19 reargue claim construction by redefining what</p> <p>20 the construction is.</p> <p>21 THE COURT: Mr. Andre?</p> <p>22 MR. ANDRE: Your Honor, the claim</p> <p>23 construction is determined based on one skilled</p> <p>24 in the art. Words in construction have special</p>
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<p>1 term component means a computer-related entity,</p> <p>2 either hardware, a combination of hardware and</p> <p>3 software, software, or software in execution.</p> <p>4 Q. Now, what does that mean to</p> <p>5 computer scientists?</p> <p>6 A. Well, in this particular case, I</p> <p>7 would say --</p> <p>8 THE COURT: Hold on. There's an</p> <p>9 objection.</p> <p>10 MS. KEEFE: Objection. Your</p> <p>11 Honor, that's the definition, not what it means</p> <p>12 to him. It's what it means to the Court and the</p> <p>13 Court's construed it that way.</p> <p>14 MR. ANDRE: I'll rephrase it that</p> <p>15 way, Your Honor.</p> <p>16 THE COURT: Sustained. Sustain</p> <p>17 the question.</p> <p>18 MR. ANDRE: I will.</p> <p>19 BY MR. ANDRE:</p> <p>20 Q. When you're talking about</p> <p>21 hardware, what's that referring to?</p> <p>22 A. Well, it's referring to any kind</p> <p>23 of equipment, group of equipment, it could be</p> <p>24 one CPU. It could be a CPU on a disk.</p>	<p>1 meaning to those skilled in the art. I'm just</p> <p>2 asking what those words are and what they mean.</p> <p>3 THE COURT: I think in this case,</p> <p>4 the jury needs some translation into English</p> <p>5 essentially to understand the concepts. And</p> <p>6 that's my understanding of what these questions</p> <p>7 are seeking to elicit, not reconstructing claims.</p> <p>8 But just trying to help the jury understand what</p> <p>9 it is that the Court's construction says.</p> <p>10 MS. KEEFE: I think he's going a</p> <p>11 little bit far, Your Honor. We are talking</p> <p>12 about words that are supposed to have plain</p> <p>13 meaning. This is the definition they propose.</p> <p>14 It comes from the patent.</p> <p>15 THE COURT: I'm overruling the</p> <p>16 objection.</p> <p>17 (Conclusion of conference held at</p> <p>18 side-bar.)</p> <p>19 BY MR. ANDRE:</p> <p>20 Q. Dr. Vigna, go back to my previous</p> <p>21 question. What does it mean when there's a</p> <p>22 combination of hardware and software?</p> <p>23 A. Well, usually a combination of</p> <p>24 hardware and software is a system that is</p>

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<p>1 composed of hardware and software that usually 2 determines how the hardware is going to behave. 3 And this can be any kind of composition. 4 It could be in an embedded system 5 like cell phone is a combination of hardware and 6 software. And it could be a large-scale system 7 composed of thousands of computers. 8 There are compositions of hardware 9 an software that makes them work together. 10 Q. I think we all got a pretty good 11 feel of what software is, but what is software 12 in execution? 13 A. Well, software in execution is 14 when the code that determines what the software 15 is. So it receives the instruction, it's 16 telling hardware what to do. They are 17 effectively executed and the hardware does what 18 the instruction tells the hardware to do. 19 Q. And would source code be just 20 software? 21 A. Yeah, software usually refers to 22 source code -- not source code. Software 23 usually imports instructions for the hardware. 24 So it could be source code. It could be</p>	<p>1 based on the specification of the patent. 2 THE COURT: I'm going to sustain 3 the objection to the question as asked. You can 4 ask the expert what his opinion is as long as 5 he's applying the Court's construction. 6 BY MR. ANDRE: 7 Q. Okay. Dr. Vigna, do you have an 8 opinion as to whether or not a storage component 9 has to be a single server? 10 A. I do. In -- the storage component 11 is an architectural concept in the design of an 12 application. It is not bound to one particular 13 implementation of one server or multiple 14 servers. And actually I think if you pull up 15 the patent itself, and in the specification of 16 the patent, I think it's in Column 5 towards the 17 bottom. 18 So it's going to be around -- 19 yeah. In this case, there are -- go -- they say 20 one or more components may reside within a 21 process and/or thread of execution and a 22 component may be localized on one computer 23 and/or distributed between two or more 24 computers.</p>
<p>Page 547</p> <p>1 interpreted source code like in the case of PHP. 2 It could be compiled source code 3 in the case of libraries. And in this case, the 4 source code becomes executable code in manner of 5 form. 6 Q. Going back to Claim 1, there's a 7 claim element called the storage component at 8 the end of Claim 1. Do you see that? 9 A. Yes. 10 Q. Does the storage component of the 11 '761 patent have to be a single server? 12 A. Well, I think that -- 13 MS. KEEFE: Objection. Sorry, 14 Your Honor. Objection. 15 Again, the Court's claim 16 construction says what it says and we have a 17 definition for component. 18 THE COURT: Mr. Andre? 19 MR. ANDRE: Your Honor, I'm 20 asking: The storage component in this claim has 21 been inferred in counsel's opening to be a 22 single server. And I don't believe that's the 23 case. 24 Dr. Vigna can support his opinion</p>	<p>Page 549</p> <p>1 And I think that what it's trying 2 to say here is that this component is, like it 3 is often done in computer science. It is a way 4 to express a functionality. 5 The way in which you perform the 6 functionality is largely irrelevant, meaning if 7 it's a storage component, it's something that, 8 you know, allows you to store something and 9 later when you want it, it's still there. You 10 can get it out. 11 THE COURT: All right. Doctor, 12 forgive me for interrupting you. 13 Is it the same objection? 14 MS. KEEFE: I very much apologize. 15 It's a slight tweak on the objection. 16 The problem here is that we have a 17 claim construction and the law on claim 18 construction says that you do not need 19 limitations from the specification into the 20 claims. 21 THE COURT: I'm overruling the 22 objection. The record will note your objection 23 to this line of questioning. 24 THE COURT: Go ahead.</p>

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1 MR. ANDRE: Thank you, Your Honor	1 computer, your computer stops it from going and
2 BY MR. ANDRE:	2 shows you what you're sending; is that correct?
3 Q. Did you finish your answer?	3 A. Correct.
4 A. Well, I was almost close to	4 Q. And then after it goes to
5 finished.	5 Facebook's servers in California or on the East
6 Q. Okay.	6 Coast wherever they are, and it comes back,
7 A. Let me go. So the storage	7 before it shows it on your screen, your computer
8 component typically can use different types of	8 stops it again?
9 storage, can use a memory cash, can use a disk,	9 A. Okay. Yes. That's correct.
10 can use an array of disks organized in a certain	10 Q. I just wanted to make sure I
11 way, can use a database, can use a set of	11 understand.
12 federated database, a database that talks to	12 A. Yeah,
13 each other so that they can hold even more	13 Q. Okay. And you have a
14 information.	14 representation of that on your computer?
15 The basic concept is that a	15 A. That is correct.
16 storage component is something that stores data	16 Q. Okay. Could you please
17 so that you can retrieve it afterwards.	17 demonstrate to the jury how that actually
18 Q. I'm going to show you what was	18 happens?
19 marked as a demonstrative in this case earlier.	19 A. Okay.
20 I know you haven't seen this document, though	20 Q. Before you begin that, let me just
21 Dr. Vigna, but when you see server one, server	21 ask you one more question.
22 two and server three -- or strike that question.	22 A. Yeah,
23 Let me try another one.	23 Q. Why do you think Facebook has a
24 What would be the storage	24 context component?
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1 component in this figure?	1 A. Well, it has a context component
2 A. Well, in this here as I interpret	2 because it wants to capture user data, plus
3 it, I would say that the three servers together	3 additional context information so that it can
4 perform the function of a storage component.	4 use it to share it with other people.
5 Because I'm here seeing that there are database	5 Q. Okay. Okay. Could you
6 tables, activity logs, tracking information and	6 demonstrate that on your program here?
7 there is raw data.	7 A. Yes. It's here.
8 So these are all things that you	8 So here what you see is, you know,
9 want to store so that later you can retrieve	9 of course, not Facebook, another well-known
10 them. So altogether, regardless of the type of	10 website. And we see the user go into Facebook
11 information, would present a storage component.	11 You can see it on the top bar.
12 Q. Going back to the first element of	12 And this particular case, the user
13 Claim 1, is it your opinion -- do you have an	13 goes to the log-in page and puts in the email
14 opinion as to whether or not Facebook's website	14 address of the user and the password to be able
15 contains a context component?	15 to log in.
16 A. Yes, I do. And I think that it	16 And once the user logs in, it's
17 does.	17 sent to the home page that is in this case
18 Q. Now, you said earlier that you had	18 empty. Then the user goes to the profile.
19 a program on your computer in which you could	19 And here you can see that the
20 show the Facebook website in action under the	20 moment -- let me stop here really fast. Okay.
21 hood you said; correct?	21 What you see here is that I switched from -- you
22 A. Yeah. That is correct.	22 can see here the moment here at this point I
23 Q. So just making sure I understand,	23 clicked on profile up there to go to the profile
24 when you send a request to Facebook from your	24 page of John Vineyard account.

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<p>1 And then I moved to this</p> <p>2 interceptor, which is the tool that I was</p> <p>3 telling you about that is able to intercept the</p> <p>4 communication between the user and the Facebook</p> <p>5 website. In this particular case, the name</p> <p>6 burp.</p> <p>7 It's not the most inspiring name,</p> <p>8 but it's a tool that's very useful that I use</p> <p>9 routinely in my work. So what you can see here</p> <p>10 is that this is the raw data that is sent to</p> <p>11 Facebook whenever the user clicks on that</p> <p>12 button.</p> <p>13 So the experience of the user is I</p> <p>14 click on -- I want to go to profile. What</p> <p>15 happens under the hood is that an PHP request,</p> <p>16 and it's just a way to say communication is</p> <p>17 performed and the content of the communication</p> <p>18 is displayed right here.</p> <p>19 Now, it's like a bird left from</p> <p>20 the browser and is going to Facebook with a</p> <p>21 message. And I just grab that bird and I'm</p> <p>22 opening up and say, Okay. What are you sending</p> <p>23 to Facebook? Let me look at the message.</p> <p>24 And if it's okay once I'm done</p>	<p>1 you interact with the Facebook website. And so</p> <p>2 if now I go on, you can see that there is my</p> <p>3 picture here. I say, I don't like it very much</p> <p>4 and I want to upload a new profile picture.</p> <p>5 So I press another button, so</p> <p>6 another action is generated. And here I</p> <p>7 switched again. I grabbed that communication</p> <p>8 before it reached Facebook, and I'm going to</p> <p>9 examine it.</p> <p>10 For example, in this particular --</p> <p>11 in this particular place, we can see that the</p> <p>12 ajax profile picture upload.PHP file is</p> <p>13 requested passing some parameters.</p> <p>14 And as a result of this, what</p> <p>15 happens is that what is sent back to me is this</p> <p>16 pop-up dialogue that asks me for a new picture.</p> <p>17 And when it selects me, another request is</p> <p>18 performed. And that is the request that is</p> <p>19 performed.</p> <p>20 And you can see up there that</p> <p>21 there is -- that there is a bunch of data, in</p> <p>22 particular, at the bottom -- sorry to scroll it.</p> <p>23 You see all this gibberish at the bottom is --</p> <p>24 let me just go back for a second just to -- so</p>
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<p>1 looking at it, I can let it continue towards</p> <p>2 Facebook. Okay.</p> <p>3 So in this particular case, for</p> <p>4 example, I see that by pressing that button,</p> <p>5 there is a request for the module Profile.PHP.</p> <p>6 And it is -- I highlight it up there.</p> <p>7 You can see this is getprofile.PHP</p> <p>8 passing a number of parameters. And also there</p> <p>9 is a cookie that as we will see it's all that</p> <p>10 data that I highlighted that is important. And</p> <p>11 we will see later when we talk about tracking</p> <p>12 how that is important.</p> <p>13 So now, I will just slide okay</p> <p>14 forward, let the bird go and go to Facebook. I</p> <p>15 get the results back and here I am in my profile</p> <p>16 page. Okay. So this simple interaction shows</p> <p>17 you that you, that UI, which would be the one</p> <p>18 with the button to say profile interact with the</p> <p>19 user, actually the inter -- users interact with</p> <p>20 a UI.</p> <p>21 There was a click. There was some</p> <p>22 information that was sent to Facebook. And this</p> <p>23 page is sent back and is displayed to the user.</p> <p>24 Okay. So that's pretty much how</p>	<p>1 all this information that you see here right</p> <p>2 here, this is the raw information about the</p> <p>3 picture that I'm uploading.</p> <p>4 And this information is sent</p> <p>5 together with other information, and I'm going</p> <p>6 to click. I want to explain to you, I click on</p> <p>7 params. You can see that there are those four</p> <p>8 headers here.</p> <p>9 There is one that say raw, one say</p> <p>10 param. So when it show you the raw version, I</p> <p>11 show you exactly the communication that</p> <p>12 happened. When I clicked on params, what the</p> <p>13 tool did is actually parsing that data and is</p> <p>14 presenting you that same information in a much</p> <p>15 -- in a much clearer fashion where it can show</p> <p>16 you exactly the different information that is</p> <p>17 sent.</p> <p>18 So the two information that I show</p> <p>19 is the content is exactly the same. It's just</p> <p>20 shown to you in two different ways.</p> <p>21 And, for example, here you can see</p> <p>22 that there is the ID of the user, the type, the</p> <p>23 profile, picture. And so this information is</p> <p>24 sent to Facebook. And as a result, now we get</p>

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1 back information from Facebook and my picture is	1 A. Yes. I will follow my expert
2 actually updated.	2 report just because I don't know by heart all
3 And this shows how by interacting	3 the things that I have to show you.
4 with the Facebook website, we're able to capture	4 So what you see here as I was
5 not only the raw data associated with the	5 telling you at the beginning, this is the source
6 picture itself, but now they're -- but other	6 code computer, and let's see here. So this is
7 context information like the type of	7 pretty much the -- one of the snapshots of the
8 information, the idea before the user that this	8 code, and it's the one that I mainly reviewed.
9 picture refers to and so forth.	9 So now I'm going to open an editor.
10 MR. ANDRE: And, Your Honor, we're	10 Q. What is an editor?
11 going to try executing the source code at this	11 A. Sorry. An editor is just -- this
12 point, so I think we're a few minutes early for	12 editor is called Emacs and it's used to review
13 the break, but maybe we could do that and close	13 any type of text, including source code that in
14 the courtroom.	14 this case is text. So it's just, if you're
15 THE COURT: Right. It will be a	15 familiar with the Windows operating system, I
16 good time for our break. And when we come back	16 could also use Notepad. It would be exactly the
17 we'll close the courtroom. Let the jury step	17 same thing.
18 out first.	18 So, if you remember when I show
19 MR. ANDRE: I'm sorry.	19 you the uploading of the picture, let me just go
20 THE COURT: We'll be back in 15	20 back for one second here. You see up here there
21 minutes.	21 is this pic upload.PHP. So this is actually
22 (A brief recess was taken.)	22 testimony source code component that receive
23 THE COURT: We're ready to have	23 information of the picture, profile picture in
24 Dr. Vigna take the stand again. We'll bring the	24 addition to more information.
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1 jury in.	1 And now I will show you what pic
2 For the record, has the courtroom	2 upload actually is. As you will see it is one
3 been closed? Is there anybody that --	3 of the most unglamorous things that you can
4 MS. KEEFE: There are people that	4 imagine.
5 I don't recognize that aren't even in the law	5 Q. Is pic upload, is that the link or
6 firm on the other side.	6 folder name? What would that be?
7 THE COURT: Counsel confer with	7 A. Sorry. Say again.
8 one another after the jury gets settled.	8 Q. Would the pic upload, would that
9 (Jury entering courtroom at	9 be the name of the file?
10 3:20 p.m.	10 A. Correct. It's the name of the
11 THE CLERK: Please be seated.	11 file. I mean, what I show you, so in this is
12 THE COURT: Welcome back everyone	12 technically pic upload is technically the
13 for the last session of the afternoon.	13 resource that is requested by the browser, but
14 Is there any issue?	14 of course that is mapped to a source code file
15 MS. KEEFE: No.	15 on the Facebook server.
16 THE COURT: You may continue.	16 So what I'm going to show you now
17 MR. ANDRE: Thank you, Your Honor.	17 is that Facebook. Sorry, this is not the best
18 BY MR. ANDRE:	18 environment to do this. But I'll do my best to
19 Q. Dr. Vigna, when we took a break	19 not be completely -- so that request I show you
20 you had just shown an example of a profile photo	20 will actually invoke this source code. Okay?
21 using your interceptor program.	21 And, of course, this source code to I think most
22 A. Yes.	22 of the people in this room doesn't say really
23 Q. Could you show us in the Facebook	23 anything, but what this source code represents
24 source code where that's taking place as well?	24 is a series of instructions that represents

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<p>1 software that when executed will perform a 2 particular task.</p> <p>3 So I always explain software sort 4 of like a recipe, when you read a recipe, you 5 say okay, take out three eggs and scramble the 6 eggs and put this butter on the pan, so it's a 7 series of tasks that have to be executed in a 8 certain order in order to achieve a certain 9 goal.</p> <p>10 Software is exactly the same. You 11 can see every line here has a particular meaning 12 and altogether one instruction after another 13 will end up executing some kind of task to 14 achieve a certain goal.</p> <p>15 In this particular case, the 16 source code in the pic upload.PHP file will 17 receive that image and in addition will capture 18 context information and store this in the 19 metadata.</p> <p>20 So this is a rather complex thing, 21 but what you can see is, for example, this file 22 gets executed, and this file calls other files, 23 actually it invokes a number of pictures, you 24 can see that there are a number of instructions,</p>	<p>1 functions in different files until there is a 2 function. And I will spare you having to track 3 all these functions across because it's 4 excruciatingly painful, but I'm going to get to 5 one important point is this important point is a 6 function called add photo which is in a 7 different file called list photos PHP, so 8 execution of this code eventually will get to 9 this file which is another not very interesting 10 source code file.</p> <p>11 But if we go to -- there is a lot 12 of code here, and this code all specifies some 13 kind of behavior. But at a certain point when 14 we get somewhere, a function called add photos. 15 This is the function add photo. And you can see 16 that at a certain point, we'll get there, there 17 is this construction that you see right here. 18 You see this. This is something that say insert 19 into photo ID, album_FBID, user, creator ID, 20 link, order, visible, et cetera, et cetera.</p> <p>21 What this is is another piece of 22 code in a different language called sequel. 23 Now, this is just to make things a 24 little more complicated. There is this source</p>
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<p>1 and this, for example, call this pic upload 2 function that you can see right here. And this 3 function calls -- so what's a function? Sorry. 4 A function is like a group of instruction that 5 does a specific task.</p> <p>6 And, of course, we could have one 7 very large file with everything that has to be 8 done, but human beings are not really good at 9 handling very complex, very large scale set of 10 instruction. We like to, you know, put little 11 snippets together to achieve a specific subgoal 12 and so that we can understand it.</p> <p>13 So, for example, there is -- if I 14 say, for example, prepare some scrambled -- no, 15 prepare some scrambled eggs is an overall goal, 16 but if I take the eggs and heat them, there are 17 a number of subtasks that are involved and I 18 just put them together and say prepare the egg.</p> <p>19 So a function, it's sort of taking 20 a number of instructions and package them so they 21 can be reused multiple times.</p> <p>22 So this is, for example, a 23 function to upload a picture. And this function 24 will call other function that will call other</p>	<p>1 code that is preparing another invocation of a 2 different type of code called sequel code 3 actually store in the storage component some 4 data.</p> <p>5 Q. When we talk about the sequel and 6 this code, this is all Facebook? 7 A. This is all Facebook code. 8 Q. Okay. 9 A. And so in this particular case, 10 the net effect of this instruction is to store 11 in the database context information as metadata.</p> <p>12 So, for example, who created a 13 certain picture. In what album we want to 14 create a picture. All this information is 15 context information that has been captured by 16 Facebook in addition to the data. So the data 17 as I show you -- if we go to the data, the raw 18 data that we see is this gibberish right here, 19 all this data represents actually the image that 20 you want to upload.</p> <p>21 But we go back to the source code, 22 in addition to that data, there is all this 23 additional data that is captured by the context 24 component and stored as metadata in the storage</p>

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<p>1 component along with the actual data of the</p> <p>2 user. And this is where in the code the context</p> <p>3 component is.</p> <p>4 Q. Now, going back to your next</p> <p>5 program, could you give us another example of</p> <p>6 uploading a photo perhaps into an album or</p> <p>7 something?</p> <p>8 THE COURT: Let me stop you there,</p> <p>9 I apologize. I want to see counsel at side-bar</p> <p>10 real quick.</p> <p>11 (Side-bar discussion.)</p> <p>12 THE COURT: I'm sure I'm being</p> <p>13 unnecessarily fearful, but there is a number of</p> <p>14 people that are milling about outside the</p> <p>15 courtroom trying to peer in through the</p> <p>16 windows. I can't image they can see and copy it</p> <p>17 down off the board, but I don't know if you have</p> <p>18 any concern about that. If you want me to ask</p> <p>19 court security to do anything.</p> <p>20 MS. KEEFE: I do, because I don't</p> <p>21 want to see the code showing up in the Wall</p> <p>22 Street Journal or the New York Times.</p> <p>23 THE COURT: I have seen a number</p> <p>24 of --</p>	<p>1 that they should not be peering through those</p> <p>2 windows.</p> <p>3 THE MARSHAL: Okay.</p> <p>4 THE COURT: Thank you. Just to</p> <p>5 let the jury know, as you may be seeing, we're</p> <p>6 going to be covering up the windows that are in</p> <p>7 the back of the courtroom just to be extra sure</p> <p>8 that the confidential information that you all</p> <p>9 are hearing is not going to be disclosed to the</p> <p>10 public. So that we'll just take a brief moment.</p> <p>11 MS. KEEFE: Thank you, again, Your</p> <p>12 Honor.</p> <p>13 MR. ANDRE: And Your Honor, we're</p> <p>14 about ready to get out of the source code and go</p> <p>15 into something that's not as confidential, but</p> <p>16 we're going to come back to the source code in a</p> <p>17 few minutes. But we can do this.</p> <p>18 THE COURT: I see it's done. Go</p> <p>19 ahead.</p> <p>20 BY MR. ANDRE:</p> <p>21 Q. Okay. Dr. Vigna, would you walk</p> <p>22 us through another example using interceptor</p> <p>23 program?</p> <p>24 A. Yeah. For -- in this case, what</p>
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<p>1 MS. KEEFE: That wouldn't be good</p> <p>2 for anybody. Could we put a piece of paper over</p> <p>3 the window.</p> <p>4 THE COURT: I think so. It is</p> <p>5 going to be a little annoying at the moment, but</p> <p>6 probably I'll have the court security officer to</p> <p>7 ask him to step back to the door for now and if</p> <p>8 he has the resources to cover the windows now,</p> <p>9 fine, if not, are you comfortable with going</p> <p>10 forward for the hour or do you want to take a</p> <p>11 break to let him do it?</p> <p>12 MS. KEEFE: I have got paper and</p> <p>13 tape.</p> <p>14 THE COURT: Let's talk to them.</p> <p>15 Stay here.</p> <p>16 I'm just concerned because I have</p> <p>17 seen a number of people trying to peer in</p> <p>18 through the windows back there, and this is very</p> <p>19 confidential information on the screen, so if</p> <p>20 you could --</p> <p>21 THE MARSHAL: Do you have any</p> <p>22 letterhead paper I could tape up?</p> <p>23 THE COURT: I think counsel does.</p> <p>24 Could you also go outside and just tell them</p>	<p>1 I'm going to show is the uploading of a picture</p> <p>2 to an album instead of using -- before we saw</p> <p>3 how one would change his own profile picture.</p> <p>4 In this case, we're going to see how somebody</p> <p>5 can upload the picture to an album.</p> <p>6 So here we are again. This is</p> <p>7 John Vineyard profile.</p> <p>8 He decides to go to an album that</p> <p>9 contains pictures of his recipes. And here</p> <p>10 clicks on add more photos and decides to try the</p> <p>11 simple uploader. Browse and decide to click on</p> <p>12 this granite picture.</p> <p>13 And click on upload photo. So</p> <p>14 whenever it clicks on this pic button, again a</p> <p>15 request is made to Facebook. And I want to</p> <p>16 clarify that there are other requests that are</p> <p>17 made under the hood that I'm not showing here</p> <p>18 because it would be excruciatingly boring to</p> <p>19 see.</p> <p>20 Everything I'm showing you, only</p> <p>21 the ones that are directly related to uploading</p> <p>22 a picture and that makes sense in this</p> <p>23 particular context.</p> <p>24 But websites are very complicated.</p>

Page 570	Page 572
<p>1 And for each action, multiple requests are 2 performed. 3 So just to be absolutely complete, 4 this is the important one that I'm showing you. 5 So in this particular case, photos upload. 6 PHP is invoked again. And as you 7 can see below here, when I show the parameters, 8 a number of things are captured. For example, 9 the rasy information, the ID of the user, the 10 album ID in which the picture is loaded, and 11 there is also a cookie of the user that plays an 12 important role as will be described later. 13 So as a result, the picture of 14 this delicious granita is now part here -- is 15 part of the album and has been uploaded. And 16 that's pretty much it. 17 Q. And could you go back to the 18 source code and show us where that happens in 19 the album when you upload a photo? 20 A. Yeah. This is at the -- slightly 21 different, but very similar sort of like flow. 22 As you can see, again, we saw this pic upload 23 execution, and this function eventually calls 24 again the photos.php. And in particular, the</p>	<p>1 and for the Facebook website, at least it's a 2 version around September 23rd, 2008. It says 3 many things, and one interesting thing is 4 somewhat later in this where it says that -- I 5 think it's -- maybe I can't. 6 Q. Page 2? 7 A. It says that Facebook can make 8 copies of -- I think maybe that. Let me check 9 in my copy. 10 Yeah, exactly. The second 11 paragraph, it says when you post user contents 12 to the site, you authorize and direct us to make 13 such copies thereof as we deem necessary in 14 order to facilitate the posting and storage of 15 the user content on the site. 16 So this show that actually the 17 data is captured and stored on the website as 18 part of their terms of use. 19 MR. ANDRE: Your Honor, I'd like 20 to move exhibit PTX-628 into evidence. 21 MS. KEEFE: No objection. 22 THE COURT: That's admitted. 23 BY MR. ANDRE: 24 Q. Okay. Also, could you look at</p>
Page 571	Page 573
<p>1 add photo function. 2 And this is the code that inserts 3 the photo and then specifies exactly the album 4 ID as captured by the context component. And 5 can take -- no, we're covered, so there is no 6 problem. 7 Q. Okay. Is that it for the source 8 code? 9 A. Yes, thanks. 10 Q. Okay. Now, I wanted to start 11 directing your attention to some of the 12 documents that were produced in this case by 13 Facebook that reflect what you're talking about 14 as well. 15 A. Yeah. 16 Q. Could I get you to go to what's 17 been marked as PTX-628? And these will be in 18 the jury binders as well. 19 A. Yes. 20 Q. Dr. Vigna, are you familiar with 21 what's marked PTX-628? 22 A. Yes. 23 Q. And what is this document? 24 A. This describes their terms of use</p>	<p>1 PTX-629? 2 A. Yeah, this is the terms of use. I 3 think you want to -- 4 Q. I apologize. I believe that may 5 have been inadvertently omitted from the 6 binders. 7 Do you have a -- could you go to 8 Page 3 with that? 9 A. Again, the second paragraph shows 10 that Facebook, you know, make copies, capture 11 the user information, make copies and stores 12 those copies so they can be used by the site. 13 MR. ANDRE: Your Honor, I'd like 14 to move PTX-629 into evidence. 15 MS. KEEFE: No objection. Just 16 note for the record that these are old, 2008. 17 MR. ANDRE: Yeah. 18 THE COURT: Yeah. They are 19 admitted or it is admitted, I should say. 20 BY MR. ANDRE: 21 Q. Dr. Vigna if you turn to PTX-882. 22 A. Yeah. This is an interesting 23 document that describes a laystack, which at 24 least at a certain point in life of Facebook was</p>

Page 574	Page 576
<p>1 or is used to store actually the pictures of 2 users.</p> <p>3 So if you go to the next page, you 4 can see that -- that, you know, it says the 5 photos application is one of Facebook's most 6 popular features.</p> <p>7 People have uploaded, you know, 8 billions of photos. And Facebook is a 9 photo-sharing site, which is you know in line 10 with a collaborative nature of sharing 11 information and uploading.</p> <p>12 It gives, you know, statistics 13 about how much data is uploaded and later 14 describes different types of infrastructure that 15 rely on distributed systems in order to store 16 the content, the user uploaded information. And 17 it's very technical so -- but it mainly, you 18 know, describes how the storage can be optimized 19 so that, you know, it can be accessed in the 20 fastest way possible.</p> <p>21 And it shows that, for example, 22 when they use the photo architecture, there is 23 a -- since each image is stored in its own file, 24 there is an enormous amount of metadata</p>	<p>1 Q. Those are three of the public 2 documents that you reviewed; is that correct?</p> <p>3 A. Yeah.</p> <p>4 Q. Let me show you some of the 5 confidential documents. First, what is a wiki?</p> <p>6 A. So a wiki is a web-based means to 7 share information. So imagine that you go to 8 the web page of CNN.com and imagine that instead 9 of just passively looking at the information, 10 you could actually edit some of the articles and 11 add corrections or comments.</p> <p>12 That type of interaction is what 13 nowadays we know as a wiki. So a wiki is 14 fundamentally a way in document things in a way 15 that allows many people to comment and 16 contribute to that particular topic.</p> <p>17 Okay. So there are wikis on 18 anything. One thing that you might be familiar 19 with is Wikipedia is the idea of creating an 20 encyclopedia by using this shared sort of like 21 information production system.</p> <p>22 So, sorry. Now, to answer your 23 question, wikis are often used for documentation 24 of software, because all the developers can</p>
Page 575	Page 577
<p>1 generated on the storage.</p> <p>2 And so this is one example how 3 they use to store this type of information.</p> <p>4 Q. If you go down a bit lower in this 5 document, you'll see something titled storage. 6 Do you see that?</p> <p>7 A. Yeah.</p> <p>8 Q. Is that -- it says the typical 9 hardware configuration of a U2 storage blade 10 provides. Is that indicating that the photos 11 are stored on hardware?</p> <p>12 A. These are -- what they're 13 specifying here is actually one -- I mean, it's 14 one -- like one computer. They call it a blade. 15 But it's pretty much a computer exactly as the 16 one sitting down here.</p> <p>17 But they use just a number of 18 those computers organized in distributed systems 19 so they can store billions of pictures.</p> <p>20 I'd like to move Exhibit 882 into 21 evidence.</p> <p>22 MS. KEEFE: No objection.</p> <p>23 THE COURT: It's admitted.</p> <p>24 BY MR. ANDRE:</p>	<p>1 contribute and make sure that the document is up 2 to date and reflects what's going on.</p> <p>3 Q. And did you happen to review 4 documents from Facebook's confidential internal 5 wiki?</p> <p>6 A. Yes, I did.</p> <p>7 Q. And if you will go to Exhibit 252, 8 PTX 252. Could you briefly describe what's in 9 this document?</p> <p>10 A. Yeah. So this is a document that 11 describes for internal developers how to -- how 12 uploading a picture happens.</p> <p>13 So how the actual capturing of 14 user data and context information is performed 15 by different subcomponents of the system. And 16 it describes how developers can test different 17 flavors of the system if they are to develop 18 enhancement or things like that.</p> <p>19 Q. And under the basic upload flow, 20 there's numbers one, two and three. Could you 21 just describe generally what's going on?</p> <p>22 A. Well, pretty much it describes, 23 you know, in -- sort of in layman's terms how 24 the different ways in which data can be uploaded</p>

Page 578	Page 580
<p>1 to the system using the components of Facebook</p> <p>2 Q. And number one, where it talks</p> <p>3 about user navigates to form editfoo.php page on</p> <p>4 www tier, that let them up load data to</p> <p>5 Facebook.</p> <p>6 A. Mm-hmm.</p> <p>7 Q. When they talk about form</p> <p>8 editfoo.php, what is that referring to?</p> <p>9 A. So it's referring to one of</p> <p>10 different possible components that can be used</p> <p>11 to upload different kinds of information into</p> <p>12 the system.</p> <p>13 It's trying to be a little more</p> <p>14 generic in terms of describing how the generic</p> <p>15 process of uploading different kinds of</p> <p>16 information is performed.</p> <p>17 Q. Then on the number two, it talks</p> <p>18 about the data is posted. And at the end it</p> <p>19 says stored in our storage or database.</p> <p>20 Do you see that?</p> <p>21 A. Yeah. Correct.</p> <p>22 Q. Do you understand what that's</p> <p>23 referring to?</p> <p>24 A. Well, I think that refers to the</p>	<p>1 two are very important, one is get, one is post.</p> <p>2 And both get parameters, both can provide this</p> <p>3 type of information that you see right here, so</p> <p>4 that's the information that they're referring to</p> <p>5 in the text that you were showing.</p> <p>6 MR. ANDRE: Your Honor, I would</p> <p>7 like to move Exhibit 252 into evidence.</p> <p>8 MS. KEEFE: No objection.</p> <p>9 THE COURT: It's admitted.</p> <p>10 BY MR. ANDRE:</p> <p>11 Q. Dr. Vigna, would you please turn</p> <p>12 to PTX -- do you have a copy of the --</p> <p>13 A. I have it somewhere.</p> <p>14 MR. ANDRE: I just realized Your</p> <p>15 Honor, I don't know if we gave him a binder or</p> <p>16 not.</p> <p>17 THE WITNESS: I got it.</p> <p>18 Q. If you go to PTX 190.</p> <p>19 A. Okay. So this document describes</p> <p>20 Mulligan which is some kind of code name to</p> <p>21 describe an improvement to Facebook photos</p> <p>22 product. So the goal is pretty much to simplify</p> <p>23 the way in which photos are updated. And if you</p> <p>24 look at the uploader paragraph, they describe,</p>
<p>Page 579</p> <p>1 storage component and storage capability of</p> <p>2 Facebook. I mean, of course, there is data that</p> <p>3 is uploaded.</p> <p>4 And as we have seen, a moment ago,</p> <p>5 there is other information in addition to the</p> <p>6 data that is captured and that has to be put</p> <p>7 somewhere. And that's the storage component of</p> <p>8 Facebook.</p> <p>9 Q. And then on number three, there's</p> <p>10 a second sentence. It says other metadata about</p> <p>11 the write is passed in the get args.</p> <p>12 A. Yeah.</p> <p>13 Q. What is that referring to?</p> <p>14 A. Well, that's -- it's similar to</p> <p>15 the get -- args are additional arguments. Args</p> <p>16 is a -- sort of like a computer nickname for</p> <p>17 arguments so this is additional data that is</p> <p>18 passed as parameters, and if you remember in the</p> <p>19 movie when I showed -- so can I show this.</p> <p>20 For example, in this case, these</p> <p>21 are arguments past as part of a post in a</p> <p>22 different, but similar type of arguments can be</p> <p>23 passed as a get. There are two operations that</p> <p>24 can be performed on the web, more than that, but</p>	<p>Page 581</p> <p>1 you know, that at a certain point their photo</p> <p>2 uploader wasn't good enough, and it wasn't up to</p> <p>3 par with respect to their request that users had</p> <p>4 in terms of uploading pictures. And so they</p> <p>5 decided to try a new component that would</p> <p>6 capture users pictures, photos in addition to</p> <p>7 metadata that is stored in the storage</p> <p>8 component.</p> <p>9 Q. And is this another document from</p> <p>10 Facebook's confidential internal wiki?</p> <p>11 A. Yes, it is.</p> <p>12 Q. Have you heard of the term context</p> <p>13 switching?</p> <p>14 A. Yes.</p> <p>15 Q. And what does that term refer to?</p> <p>16 A. Well, context switching in</p> <p>17 different context can mean different things. It</p> <p>18 usually means that you can have certain</p> <p>19 operation or certain data accessed in different</p> <p>20 context or environments, and when you move from</p> <p>21 one to another, you have a context switch.</p> <p>22 MR. ANDRE: Your Honor, may I have</p> <p>23 one moment, please?</p> <p>24 THE COURT: You may.</p>

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LEADER TECHNOLOGIES, INC.,)	
a Delaware corporation,)	
)	
Plaintiff-Counterdefendant,	)	Civil Action No. 08-862-LPS
)	
v.)	
)	
FACEBOOK, INC.,	)	PUBLIC VERSION
a Delaware corporation,)	
)	
Defendant-Counterclaimant.)	

**DECLARATION OF RYAN HOPKINS IN SUPPORT OF PLAINTIFF LEADER
TECHNOLOGIES, INC.'S OPPOSITIONS TO DEFENDANT FACEBOOK, INC.'S
RENEWED MOTIONS FOR JUDGMENT AS A MATTER OF LAW**

VOLUME 3 – EXHIBITS 29-30

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*Attorneys for Plaintiff and Counterdefendant
Leader Technologies, Inc.*

Dated: September 15, 2010
Public Version: September 22, 2010

I, Ryan Hopkins, hereby declare as follows:

1. I am an attorney with the law firm King & Spalding LLP, counsel for Plaintiff Leader Technologies, Inc. I have personal knowledge of the facts set forth in this declaration and can testify competently to those facts. I make this declaration in support of Plaintiff Leader Technologies, Inc.'s Oppositions to Facebook, Inc.'s Renewed Motions for Judgment as a Matter of Law ("Leader's Oppositions to Facebook's JMOL Motions").

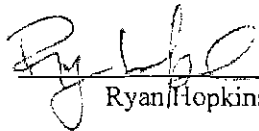
2. Attached hereto is a true and correct copy of documents referenced in Leader's Oppositions to Facebook's JMOL Motions:

Exhibit	Trial Exhibit	Description
1	PTX 1	U.S. Patent No. 7,139,761, bearing bates numbers LTI 000001-31
2	PTX 145	Facebook Wiki Page, bates numbered FB00109890-91
3	PTX 180	Facebook Wiki Page, bates numbered FB00109965-66
4	PTX 190	Facebook Wiki Page, bates numbered FB00109982-83
5	PTX 191	Facebook Wiki Page, bates numbered FB00109984-87
6	PTX 208	Facebook Wiki Page, bates numbered FB00110029
7	PTX 252	Facebook Wiki Page, bates numbered FB00110111-12
8	PTX 269	Facebook Wiki Page, bates numbered FB00110138-39
9	PTX 277	Facebook Mobile Client, bates numbered FB00110536-43
10	PTX 300	Facebook Pages, bates numbered FB00112895-904
11	PTX 302	Politician Users Guide To Facebook, bates numbered FB00113052-71
12	PTX 341	Facebook Wiki Page, bates numbered FB00113847

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14	PTX 629	Facebook Website Pages, bates numbered LTI 000770-80
15	PTX 882	Facebook Website Pages, bates numbered LTI 156866-70
16	PTX 886	Facebook Website Pages, bates numbered LTI 156902-05
17	PTX 904	Facebook Website Pages, bates numbered LTI 156964-67
18	PTX 906	Facebook Website Pages, bates numbered LTI 156970-72
19	PTX 907	Facebook Website Pages, bates numbered LTI 156973
20	PTX 911	Facebook Website Pages, bates numbered LTI 156982-87
21	PTX 920	Facebook Website Pages, bates numbered LTI 157010-11
22	PTX 942	Facebook Website Screenshots, bates numbered LTI 157081-137
23	PTX 1000	Facebook Statement of Rights and Responsibilities, bates numbered LTI 157155-57
24	PTX 1001	Facebook's Privacy Policy, bates numbered LTI 157158-61
25	DTX 919	U.S. Patent No. 6,236,994 ("Swartz")
26	DTX 922	European Patent Application No. EP 1 087 306A2 ("Hubert")
27	DTX 1010	iManage DeskSite 6.0 User Reference Manual

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29		Chart of Testimony Supporting Literal Infringement of the '761 Patent
30		Chart regarding Dr. Giovanni Vigna's Testimony Compared to His Expert Report
31		Chart of Dr. James Herbsleb's Testimony Supporting Validity of the '761 Patent
32		Email from counsel for Leader, James Hannah, to counsel for Facebook, Jeff Norberg, dated August 26, 2010
33		Deposition transcript of Saul Greenberg taken April 30, 2010, Page 192
34		Letter from Melissa Keyes to James Hannah regarding Autonomy document production, dated November 20, 2009
35		USPTO Office Action from the reexamination proceedings of U.S. Patent No. 7,139,761, dated May 21, 2010
36		Expert Report of Dr. Giovanni Vigna, dated April 8, 2010

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on September 15, 2010 in Redwood Shores, California.


 Ryan Hopkins

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 22, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

BY CM-ECF

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EXHIBIT 30

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT 29

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

**IN THE UNITED STATES DISTRICT COURT
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VOLUME 4 – EXHIBITS 31-36

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*Attorneys for Plaintiff and Counterdefendant
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35		USPTO Office Action from the reexamination proceedings of U.S. Patent No. 7,139,761, dated May 21, 2010
36		Expert Report of Dr. Giovanni Vigna, dated April 8, 2010

I declare under penalty of perjury under the laws of the State of California and the United States that each of the above statements is true and correct. Executed on September 15, 2010 in Redwood Shores, California.


Ryan Hopkins

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

CERTIFICATE OF SERVICE

I, Philip A. Rovner, hereby certify that on September 22, 2010, the within document was filed with the Clerk of the Court using CM/ECF which will send notification of such filing(s) to the following; that the document was served on the following counsel as indicated; and that the document is available for viewing and downloading from CM/ECF.

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EXHIBIT 32

From: Hannah, James
Sent: Thursday, August 26, 2010 12:55 PM
To: Jeffrey Norberg
Cc: Andre, Paul; Kobialka, Lisa; Philip A. Rovner; Caponi, Steven L.; Heidi Keefe; Mark Weinstein
Subject: Leader v. Facebook - Meet and Confer for Motion to Strike

Jeff,

As you know, Facebook filed 4 separate motions for judgment as a matter of law yesterday. Together, these motions total over 50 pages. However, the Delaware local rules restrict parties to filing a single 20 page motion for judgment as a matter of law. Furthermore, it appears that Facebook has filed motions for judgment as a matter of law regarding issues that were not before the jury. Accordingly, we request that Facebook withdraw 3 of its motions in order to come within the page limitations. If Facebook does not agree to withdraw its motions by tonight, we file a motion to strike Facebook's motions for exceeding the page limitations. If you would like to discuss, please call me at my office number below.

James

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EXHIBIT 31

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT 36

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**

EXHIBIT 35



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
95/001,261	11/13/2009	7,139,761 B2	309101-203	5286

74877 7590 05/21/2010
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EXAMINER

HUGHES, DEANDRA M

ART UNIT	PAPER NUMBER
3992	

3992

MAIL DATE	DELIVERY MODE
05/21/2010	PAPER

05/21/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS
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Date:

MAILED
MAY 21 2010
CENTRAL REEXAMINATION UNIT

**Transmittal of Communication to Third Party Requester
Inter Partes Reexamination**

REEXAMINATION CONTROL NO. : 95001261
PATENT NO. : 7139761
TECHNOLOGY CENTER : 3999
ART UNIT : 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified Reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the inter partes reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an ex parte reexamination has been merged with the inter partes reexamination, no responsive submission by any ex parte third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the Central Reexamination Unit at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

OFFICE ACTION IN INTER PARTES REEXAMINATION	Control No.	Patent Under Reexamination	
	95/001,261	7,139,761 B2 ET AL.	
	Examiner	Art Unit	
	Deandra M. Hughes	3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Responsive to the communication(s) filed by:

Patent Owner on _____

Third Party(ies) on _____

RESPONSE TIMES ARE SET TO EXPIRE AS FOLLOWS:

For Patent Owner's Response:

2 MONTH(S) from the mailing date of this action. 37 CFR 1.945. EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.956.

For Third Party Requester's Comments on the Patent Owner Response:

30 DAYS from the date of service of any patent owner's response. 37 CFR 1.947. NO EXTENSIONS OF TIME ARE PERMITTED. 35 U.S.C. 314(b)(2).

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

This action is not an Action Closing Prosecution under 37 CFR 1.949, nor is it a Right of Appeal Notice under 37 CFR 1.953.

PART I. THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. Notice of References Cited by Examiner, PTO-892
2. Information Disclosure Citation, PTO/SB/08
3. _____

PART II. SUMMARY OF ACTION:

- 1a. Claims 1-16,21,23-26,29 and 31-34 are subject to reexamination.
- 1b. Claims 17-20,22,27,28 and 30 are not subject to reexamination.
2. Claims _____ have been canceled.
3. Claims 3,32 and 34 are confirmed. [Unamended patent claims]
4. Claims _____ are patentable. [Amended or new claims]
5. Claims 1,2,4-16,23-26,29,31 and 33 are rejected.
6. Claims _____ are objected to.
7. The drawings filed on _____ are acceptable are not acceptable.
8. The drawing correction request filed on _____ is: approved. disapproved.
9. Acknowledgment is made of the claim for priority under 35 U.S.C. 119 (a)-(d). The certified copy has:
 - been received. not been received. been filed in Application/Control No _____.
10. Other _____

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**MERGED *INTER PARTES/EX PARTE* REEXAMINATION
NON-FINAL ACTION**

1. This is a non-final action in the merged reexaminations (90/010,591 and 95/001,261) of **USP 7,139,761** ("**761 Patent**").
2. **Claims 1-16, 21, 23-26, 29 and 31-34** were ordered for reexamination.
3. In the *Inter Partes* Request for Reexamination ("Request"), Third Party Requester ("3PR") proposed rejections **(A)-(N)** as set forth below.
4. The following is a summary of this action:
 - The proposed anticipation rejection **(C)** under **Hubert** was adopted as to **claims 1-2, 4-16, 21-29, 31, and 33**. The remaining proposed rejections were NOT adopted.
 - **Claims 1-2, 4-16, 21-29, 31, and 33** are rejected as obvious over **Hess** in view of **Maritzen**. This rejection was initiated by the Examiner.
 - **Claims 3, 32, and 34** are confirmed as patentable over the prior art of record.

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Proposed Rejections

5. The Request (pg. 6) indicates that 3PR considers:
- (A) Claims 1-13, 16, 21, 23-26, 29, and 31-34 are anticipated by Hess.
 - (B) Claims 1-15, 21, 23-26, 29, and 31-34 are anticipated by Dourish.
 - (C) Claims 1-15, 21, 23-26, 29, and 31-34 are anticipated by Hubert.
 - (D) Claims 1-2, 4-15, 21, 23-26, 29, 32-34 are anticipated by iManage.
 - (E) Claim 3 is anticipated by Swartz.
 - (F) Claims 9-15, 21, 23-26, and 31-34 are obvious over Hess in view of Microsoft.
 - (G) Claim 16 is obvious over Dourish in view of Ausems.
 - (H) Claim 16 is obvious over Hubert in view of Ausems.
 - (I) Claim 16 is obvious over iManage in view of Ausems.
 - (J) Claim 31 is obvious over Hess in view of Microsoft.
 - (K) Claim 31 is obvious over Dourish in view of Microsoft.
 - (L) Claim 31 is obvious over iManage in view of Microsoft.
 - (M) Claims 1-16, 21, 23-26, 29, and 31-34 are obvious over Hess in view of Dourish.
 - (N) Claims 1-15, 21, 23-26, 29, and 31-34 are obvious over Hubert in view of Maritzen.

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Directory to this Action

6.	Hess: Proposed Rejections (A), (F), (J), and (M)	pg. 6
	Dourish: Proposed Rejections (B), (G), and (K)	pg. 11
	Hubert: Proposed Rejections (C), (H), and (N)	pg. 15
	iManage: Proposed Rejections (D), (I), and (L)	pg. 30
	Swartz: Proposed Rejection (E)	pg. 33
	Examiner Initiated Rejection: Hess in view of Maritzen	pg. 34

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Summary of the '761 Patent

7. The **'761 patent** is a horizontal data management tool for communications, organization, information processing, and data storage which operates on existing platforms. (*Abstract*) This tool is a common workflow layer that is automated with a scalable relational database. (*Id.*) As opposed to traditional systems that simply associate data with a folder, the data storage model associates data generated by applications with a user and the topical content of the data. (*Id.*)

When a user logs into the system that employs the tool, the user enters a personal workspace environment called a board, which is associated with the user context. (*col. 3:32-34*) Data created within the board is immediately associated with the user, the user's permission level, the application, the current workspace, and any other desired workspace that the user designates. (*col. 3:44-46*) This association is captured in a form of metadata and tagged to the data being created. (*col. 3:46-48*)

As a user creates a context, or moves from one context to another, the data created and applications used previously by the user automatically follows the user to the next context. (*col. 4:1-4*) The change in user context is captured dynamically and all files and groups of files can be associated with any other file in the system thereby allowing a system user the flexibility in determining the dynamic association. (*col. 4:5-8*) The user can also create the more traditional familiar hierarchical folders within any board via virtual folders, which do not contain any actual physical storage. (*col. 4:10-11*)

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References Cited

8. Christopher K. Hess & Roy H. Campbell, *A Context File System for Ubiquitous Computing Environments*, published by Dept. of Computer Science, U of Illinois at Urbana-Champaign. July 2002. ("**Hess**")
9. USP 6,236,994 to Dourish et al. published Aug. 6, 2002. ("**Dourish**")
10. EP 1 087 306A2 to Hubert et al. published May 22, 2001. ("**Hubert**")
11. iManage, Inc. iManage DeskSite 6.0 User Reference Manual, 2001. Chapters 1-5, 2001. ("**iManage**")
12. USP 6,236,994 to Swartz et al. published May 22, 2001 ("**Swartz**")
13. USP 6,434,403 to Ausems et al. published Aug. 13, 2002. ("**Ausems**")
14. Microsoft Press. Microsoft Computer Dictionary. 3rd Ed. 1997. pgs. 403-404, 462, 487, 505-506, 511-512. ("**Microsoft**")
15. US Pub. No. 2003/0120660 to Maritzen et al. filed Dec. 7, 2001. ("**Maritzen**")

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Claim Treatment

16. Patent Owner has acted as his own lexicographer for the following terms:

Board: "As used herein, a 'board' is defined as a collection of data and application functionality related to a user-defined topic." (col. 7:49-51).

Web: "As used herein, the term 'web' refers to a collection of interrelated boards." (col. 7:58-59).

Webslice: "A webslice is a relationship rule that defines a relationship between a web and one or more boards of that web." (col. 8:59-63).

As to the term **web-based computing platform**, the '761 patent discloses that the users can access the data management tool via the Internet or the Intranet. (col. 10:60-67 and col. 11:1-6) Further, it is well-known in the art that 'web-based' means either or both Internet and Intranet. As such, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms.

As to the term **web-based server**, the '761 patent discloses that the users can access the data management tool via the Internet or the Intranet. (col. 10:60-67 and col. 11:1-6) Further, it is well-known in the art that 'web-based' means either or both Internet and Intranet. As such, the Examiner considers a web-based server to comprise either Internet or Intranet computing platforms.

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HESS: PROPOSED REJECTIONS (A), (F), (J), AND (M)

17. 3PR proposed the following rejections. None of these rejections are adopted.

- (A) Claims 1-13, 16, 21, 23-26, 29, and 31-34 are anticipated by **Hess**.
- (F) Claims 9-15, 21, 23-26, and 31-34 are obvious over **Hess** in view of **Microsoft**.
- (J) Claim 31 is obvious over **Hess** in view of **Microsoft**.
- (M) Claims 1-16, 21, 23-26, 29, and 31-34 are obvious over **Hess** in view of **Dourish**.

Hess is a context file system for ubiquitous computing environments. (*Abstract*).

A factor that distinguishes ubiquitous computing environments from traditional distributed computing is context. (*Id.*) Context allows the system to adapt to the current surroundings in order to facilitate the use of the computational environment. (*Id.*)

Context is associated with files and directories and is used to limit the scope of available data to what is important for the current task, aggregate related material, and trigger data type conversions, therefore simplifying the tasks of application developers and users of the system. (*Id.*)

The file system of **Hess** constructs a virtual directory hierarchy that is based on these associations and uses an internal mounting mechanism, where mount points are owned by users and contain context tags. Mount points are retrieved by mobile handheld devices and injected into the current environment to make personal storage available to applications and other users. (*Id.*)

However, **Hess** does not disclose a computer implemented tracking component for tracking the change of the user from the 1st context to the 2nd context of the

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networked-based system because **Hess** describes a user who carries a mobile handheld device to move from the 1st mount point to the 2nd mount point wherein the context is set manually (*pg. 10; 2nd ¶*) As such, **Hess** does not disclose computer implemented tracking of this physical movement of the user.

GROUP 1: CLAIMS 1-8

18. As to proposed rejection **(A)** of independent **claim 1** and its dependent claims **2-8**, 3PR identifies the mount server as both the claimed context component and the claimed tracking component. (*Request, pg. 29, last box and pg. 30, 2nd box*) For at least the reason that the mount server cannot be both the claimed context component and the claimed tracking component, proposed rejection **(A)** of **claims 1-8** is NOT adopted.

As to proposed rejection **(M)** of independent **claim 1** and its dependent claims **2-8**, 3PR does not rely on the **Dourish** reference to teach the claimed computer-implemented user movement tracking. Further, 3PR makes the conclusion that the combination of **Hess** and **Dourish** meet the claim limitations without pointing to any specific teachings as to *how* this combination meets the claim limitations. (*Request, pg. 139*) For at least these reasons, proposed rejection **(M)** of **claims 1-8** is NOT adopted.

GROUP 2: CLAIMS 9-16

19. As to proposed rejection **(A)** of independent **claim 9** and its dependent claims **10-16**, 3PR states **Hess** accomplishes computer-implemented tracking of movement of the user from the 1st user environment to the 2nd user environment when a user leaves a 1st space to a 2nd space. (*Request, pg. 40, 1st box*). **Hess** describes a user who carries a mobile handheld device to move from the 1st mount point to the 2nd mount point

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wherein the context is set manually. (*pg. 10; 2nd ¶*) As such, **Hess** does not track the user movement via a computer. For at least this reason, proposed rejection **(A)** of **claims 9-16** is NOT adopted.

As to proposed rejection **(F)** of independent **claim 9** and its dependent claims **10-15**, 3PR does not rely on the **Microsoft** reference to teach the claimed computer-implemented user movement tracking. Rather, 3PR relies on **Microsoft** to teach web-based computing platforms or servers. (*Request, pg. 135-136*) As such, the combination of **Hess** in view of **Microsoft**, as proposed by 3PR, does not track the user movement via a computer. For at least this reason, proposed rejection **(F)** of **claims 9-15** is NOT adopted.

As to proposed rejection **(M)** of independent **claim 9** and its dependent claims **10-16**, 3PR does not rely on the **Dourish** reference to teach the claimed computer-implemented user movement tracking. Further, 3PR makes the conclusion that the combination of **Hess** and **Dourish** meet the claim limitations without pointing to any specific teachings as to *how* this combination meets the claim limitations. (*Request, pg. 139*) For at least these reasons, proposed rejection **(M)** of **claims 9-16** is NOT adopted.

GROUP 3: CLAIM 21

20. As to proposed rejection **(A)** of independent **claim 21**, 3PR states **Hess** accomplishes computer-implemented tracking of movement of the user from the 1st user environment to the 2nd user environment when a user leaves a 1st space to a 2nd space. (*Request, pg. 45, 3rd box*). **Hess** describes a user who carries a mobile handheld device to move from the 1st mount point to the 2nd mount point wherein the context is set

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manually. (*pg. 10; 2nd ¶*) As such, **Hess** does not track the user movement via a computer. For at least this reason, proposed rejection (A) of claim 21 is NOT adopted.

As to proposed rejection (F) of independent claim 21, 3PR does not rely on the **Microsoft** reference to teach the claimed computer-implemented user movement tracking. Rather, 3PR relies on **Microsoft** to teach web-based computing platforms or servers. (*Request, pg. 135-136*) As such, the combination of **Hess** in view of **Microsoft**, as proposed by 3PR, does not track the user movement via a computer. For at least this reason, proposed rejection (F) of claim 21 is NOT adopted.

As to proposed rejection (M) of independent claim 21, 3PR does not rely on the **Dourish** reference to teach the claimed computer-implemented user movement tracking. Further, 3PR makes the conclusion that the combination of **Hess** and **Dourish** meet the claim limitations without pointing to any specific teachings as to *how* this combination meets the claim limitations. (*Request, pg. 139*) For at least these reasons, proposed rejection (M) of claim 21 is NOT adopted.

GROUP 4: CLAIMS 23-26, 29, AND 31-34

21. As to proposed rejection (A) of independent claim 23 and its dependent claims 24-26, 29, and 31-34, 3PR states **Hess** accomplishes computer-implemented tracking of movement of the user from the 1st user environment to the 2nd user environment when a user leaves a 1st space to a 2nd space. (*Request, pg. 49, 1st box*). **Hess** describes a user who carries a mobile handheld device to move from the 1st mount point to the 2nd mount point wherein the context is set manually. (*pg. 10; 2nd ¶*) As such, **Hess** does not

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track the user movement via a computer. For at least this reason, proposed rejection **(A)** of claims 24-26, 29, and 31-34 is NOT adopted.

As to proposed rejection **(F)** of independent claim 23 and its dependent claims 24-26, 29, and 31-34, 3PR does not rely on the **Microsoft** reference to teach the claimed computer-implemented user movement tracking. Rather, 3PR relies on **Microsoft** to teach web-based computing platforms or servers. (*Request*, pg. 135-136). As such, the combination of **Hess** in view of **Microsoft**, as proposed by 3PR, does not track the user movement via a computer. For at least this reason, proposed rejection **(F)** of claims 23-26, 29, and 31-34 is NOT adopted.

As to proposed rejection **(J)** of dependent claim 31, 3PR does not rely on the **Microsoft** reference to teach the claimed computer-implemented user movement tracking. Rather, 3PR relies on **Microsoft** to teach relational databases. (*Request*, pg. 137). As such, the combination of **Hess** in view of **Microsoft**, as proposed by 3PR, does not track the user movement via a computer. For at least this reason, proposed rejection **(J)** of dependent claim 31 is NOT adopted.

As to proposed rejection **(M)** of independent claim 23 and its dependent claims 24-26, 29, and 31-34, 3PR does not rely on the **Dourish** reference to teach the claimed computer-implemented user movement tracking. Further, 3PR makes the conclusion that the combination of **Hess** and **Dourish** meet the claim limitations without pointing to any specific teachings as to *how* this combination meets the claim limitations. (*Request*, pg. 139). For at least these reasons, proposed rejection **(M)** of claims 23-26, 29, and 31-34 is NOT adopted.

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DOURISH: PROPOSED REJECTIONS (B), (G), AND (K)

22. 3PR proposed the following rejections. None of these rejections are adopted.

(B) Claims 1-15, 21, 23-26, 29, and 31-34 are anticipated by **Dourish**.

(G) Claim 16 is obvious over **Dourish** in view of **Ausems**.

(K) Claim 31 is obvious over **Dourish** in view of **Microsoft**.

Dourish is a collaborative document management system for sharing customizations to a filing system in which documents stored in memory (e.g. a shared repository) are categorized and accessed by multiple users through an application program interface. (*col. 2:25-30*). Initially, a common filing structure is defined. (*Abstract*). Subsequently, changes are made to the common filing structure to define any number of customized filing structures. (*Id.*) The changes are recorded by the document management system as sequences of modifications. (*Id.*) Using recorded sequences of modifications, documents are retrieved using a filing structure that is different from the filing structure in which the document was filed. (*Id.*)

GROUP 1: CLAIMS 1-8

23. The proposed anticipation rejection (B) of claims 1-8 is NOT adopted because **Dourish** does not anticipate at least: (1) the context component; (2) the tracking component; (3) dynamically storing the context information; and (4) dynamically updating the stored metadata based on a change.

3PR identifies the category manager 122 as the context component which dynamically stores the context information in metadata associated with the user-defined data. (*Request, pg. 58, 2nd box; 1st ¶*). However, the category manager 122 is not

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disclosed as storing the context information metadata, i.e. the customized filing structures 120. Rather, the filing structure store stores the customized filing structures.

(figure 1)

Further, 3PR states the structure translator 124 tracks a change of the user from the 1st context to the 2nd context. (Request, pg. 59, 3rd box; 1st ¶). However, in proposed rejection **(B)**, 3PR does not state *where Dourish* discloses that the structure translator tracks changes from the 1st context to the 2nd context. (Request, pgs. 59-60). In addition, 3PR states that the structure translator is also the context component (Request, pg. 60; 2nd ¶). The structure translator cannot be both the context component and the tracking component. For at least these reasons, proposed rejection **(B)** of claims 1-8 under **Dourish** is NOT adopted.

GROUP 2: CLAIMS 9-16

24. The proposed anticipation rejection **(B)** of claims 9-15 is NOT adopted because **Dourish** does not anticipate at least: (1) dynamically associating metadata with the data and (2) dynamically updating the stored metadata in combination with the other features set forth in independent claim 9.

3PR does not give the term 'dynamically' any weight in his proposed anticipation rejection **(B)** over **Dourish**. (Request, pg. 67, 1st ¶ and pg. 69, 1st ¶) The '761 patent repeatedly emphasizes the feature of capturing the user context dynamically. (e.g., see col. 4:5-8, col. 7:45-50, col. 9:35-40, col. 12:29-38, etc.) As such, an anticipation rejection must squarely address the claimed '*dynamically associating metadata*' and '*dynamically updating the stored metadata*' claim elements. However, 3PR's proposed

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rejection **(B)** of claims 9-15 does not address these terms and the Examiner is unable to identify a teaching in **Dourish** which anticipates these claim terms.

In addition, 3PR proposes an obviousness rejection **(G)** of claim 16 over **Dourish** in view of **Ausems**. (Request, pgs. 137-138). However, 3PR does not rely on **Ausems** for a teaching of the claimed '*dynamically associating metadata*' and '*dynamically updating the stored metadata*' elements. Rather, 3PR cites **Ausems** for the teaching of portable wireless devices. (*Id.*)

For at least these reasons, proposed rejections **(B)** and **(G)** of claims 9-16 under **Dourish** alone or in combination are NOT adopted.

GROUP 3: CLAIM 21

25. The proposed anticipation rejection **(B)** of claim 21 is NOT adopted because **Dourish** does not anticipate at least: (1) dynamically associating metadata with the data and (2) dynamically associating the data and the application with the other features set forth in independent claim 21.

3PR does not give the term 'dynamically' any weight in his proposed anticipation rejection **(B)** over **Dourish**. (Request, pg. 74, 2nd and 4th boxes) The '**761 patent** repeatedly emphasizes the feature of capturing the user context dynamically. (e.g., see col. 4:5-8, col. 7:45-50, col. 9:35-40, col. 12:29-38, etc.) As such, an anticipation rejection must squarely address the claimed '*dynamically associating metadata*' and '*dynamically associating the data and the application*' claim elements. However, 3PR's proposed rejection **(B)** of claim 21 does not address these terms and the Examiner is unable to identify a teaching in **Dourish** which anticipates these claim terms.

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For at least these reasons, proposed rejection **(B) claim 21** under **Dourish** is NOT adopted.

GROUP 4: CLAIMS 23-26, 29, AND 31-34

26. The proposed anticipation rejection **(B)** of **claims 23-26, 29, and 32-34** is NOT adopted because **Dourish** does not anticipate at least: (1) dynamically storing the context data (2) dynamically associating the metadata with data and (3) dynamically storing the change information in combination with the other features set forth in independent **claim 23**.

3PR does not give the term 'dynamically' any weight in his proposed anticipation rejection **(B)** over **Dourish**. (*Request, pgs. 76-78*) The '761 patent repeatedly emphasizes the feature of capturing user context dynamically. (*e.g., see col. 4:5-8, col. 7:45-50, col. 9:35-40, col. 12:29-38, etc.*) As such, an anticipation rejection must squarely address the claimed dynamic actions. However, 3PR's proposed rejection **(B)** of **claims 23-26, 29, and 32-34** does not address the dynamic nature of these actions and the Examiner is unable to identify a teaching in **Dourish** which anticipates these claim terms.

In addition, 3PR proposes an obviousness rejection **(K)** of **claim 31** over **Dourish** in view of **Microsoft**. (*Request, pgs. 137*). However, 3PR does not rely on **Microsoft** for a teaching of the claimed dynamic actions. Rather, 3PR cites **Microsoft** for the teaching of storing metadata according to a relational database methodology. (*Id.*) For at least these reasons, proposed rejections **(B)** and **(K)** of **claims 23-26, 29, and 31-34** under **Dourish** alone or in combination are NOT adopted.

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HUBERT: PROPOSED REJECTIONS (C), (H), AND (N)

27. 3PR proposed the following rejections. Some of these rejections were adopted as set forth below.

(C) Claims 1-15, 21, 23-26, 29, and 31-34 are anticipated by Hubert.

- Proposed rejection (C) of claims 1-2, 4-15, 21, 23-26, 31, and 33 was adopted.
- Proposed rejection (C) of claims 3, 32, and 34 was NOT adopted.

(H) Claim 16 is obvious over Hubert in view of Ausems.

- Proposed rejection (H) of claim 16 was NOT adopted.

(N) Claims 1-15, 21, 23-26, 29, and 31-34 are obvious over Hubert in view of Maritzen.

- Proposed rejection (N) of claims 1-15, 21, 23-26, 29, and 31-34 was NOT adopted.

Hubert is a method of management and use of documents. (§10011) This system employs meta-documents which include an object conveying document information, processing information pertaining to processing the meta-document, and metadata for indexing and retrieving the processing information. (*Id.*) Processing information includes information pertaining to: (1) the fact that the meta-document was processed; (2) who processed the meta-document; (3) any tool relevant to the processing; and (4) the result of the processing. (*Id.*) The processing information is recorded on the meta-document each time the meta-document is processed. (*Id.*) When processing information is recorded on the document, appropriate metadata for indexing and retrieving the processing information is also stored on the meta-document. (*Id.*)

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GROUP 1: CLAIMS 1-8

28. Claims 1-2 and 4-8 are rejected under 35 USC §102(b) as anticipated by Hubert.

With regard to **claim 1**, **Hubert** discloses a computer-implemented network-based system that facilitates management of data comprising:

(Meta-documents and a method of managing them; Title)

- a computer-implemented context component of the network-based system for capturing context information associated with user-defined data;

(The context component is optional tool 18 which generates and stores processing information 14 and associated metadata 16 for indexing and retrieving the processing information 14. ¶0021 The processing information 14 and associated metadata 16 is the context information. The user-defined data is the data 12 of figure 1.)

- created by user interaction of a user in a 1st context of the network-based system

(Whenever a meta-document 10 is accessed and processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

- the context component dynamically storing the context information in metadata associated with the user-defined data

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

- the user-defined data and metadata stored on a storage component of the network-based system; and

(The user defined data 12 and the metadata 16 are stored on a type of media such as a floppy disk or magnetic tape. ¶0020)

- a computer implemented tracking component of the networked based system for tracking a change of the user from the 1st context to a 2nd context of the networked based system; and

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(The processing program 40 meets the claimed tracking component because it extracts the defined processing information, i.e. the claimed metadata. ¶0025)

- dynamically updating the stored metadata based on the change; wherein the user accesses the data from the 2nd context.

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

With regard to **claim 2**, **Hubert** discloses the context component is associated with a workspace, which is a collection of data and application functionality related to the user-defined data.

(The context component is the optional tool 18 which is embedded in meta-document 10. See figure 1.)

With regard to **claim 4**, **Hubert** discloses the context information includes a relationship between the user and at least one of an application, application data, and user environment.

(Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

With regard to **claim 5**, **Hubert** discloses the context component captures context information of the 1st context and context information related to at least one other context.

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 6**, **Hubert** discloses the context information of the at least one other context is at least one of stipulated by the user and suggested automatically by the system based upon search and association criteria set by the user.

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(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 7**, **Hubert** discloses the data created in the 1st context is associated with data created in the 2nd context.

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 8**, **Hubert** discloses the context information is tagged to the user-defined data via the metadata when the user-defined data is created.

(The user defined data 12 of figure 1 is tagged with the metadata 16.¶)

As to **claim 3**, 3PR proposes an anticipation rejection **(C)** of **claim 3** under **Hubert**. (*Request, pg. 88*). 3PR alleges that the source or the environment of figure 2 is the claimed workspace. (*Request, pg. 88, 3rd box*). 3PR also states the document trajectory meets the claim limitation of maintaining a location of data of the respective interrelated workspaces when one or more of the interrelated workspaces are moved into a different workspace interrelationship. (*Request, pg. 98, 1st box*). However, the path of distribution and the fact that a document undergoes changes through its travels, as disclosed by **Hubert**, is not a disclosure of maintaining a location of data of the respective interrelated workspaces when one or more of the interrelated workspaces are moved into a different workspace interrelationship because both the disclosed document and the disclosed sources/environments cannot read on the claimed workspace. For at least this reason, proposed an anticipation rejection **(C)** of **claim 3** is NOT adopted.

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As can be seen by a comparison of the reasons for not adopting the proposed anticipation rejection (**C**) and 3PR's proposed obviousness rejection (**N**) of **Hubert** in view of **Maritzen**, 3PR does not rely on **Maritzen** to teach the elements missing in the **Hubert** reference as set forth above. (*Request, pgs. 138-139*). For at least this reason, proposed rejection (**N**) of **claim 3** is NOT adopted.

In addition, 3PR proposes an obviousness rejection (**N**) of **claims 1-2 and 4-8** over **Hubert** in view of **Maritzen**. (*Request, pgs. 138-139*). 3PR states that **Maritzen** is not required to show the invalidity of the claims but claims **1-2 and 4-8** would nonetheless be rendered obvious by the combination of **Hubert** in view of **Maritzen**. (*pg. 138, last ¶*) Further, 3PR states **Maritzen** provides a specific example in which the user moves between separate Internet websites (*Id.*) However, movement between separate Internet websites is not claimed. For at least this reason, proposed anticipation rejection (**N**) of **claims 1-2 and 4-8** was NOT adopted.

GROUP 2: CLAIMS 9-16

29. Claims 9-15 are rejected under 35 USC §102(b) as anticipated by Hubert.

With regard to **claim 9**, **Hubert** discloses a computer-implemented method of managing data comprising computer-executable acts of:

(A context file system for Ubiquitous Computing Environments; Title)

- creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application;

(As explained above, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms. Figure 1 discloses the created meta-document. Figure 2 discloses sharing of this document via the Internet 36. The optional tool 18 is the claimed application.)

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- the data in the form of at least files and documents;

(Figure 1 is a meta-document.)

- dynamically associating metadata with the data;

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

- the data and metadata stored on a storage component of the web-based computing platform;

(The mount server contains both system and user storage mappings as described in §2.1. See also system architecture pg. 8, §3)

- the metadata includes information related to the user, the data, the application, and the user environment;

(The meta-data includes information related to at least the data because the metadata includes time stamp and a record of the place where the document was created. ¶0022)

- tracking movement of the user from the user environment of the web-based computing platform to a 2nd user environment of the web-based computing platform;

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

- dynamically updating the stored metadata with an association of the data the application, and the 2nd user environment wherein the user employs at least one of the application and the data from the 2nd environment;

(Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

- the data and metadata stored on a storage component of the web-based computing platform.

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

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With regard to **claim 10**, Hubert discloses capturing context information of the user.

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

With regard to **claim 11**, Hubert discloses indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments.

(Optional tool 18 generates and stores processing information 14 and associated metadata 16 for indexing and retrieving the processing information 14. ¶0021)

With regard to **claim 12**, Hubert discloses at least one of the data and the application is associated automatically with the 2nd user environment.

(The meta-data includes information related to at least the data because the metadata includes time stamp and a record of the place where the document was created. ¶0022)

With regard to **claim 13**, Hubert discloses accessing the user environment and the 2nd user environment using a browser.

(A meta-document is sent to a different pollenization space typically when it is sent through email as an attachment or downloaded through a web server. ¶0036)

With regard to **claim 14**, it is well-known that web servers on the Internet communicate using a TCP/IP communication protocol.

With regard to **claim 15**, it is well-known that websites are located from a remote location using a URL address.

In addition, 3PR proposes an obviousness rejection (H) of **claim 16** over Hubert in view of **Ausems**. *(Request, pgs. 136)*. Hubert does not disclose accessing the user

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environment via a portable wireless device. 3PR alleges that **Ausems** teaches accessing the user environment (please note the antecedent basis) via a portable wireless device. However, **Ausems** merely teaches personal digital assistants ("PDA") and does not disclose accessing a user environment such as the user environment of **Hubert** via the PDA. Further, the disclosures cited by 3PR (i.e., col. 1:5-9 and 54-58) do not teach accessing a user environment such as the user environment of **Hubert** via the PDA. For at least this reason, proposed rejection (H) of claim 16 is NOT adopted.

In addition, 3PR proposes an obviousness rejection (N) of claims 9-15 over **Hubert** in view of **Maritzen**. (*Request, pgs. 138-139*). 3PR states that **Maritzen** is not required to show the invalidity of the claims but claims 9-15 would nonetheless be rendered obvious by the combination of **Hubert** in view of **Maritzen**. (*pg. 138, last ¶*) Further, 3PR states **Maritzen** provides a specific example in which the user moves between separate Internet websites (*Id.*) However, movement between separate Internet websites is not claimed. For at least this reason, proposed rejection (N) of claims 9-15 is NOT adopted.

GROUP 3: CLAIM 21

30. Claim 21 is rejected under 35 USC §102(b) as anticipated by **Hubert**.

With regard to claim 21, **Hubert** discloses a computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;

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(As explained above, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms. Figure 1 discloses the created meta-document. Figure 2 discloses sharing of this document via the Internet 36. The optional tool 18 is the claimed application.)

- dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform;

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

- the metadata includes information related to the user of the user workspace, to the data, to the application, and to the user workspace;

(The meta-data includes information related to at least the data because the metadata includes time stamp and a record of the place where the document was created. ¶0022)

- tracking movement of the user from the user workspace to a 2nd user workspace of the web-based computing platform;

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

- dynamically associating the data and the application with the 2nd user workspace in the metadata such that the user employs the application and data from the 2nd user workspace; and

(Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

- indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces

(Optional tool 18 which generates and stores processing information 14 and associated metadata 16 for indexing and retrieving the processing information 14. ¶0021)

In addition, 3PR proposes an obviousness rejection **(N)** of **claim 21** over Hubert in view of Maritzen. *(Request, pgs. 138-139)*. 3PR states that Maritzen is not required to show the invalidity of the claims but **claim 21** would nonetheless be rendered obvious

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by the combination of **Hubert** in view of **Maritzen**. (*pg. 138, last ¶*) Further, 3PR states **Maritzen** provides a specific example in which the user moves between separate Internet websites (*Id.*) However, movement between separate Internet websites is not claimed. For at least this reason, proposed rejection (N) of **claim 21** is NOT adopted.

GROUP 4: CLAIMS 23-26, 29, AND 31-34

31. Claims 23-26, 29, 31, and 33 are rejected under 35 USC §102(b) as anticipated by Hubert.

With regard to **claim 23**, **Hubert** discloses a computer-implemented system that facilitates management of data, comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- a computer-implemented context component of a web-based server for defining a 1st user workspace of the web-based server;

(As explained above, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms. Figure 1 discloses the created meta-document. Figure 2 discloses sharing of this document via the Internet 36. The context component is optional tool 18 which generates and stores processing information 14 and associated metadata 16 for indexing and retrieving the processing information 14. ¶0021 The processing information 14 and associated metadata 16 is the context information. The user-defined data is the data 12 of figure 1.)

- assigning one or more applications to the 1st user workspace;

(Optional tool 18 is an embedded software program, interface, or macro which generates and stores processing information. ¶0021)

- capturing context data associated with user interaction of a user while in the 1st user workspace;

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

- dynamically storing the context data as metadata on a storage component of the web-based server;

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(The user defined data 12 and the metadata 16 are stored on a type of media such as a floppy disk or magnetic tape. ¶0020)

- which metadata is dynamically associated with data created in the 1st user workspace; and

(Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

- a computer implemented tracking component of the web-based server for tracking a change information associated with a change in access of the user from the 1st user workspace to a 2nd user workspace; and

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

- dynamically storing the change information on the storage component as part of the metadata;

(Whenever the meta-document 10 is accessed or processed, tool 18 generates a piece of processing information 14 and metadata 16 to record that fact. ¶0021)

- the data and metadata stored on a storage component of the web-based computing platform wherein the user accesses the data from the 2nd user workspace.

(See also figure 2 where a record of the fact that a meta-document was received at source 32 is stored as processing information 22 with associated metadata. ¶0023)

With regard to **claim 24**, Hubert discloses a tracking component which automatically creates the metadata when the user accesses the 1st user workspace.

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 25**, Hubert discloses wherein the context component captures relationship data associated with a relationship between the 1st user workspace and at least one other user workspace.

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(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 26**, **Hubert** discloses wherein an application associated with the 1st user workspace is automatically accessible via the 2nd user workspace when the user moves from the 1st user workspace to the 2nd user workspace.

(The application is embedded option tool 18 which generates a piece of processing information to record the fact the meta-document 10 is accessed or processed. ¶0021)

With regard to **claim 29**, **Hubert** discloses wherein when the data created in the 1st user workspace is accessed from the 2nd user workspace, in response to which the context component adds information to the metadata about the 2nd user workspace.

(When a meta-document such as figure 1 is transmitted from source to source and processing information 14 is created and stored in the meta-document, this is similar to a bee travelling to a flower and picking up pollen. ¶0026. See also figure 2)

With regard to **claim 31**, **Hubert** discloses wherein the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology.

(The basic data model consists of three object types: resources, properties, and statements which correspond to resource associated with a property. ¶0011)

With regard to **claim 33**, **Hubert** discloses wherein the 1st user workspace provides access to at least one communications tool which includes at least email.

(A meta-document is sent to a different pollenization space typically when it is sent through email as an attachment. ¶0036.)

As to **claim 32**, 3PR proposes an anticipation rejection **(C)** of **claim 32** under **Hubert**. (*Request*, pg. 103). 3PR alleges that **Hubert** discloses facilitation of many-to-many functionality of the data via the metadata (*Request*, pg. 103, 2nd box). However, 3PR

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identifies the disclosed metadata for indexing and retrieving processing information.

Since it is well understood to one of ordinary skill in the art (e.g. a database engineer) that indexing and retrieving processing information is not facilitation of many-to-many functionality, proposed rejection (C) of claim 32 is NOT adopted.

As to claim 34, 3PR proposes an anticipation rejection (C) of claim 34 under **Hubert**. (*Request, pg. 104*). 3PR alleges that **Hubert** discloses one or more applications that include file storage pointers, through **Hubert's** disclosed metadata, that are dynamic and associated with the 1st user workspace. (*Request, pg. 104, 2nd box*). However, 3PR identifies the disclosed metadata as the files storage pointers. Since it is well understood to one of ordinary skill in the art (e.g. a database engineer) that metadata is not a file storage pointer, proposed rejection (C) of claim 34 is NOT adopted.

As to claims 32 and 34, proposed anticipation rejection (C) was NOT adopted. As can be seen by a comparison of the reasons for not adopting the proposed anticipation rejection (C) and 3PR's proposed obviousness rejection (N) of **Hubert** in view of **Maritzen**, 3PR does not rely on **Maritzen** to teach the elements missing in the **Hubert** reference as set forth above. (*Request, pgs. 138-139*). For at least this reason, proposed rejection (N) of claims 32 and 34 is NOT adopted.

In addition, 3PR proposes an obviousness rejection (N) of claims 23-26, 29, 31, and 33 over **Hubert** in view of **Maritzen**. (*Request, pgs. 138-139*). 3PR states that **Maritzen** is not required to show the invalidity of the claims but claims 23-26, 29, 31, and 33 would nonetheless be rendered obvious by the combination of **Hubert** in view of

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Maritzen. (*pg. 138, last ¶*) Further, 3PR states **Maritzen** provides a specific example in which the user moves between separate Internet websites (*pg. 139, last ¶*) However, movement between separate Internet websites is not claimed. For at least this reason, proposed rejection (N) of **claims 23-26, 29, 31, and 33** is NOT adopted.

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iMANAGE: PROPOSED REJECTIONS (D), (I), AND (L)

32. 3PR proposed the following rejections. None of these rejections are adopted.

(D) **Claims 1-2, 4-15, 21, 23-26, 29, 32-34** are anticipated by **iManage**.

(I) **Claim 16** is obvious over **iManage** in view of **Ausems**.

(L) **Claim 31** is obvious over **iManage** in view of **Microsoft**.

iManage is a document management system ("DMS") that manages repositories of documents for multiple users. (pg. 12, 2nd ¶) DMS provides, *inter alia*, the ability to: (1) share document with other users securely and easily; (2) create and track multiple versions of a document; (3) create extensive tracking of multiple versions of a document; and (4) automatically archive and restore a document. (*Id.*)

Each document in an **iManage** library has its own document profile record which includes: the author, the operator who entered into the library, the date of creation, the version number, the user who last edited it, a lengthy description of the document, comments, and custom classifications used to identify, differentiate, and group documents in the library. (pg. 14) The information contained in the document profile enables the user to search quickly for documents without the need to remember file names or where the file is stored on the server. (*Id.*)

GROUP 1: CLAIMS 1-2 and 4-8

33. The proposed anticipation rejection (D) of **claims 1-2 and 4-8** is NOT adopted because **iManage** does not anticipate at least the claimed metadata and the tracking component in combination with the other features set forth in the claims. In this proposed anticipation rejection, 3PR first identifies the *DeskSite Software* as the

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claimed context component. (*Request, pg. 105, 2nd box*). Within the same rejection, 3PR then identifies the claimed tracking component as the *Desksite software*. (*Request, pg. 107, 2nd box*). In this anticipation rejection, the *DeskSite Software* cannot be both the context component and the tracking component.

In addition, 3PR identifies the document profile and history information as the claimed context information. (*Request, pg. 106, 2nd box*) Within the same rejection, 3PR then identifies the metadata as the historical record of the activities of the document. (*Id.*) Yet, **iManage** expressly identifies the document profile as the historical record of the activities of the document. (*iManage; pg. 14*) In 3PR's proposed anticipation rejection, the document profile cannot meet both the claimed context information and the metadata.

For at least these reasons, 3PR's proposed anticipation rejection of **claims 1-2 and 4-8** is NOT adopted.

GROUP 2: CLAIMS 9-16

34. The proposed anticipation rejection (D) of **claims 9-15** is NOT adopted because **iManage** does not anticipate *dynamically* updating the stored metadata with an association of the data, the application, and the 2nd user environment wherein the 2nd user employs at least one of the application and the data from the 2nd environment, as claimed.

In 3PR's proposed anticipation rejection, 3PR does not address the term *dynamically* at all. (*Request, pg. 116, 1st box*). Since the '761 patent repeatedly emphasizes the feature of *dynamically* updating the stored metadata, a proposed

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anticipation rejection must squarely address this term. (*e.g.*, *see col. 4:5-8, col. 7:45-50, col. 9:35-40, col. 12:29-38, etc.*) However, in the proposed anticipation rejection (**D**), 3PR does not give the term 'dynamically' any weight.

For at least this reason, 3PR's proposed anticipation rejection of claims 9-15 is NOT adopted.

In addition, 3PR proposes an obviousness rejection (**I**) of claim 16 over **iManage** in view of **Ausems**. (*Request, pgs. 136*). However, 3PR does not rely on **Ausems** to teach the missing elements of the **iManage** reference. (*Id.*) For at least this reason, proposed rejection (**I**) of claim 16 is NOT adopted.

GROUP 3: CLAIM 21

35. The proposed anticipation rejection (**D**) of claim 21 is NOT adopted because **iManage** does not anticipate *dynamically* updating the stored metadata with an association of the data, the application, and the 2nd user environment wherein the 2nd user employs at least one of the application and the data from the 2nd environment, as claimed.

In 3PR's proposed anticipation rejection, 3PR does not address the term *dynamically* at all. (*Request, pg. 121, 2nd box*). Since the '**761 patent** repeatedly emphasizes the feature of *dynamically* updating the stored metadata, a proposed anticipation rejection must squarely address this term. (*e.g.*, *see col. 4:5-8, col. 7:45-50, col. 9:35-40, col. 12:29-38, etc.*) However, in the proposed anticipation rejection (**D**), 3PR does not give the term 'dynamically' any weight.

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For at least this reason, 3PR's proposed anticipation rejection of **claim 21** is NOT adopted.

GROUP 4: CLAIMS 23-26, 29, AND 31-34

36. The proposed anticipation rejection (D) of **claim 23-26, 29, 32-34** is NOT adopted because **iManage** does not anticipate at least the claimed metadata and the context component in combination with the other features set forth in the claims. In this proposed anticipation rejection, 3PR does not identify a disclosure in **iManage** that reads on the claimed context component. (*Request, pg. 121, last box*) An anticipation rejection must squarely address each and every element of the claim. For at least the reason that 3PR has not identified the component of **iManage** that reads on the claimed context component, proposed anticipation rejection (D) of **claim 23-26, 29, 32-34** is NOT adopted.

In addition, 3PR proposes an obviousness rejection (L) of **claim 31** over **iManage** in view of **Microsoft**. (*Request, pgs. 137*). However, 3PR does not rely on **Microsoft** for a teaching of the elements missing in the disclosure of **iManage**. (*Id.*) For at least these reasons, proposed rejections (L) of **claim 31** under **iManage** alone or in combination are NOT adopted.

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SWARTZ: PROPOSED REJECTION (E)

37. 3PR proposed the following rejection. This rejection was NOT adopted.

(E) . Claim 3 is anticipated by **Swartz**.

38. **Swartz** is a method for integrating the operation of various independent software applications directed to the management of information within an enterprise. (*Abstract*)

The system facilitates monitoring of information flow among integrated information management systems. (*Id.*) **Swartz**'s system includes additional tools which use knowledge information to enable use of knowledge within an enterprise to develop context and visualization of such knowledge. (*Id.*)

The proposed anticipation rejection (E) of claim 3 is NOT adopted because **Swartz** does not anticipate at least the claimed tracking component in combination with the other features set forth in the claims. In this proposed anticipation rejection, 3PR first identifies the *Data Docket Middleware* as the claimed context component. (*Request, pg. 129, last box*). Within the same rejection, 3PR then identifies the claimed tracking component as the *Data Docket Middleware* (*Request, pg. 131, last box*)

In this proposed anticipation rejection (E), the *Data Docket Middleware* cannot be both the context component and the tracking component because an anticipation rejection must squarely address each and every element of the claim. For at least the reason that the *Data Docket Middleware* cannot be both the claimed context component and the tracking component, proposed rejection (E) of claim 3 is NOT adopted.

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EXAMINER INITIATED CLAIM REJECTIONS

GROUP 1: CLAIMS 1-2 and 4-8

39. Claims 1-2, 4-8 are rejected under 35 USC §103(a) as being obvious over **Hess** in view of **Maritzen**.

With regard to claim 1, **Hess** discloses a computer-implemented network-based system that facilitates management of data comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- a computer-implemented context component of the network-based system for capturing context information associated with user-defined data;

(The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. The mount server which serves the mount points reads on the claimed context component.)

- created by user interaction of a user in a 1st context of the network-based system

(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

- the context component dynamically storing the context information in metadata associated with the user-defined data

(The mount server reads on the context component. The mount server contains both system and user storage mappings as described in §2.1. These mappings act as metadata for files on disk. Hess splits the metadata from the actual data so that metadata can be easily searched, where only a minimal amount of information needs to be transported as users moving among spaces. When a user leaves a space, the user's directory mappings are automatically deleted from the space file system, which restricts access unless the user is physically present. The mount server dynamically stores metadata because it removes the need for users to manually transfer files as they move between spaces. pg. 9, §3.1, 1st ¶)

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- the user-defined data and metadata stored on a storage component of the network-based system; and

(Hess uses mounts to store context information. Context information may include user preferences, application configuration, and application data. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, 5th ¶)

Hess does not disclose a computer implemented tracking component for tracking the change of the user from the 1st context to the 2nd context of the networked-based system because **Hess** describes a user who carries a mobile handheld device to move from the 1st mount point to the 2nd mount point. *(Abstract)* **Hess** does not disclose computer implemented tracking of this physical movement of the user. Further, **Hess** discloses that since context of a space does not change rapidly and some context values are fixed (e.g. location) or implicit (e.g. time), manual configuration of context via attachment of a mobile handheld device at a mount point is not a burden. *(pg. 10, 2nd ¶)*. However, **Hess** teaches future versions of his system may be able to detect the context of the user automatically through environmental sensing. *(Id.)*

Maritzen discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. *(¶0006)* This switching model is applied to different access points such as websites. *(Id.)* Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to detect the context of the user in device of **Hess** via the context aware switching model of **Maritzen** to dynamically store the context information based on the detected change in context for the advantage of removing the need of users to manually transfer files when they move between spaces.

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With regard to **claim 2**, Hess discloses the context component is associated with a workspace, which is a collection of data and application functionality related to the user-defined data.

(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

With regard to **claim 4**, Hess discloses the context information includes a relationship between the user and at least one of an application, application data, and user environment.

(Context types are user or application defined. Some examples of useful contexts are user environment such as location. The virtual file system hierarchy is based on what contexts have been attached to files. pg. 6, 2nd ¶)

With regard to **claim 5**, Hess discloses the context component captures context information of the 1st context and context information related to at least one other context.

(The mount server reads on the context component. The mount server contains both system and user storage mappings as described in §2.1. These mappings act as metadata for files on disk. Hess splits the metadata from the actual data so that metadata can be easily searched, where only a minimal amount of information needs to be transported as users moving among spaces. When a user leaves a space, the user's directory mappings are automatically deleted from the space file system, which restricts access unless the user is physically present. pg. 9, §3.1, 1st ¶)

With regard to **claim 6**, Hess discloses the context information of the at least one other context is at least one of stipulated by the user and suggested automatically by the system based upon search and association criteria set by the user.

(Context types are user or application defined. pg. 6, 2nd ¶)

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With regard to **claim 7**, Hess discloses the data created in the 1st context is associated with data created in the 2nd context.

(Once a context is associated with a file, the data is visible in the directory representing the context. The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. Context may be attached or detached from files via a mobile handheld device attached to a mount point. Abstract)

With regard to **claim 8**, Hess discloses the context information is tagged to the user-defined data via the metadata when the user-defined data is created.

(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

GROUP 2: CLAIMS 9-16

40. **Claims 9-16** are rejected under 35 USC §103(a) as being obvious over Hess in view of Maritzen.

With regard to **claim 9**, Hess discloses a computer-implemented method of managing data comprising computer-executable acts of:

(A context file system for Ubiquitous Computing Environments; Title)

- creating data within a user environment of a web-based computing platform via user interaction with the user environment by a user using an application;

(As explained above, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms. The system of Hess is disclosed as a Networked environment. pg. 3, §1; The active spaces read on the user environment and the claimed applications are the applications in the disclosed active spaces. When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

- the data in the form of at least files and documents;

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(Once a context is associated with a file, the data is visible in the directory representing the context. pg. 6, §2.2, 1st ¶)

- dynamically associating metadata with the data;

(The mount server contains both system and user storage mappings as described in §2.1. These mappings act as metadata for files on disk. Hess splits the metadata from the actual data so that metadata can be easily searched, where only a minimal amount of information needs to be transported as users moving among spaces. When a user leaves a space, the user's directory mappings are automatically deleted from the space file system, which restricts access unless the user is physically present. The mount server dynamically stores metadata because it removes the need for users to manually transfer files as they move between spaces. pg. 9, §3.1, 1st ¶)

- the data and metadata stored on a storage component of the web-based computing platform

(The mount server contains both system and user storage mappings as described in §2.1. See also system architecture pg. 8, §3)

- the metadata includes information related to the user, the data, the application, and the user environment;

(The context may include user preferences, application configuration, and application data. pg. 6, §2.2, 1st ¶. See also pg. 7 for user environment)

Hess does not disclose a computer executable act of tracking movement of the user from a 1st environment to a 2nd environment and dynamically updating the stored metadata associated with the data when the user employs an application or uses data in the 2nd environment. **Hess** describes a user who carries a mobile handheld device to move from a 1st mount point (i.e. environment) to a 2nd mount point. *(Abstract)* **Hess** does not disclose tracking this physical movement of the user via a computer. Further, **Hess** discloses that since context of a space does not change rapidly and some context values are fixed (e.g. location) or implicit (e.g. time), manual configuration of context via attachment of a mobile handheld device at a mount point is not a burden. *(pg. 10, 2nd ¶)*.

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However, **Hess** teaches future versions of his system may be able to detect the context (i.e. environment) of the user automatically through environmental sensing. (*Id.*) **Maritzen** discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. (¶0006) This switching model is applied to different access points such as websites. (*Id.*) Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to detect the context (i.e. environment) of the user in device of **Hess** via the context aware switching model of **Maritzen** to dynamically update the stored metadata associated with the data when the user employs an application or uses data in a 2nd context for the advantage of removing the need of users to manually transfer files when they move between spaces.

With regard to **claim 10**, **Hess** discloses capturing context information of the user.

(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

With regard to **claim 11**, **Hess** discloses indexing content of the user environment such that a plurality of users can access the content from an associated plurality of user environments.

(The data may be located in the personal repositories of individual users. Even though the data of a single user or group of users may be dispersed among several remote machines that data is aggregated and presented as a single source with only pertinent information visible. Name clashes are handled by indexing different files with the same name. pg. 7, 3rd ¶)

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With regard to **claim 12**, **Hess** discloses at least one of the data and the application is associated automatically with the 2nd user environment.

(Once a context is associated with a file, the data is visible in the directory representing the context. The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. Context may be attached or detached from files via a mobile handheld device attached to a mount point. Abstract)

With regard to **claim 13**, the combination of **Hess** in view of **Maritzen** as set forth above discloses accessing the user environment and the 2nd user environment using a browser because **Maritzen** teaches context tracking via websites.

With regard to **claim 14**, it is well-known that websites on the Internet communicate using a TCP/IP communication protocol.

With regard to **claim 15**, it is well-known that websites are located from a remote location using a URL address.

With regard to **claim 16**, **Hess** discloses accessing the user environment via hand-held mobile devices. *(Abstract)*

GROUP 3: CLAIM 21

41. **Claim 21** is rejected under 35 USC §103(a) as being obvious over **Hess** in view of **Maritzen**.

With regard to **claim 21**, **Hess** discloses a computer-readable medium for storing computer-executable instructions for a method of managing data, the method comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- creating data related to user interaction of a user within a user workspace of a web-based computing platform using an application;

(As explained above, the Examiner considers a web-based computing platform to comprise either Internet or Intranet computing platforms. The system of Hess is disclosed as a Networked environment. pg. 3, §1; The active spaces read on the user workspace and the claimed applications are the applications in the disclosed active spaces. When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

- dynamically associating metadata with the data, the data and metadata stored on the web-based computing platform;

(The mount server contains both system and user storage mappings as described in §2.1. These mappings act as metadata for files on disk. Hess splits the metadata from the actual data so that metadata can be easily searched, where only a minimal amount of information needs to be transported as users moving among spaces. When a user leaves a space, the user's directory mappings are automatically deleted from the space file system, which restricts access unless the user is physically present. The mount server dynamically stores metadata because it removes the need for users to manually transfer files as they move between spaces. pg. 9, §3.1, 1st ¶)

- the metadata includes information related to the user of the user workspace, to the data, to the application, and to the user workspace;

(The context may include user preferences, application configuration, and application data. pg. 6, §2.2, 1st ¶. See also pg. 7 for user environment)

- indexing the data created in the user workspace such that a plurality of different users can access the data via the metadata from a corresponding plurality of different user workspaces

(The data may be located in the personal repositories of individual users. Even though the data of a single user or group of users may be dispersed among several remote machines that data is aggregated and presented as a single source with only pertinent information visible. Name clashes are handled by indexing different files with the same name. pg. 7, 3rd ¶)

Hess does not disclose computer executable instructions to track the movement of the user from a 1st workspace to a 2nd workspace and dynamically updating the stored metadata associated with the data when the user employs an application and uses data in the 2nd environment. **Hess** describes a user who carries a mobile

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handheld device to move from a 1st mount point (i.e. workspace) to a 2nd mount point. *(Abstract)* **Hess** does not disclose tracking this physical movement of the user via a computer. Further, **Hess** discloses that since context of a space does not change rapidly and some context values are fixed (e.g. location) or implicit (e.g. time), manual configuration of context via attachment of a mobile handheld device at a mount point is not a burden. *(pg. 10, 2nd ¶)*. However, **Hess** teaches future versions of his system may be able to detect the context (i.e. workspace) of the user automatically through environmental sensing. *(Id.)*

Maritzen discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. *(¶0006)* This switching model is applied to different access points such as websites. *(Id.)* Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to detect the context (i.e. workspace) of the user in the device of **Hess** via the context aware switching model of **Maritzen** to dynamically update the stored metadata associated with the data when the user employs an application or uses data in a 2nd workspace for the advantage of removing the need of users to manually transfer files when they move between spaces.

GROUP 4: CLAIMS 23-26, 29, AND 31-34

42. **Claims 23-26, 29, 31, and 33** are rejected under 35 USC §103(a) as being obvious over **Hess** in view of **Maritzen**.

With regard to **claim 23**, Hess discloses a computer-implemented system that facilitates management of data, comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- a computer-implemented context component of a web-based server for defining a 1st user workspace of the web-based server;
(As explained above, the Examiner considers a web-based server to comprise either Internet or Intranet computing platforms. The system of Hess is disclosed as a Networked environment. pg. 3, §1; The active spaces read on the user workspace and the claimed applications are the applications in the disclosed active spaces. When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)
- assigning one or more applications to the 1st user workspace;
(The claimed applications are the applications in the disclosed active spaces.)
- capturing context data associated with user interaction of a user while in the 1st user workspace;
(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)
- dynamically storing the context data as metadata on a storage component of the web-based server;
(The mount server contains both system and user storage mappings as described in §2.1. These mappings act as metadata for files on disk. Hess splits the metadata from the actual data so that metadata can be easily searched, where only a minimal amount of information needs to be transported as users moving among spaces. When a user leaves a space, the user's directory mappings are automatically deleted from the space file system, which restricts access unless the user is physically present. The mount server dynamically stores metadata because it removes the need for users to manually transfer files as they move between spaces. pg. 9, §3.1, 1st ¶)
- which metadata is dynamically associated with data created in the 1st user workspace; and
(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and

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application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶

Hess does not disclose a computer implemented means for tracking movement of a user from a 1st workspace to a 2nd workspace and dynamically updating the stored metadata associated with the data when the user employs an application and uses data in the 2nd environment. **Hess** describes a user who carries a mobile handheld device to move from a 1st mount point (i.e. workspace) to a 2nd mount point. (*Abstract*) **Hess** does not disclose tracking this physical movement of the user via a computer. Further, **Hess** discloses that since context of a space does not change rapidly and some context values are fixed (e.g. location) or implicit (e.g. time), manual configuration of context via attachment of a mobile handheld device at a mount point is not a burden. (*pg. 10, 2nd ¶*).

However, **Hess** teaches future versions of his system may be able to detect the context (i.e. workspace) of the user automatically through environmental sensing. (*Id.*) **Maritzen** discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. (*¶0006*) This switching model is applied to different access points such as websites. (*Id.*) Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to detect the context (i.e. workspace) of the user in the device of **Hess** via the context aware switching model of **Maritzen** to dynamically update the stored metadata associated with the data when the user employs an application or uses data in a 2nd workspace for the advantage of removing the need of users to manually transfer files when they move between spaces

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With regard to **claim 24**, **Hess** does not disclose a tracking component which automatically creates the metadata when the user accesses the 1st user workspace. **Maritzen** discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. (¶0006) This context sensitive information is gathered when the user accesses the 1st user workspace. (¶0077) Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to gather context sensitive information when the user accesses the 1st user workspace via the context aware switching model of **Maritzen** for the advantage of transferring metadata without user intervention.

With regard to **claim 25**, **Hess** discloses wherein the context component captures relationship data associated with a relationship between the 1st user workspace and at least one other user workspace.

(Once a context is associated with a file, the data is visible in the directory representing the context. The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. Context may be attached or detached from files via a mobile handheld device attached to a mount point. Abstract)

With regard to **claim 26**, **Hess** discloses wherein an application associated with the 1st user workspace is automatically accessible via the 2nd user workspace when the user moves from the 1st user workspace to the 2nd user workspace.

(Once a context is associated with a file, the data is visible in the directory representing the context. The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. Context may be attached or detached from files via a mobile handheld device attached to a mount point. Abstract)

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With regard to **claim 29**, Hess discloses wherein when the data created in the 1st user workspace is accessed from the 2nd user workspace, in response to which the context component adds information to the metadata about the 2nd user workspace.

(Once a context is associated with a file, the data is visible in the directory representing the context. The system allows context to be attached to or detached from files and directories by generating context-aware mount points, where points are owned by users and contain context tags. pg. 6, §2.2, 1st ¶. Context may be attached or detached from files via a mobile handheld device attached to a mount point. Abstract)

With regard to **claim 31**, Hess discloses wherein the storage component stores the data and the metadata according to at least one of a relational and an object storage methodology.

(Hess' system is a context file system for ubiquitous computing environments.)

With regard to **claim 33**, Hess discloses wherein context data relating to an item of communication is automatically stored and used in performance of communication tasks.

(The item of communication is a document and the communication task is the document sharing functionality. pg. 9, 1st ¶)

GROUP 5: CLAIM 22

43. Claim 22 is rejected under 35 USC §103(a) as being obvious over Hess in view of Maritzen.

With regard to **claim 22**, a claim limitation will be presumed to invoke 35 USC §112, 6th ¶ if it meets the following 3-prong analysis (MPEP §2181):

- (A) the claim limitation must use the phrase "means for" or "step for";
- (B) the "means for" or "step for" must be modified by functional language; and
- (C) the phrase "means for" or "step for" must not be modified by sufficient structure, material, or acts achieving the specified function.

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Claim 22 recites, *inter alia*,

- means for creating data by interaction of a user within a user workspace of a server using an application;
- means for associating metadata with the data,
- means for tracking movement of the user from the user workspace to a 2nd user workspace of the server; and
- means for dynamically associating the data and the application with the 2nd user workspace in the metadata.

35 USC §112, 6th ¶ states that a claim limitation expressed in means-plus-function language shall be construed to cover the corresponding structure...described in the specification and equivalents thereof. However, the disclosed corresponding structure for **claim 22's** means-plus-function language is merely a processor running the process of the functional language. (*col. 5:57-65*) As such, any computer-implemented process of the functional language would cover the disclosed corresponding structure of the means-plus-function language.

With regard to **claim 22**, **Hess** discloses a computer implemented system that facilitates management of data, comprising:

(A context file system for Ubiquitous Computing Environments; Title)

- computer implemented means for creating data by interaction of a user within a user workspace of a server using an application;

(The system of Hess is disclosed as a Networked environment. pg. 3, §1; The active spaces read on the user workspace and the claimed applications are the applications in the disclosed active spaces. When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

- computer implemented means for associating metadata with the data;

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(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

- the metadata stored in association with the data on storage means of the server;

(The mount server contains both system and user storage mappings as described in §2.1. See also system architecture pg. 8, §3)

- the metadata includes information related to a user of the user workspace, to the data, to the application and to the user workspace;

(When a file is created in one of the current context directories, the current context, which may include user preferences, application configuration, and application data, is used to generate the mount context tags. This is implicit attachment of context. pg. 6, §2.2, 1st ¶ and pg. 12, §4.3, last ¶)

Hess does not disclose a computer implemented means for tracking movement of a user from a 1st workspace to a 2nd workspace and dynamically updating the stored metadata associated with the data when the user employs an application and uses data in the 2nd environment. **Hess** describes a user who carries a mobile handheld device to move from a 1st mount point (i.e. workspace) to a 2nd mount point. *(Abstract)* **Hess** does not disclose tracking this physical movement of the user via a computer. Further, **Hess** discloses that since context of a space does not change rapidly and some context values are fixed (e.g. location) or implicit (e.g. time), manual configuration of context via attachment of a mobile handheld device at a mount point is not a burden. *(pg. 10, 2nd ¶)*. However, **Hess** teaches future versions of his system may be able to detect the context (i.e. workspace) of the user automatically through environmental sensing. *(Id.)*

Maritzen discloses a context aware switching model that is capable of gathering context sensitive information and passing this context sensitive information to another location. *(¶0006)* This switching model is applied to different access points such as

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websites. (*Id.*) Consequently, it would have been obvious to one of ordinary skill in the art (e.g. a database engineer) to detect the context (i.e. workspace) of the user in the device of **Hess** via the context aware switching model of **Maritzen** to dynamically update the stored metadata associated with the data when the user employs an application or uses data in a 2nd workspace for the advantage of removing the need of users to manually transfer files when they move between spaces.

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Conduct of this Merged Proceeding

44. Claims:

The same claims must be maintained in both proceedings. The claims are identical in both proceedings. Patent Owner is required to maintain the same claims (and specification) in both files throughout the merged proceeding.

45. Governing Regulations for the merged proceeding:

Pursuant to CFR 1.989(b), the merged proceeding is governed by 37 CFR 1.902 through 1.997, except that that the rights of EP-3PR are governed by 37 CFR 1.510 through 1.560.

46. Papers mailed/filed:

All papers mailed by the Office throughout the merged proceeding will take the form of a single action which applies to both proceedings. All papers issued by the Office, or filed by the Patent Owner and the IP-3PR, will contain the identifying data for both files and will be physically entered in each reexamination file. All papers filed by the Patent Owner and the IP-3PR must consist of a single paper, filed in duplicate, each bearing a signature and identifying data for both files, for entry into each file.

All papers filed by the Patent Owner and Third Party Requesters should be directed:

By Mail to: Mail Stop Inter Partes Reexam
Attn: Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By Hand: Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

By EFS: Registered users of EFS-Web may alternatively submit such correspondence via the electronic filing system EFS-Web, at:

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<https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html>

EFS-Web offers the benefit of quick submission to the particular area of the Office that needs to act on the correspondence. Also, EFS-Web submissions are "soft scanned" (i.e., electronically uploaded) directly into the official file for the reexamination proceeding, which offers parties the opportunity to review the content of their submissions after the "soft scanning" process is complete.

47. Amendments:

The filing of any amendments to the drawings, specification or claims must comply with 37 CFR 1.943, which incorporates the provisions of 37 CFR 1.530, and the guidelines of MPEP § 2666.01, which in turn references the guidelines of MPEP § 2250.

37 CFR 1.121 does not apply to amendments in reexamination. Accordingly, clean copies of the amended claims are not required and are not to be submitted; rather amendments are to be presented via markings pursuant to paragraph 37 CFR 1.530(0, except that a claim should be canceled by a statement canceling the claim, without presentation of the text of the claim.

Pursuant to 37 CFR 1.530(i), all amendments must be made relative to the patent specification, including the claims, and drawings, which are in effect as of the date of filing the request for reexamination. Amendments are not to be made relative to previous amendments. Thus, for all amendments, all words not appearing in the patent are always underlined, and only words being deleted from the patent appear in brackets.

48. Fees:

Where a paper is filed that requires payment of a fee (e.g., petition fee, excess claims fee, extension of time fee, appeal fee, brief fee, oral hearing fee), only a single fee need be paid. For example, only one fee need be paid for any patent owner's appellant brief (or that of the inter partes reexamination requester) which may be filed, even though the brief relates to merged multiple proceedings, and copies must be filed (as pointed out above) for each file in the merged proceeding.

49. Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

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Signed:

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EXHIBIT 34



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VIA MESSENGER

November 20, 2009

James Hannah, Esq.
King & Spalding, LLP
333 Twin Dolphin Drive
Suite 400
Redwood Shores, CA 94065

RE: Leader Technologies, Inc. v. Facebook, Inc.

Dear James:

Enclosed please find Facebook's production of documents bearing Bates numbers FB00119614 - FB00128932, contained on two CDs.

Also enclosed please find a CD containing documents bearing Bates numbers AUT0001815 - AUT0053887, which were received from Autonomy, Inc. in response to Facebook's subpoena. Please be advised that per non-party Autonomy's request, the documents Bates numbered AUT0001815 - AUT0053887 are to be treated as CONFIDENTIAL under the Stipulated Protective Order.

Additionally, Facebook has made available for Leader's review documents containing Source Code or the substance thereof. Pursuant to the Stipulated Protective Order, these documents are available for review in our offices upon reasonable notice.

Finally, Facebook will serve its responses to LTI's Fifth Set of Interrogatories, Fourth Set of Requests for Production and Third Set of Requests for Admission, as well as Facebook's supplemental interrogatory responses, via email by the end of the day.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa H. Keyes". The signature is fluid and cursive, with the first name being the most prominent.

Melissa H. Keyes

cc: Philip A. Rovner, Esq. (via U.S. Mail; without enclosures)

805909 v1/PA

EXHIBIT 33

**THIS EXHIBIT HAS BEEN
REDACTED IN ITS ENTIRETY**