

Exhibit B

Deposition of Bryan J. Rose, Facebook Forensic Expert, *Paul D. Ceglia v. Mark E. Zuckerberg*,
1:10-cv-00569-RJA (W.D.N.Y. 2010), Jul. 18, 2012.

1
2 UNITED STATES DISTRICT COURT
3 WESTERN DISTRICT OF NEW YORK
4 No. 1:10-cv-00569-RJA

5 -----x
6 PAUL D. CEGLIA,

7
8 Plaintiff,

9
10 vs.

11 MARK ELLIOT ZUCKERBERG,
12 Individually, and
13 FACEBOOK, INC.,

14
15 Defendants.

16 -----x

17
18 July 18, 2012
19 10:09 a.m.

20 Videotaped deposition of BRYAN J.
21 ROSE, held at the offices of Gibson, Dunn
22 & Crutcher LLP, 200 Park Avenue, New York,
23 New York, pursuant to notice, before Cary
24 N. Bigelow, Court Reporter, a Notary Public
25 of the State of New York.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

A P P E A R A N C E S:

BOLAND LEGAL, LLC
Attorneys for Plaintiff
1475 Warren Road
Unit 770724
Lakewood, Ohio 44107
BY: DEAN BOLAND, ESQ.

GIBSON, DUNN & CRUTCHER LLP
Attorneys for Defendants
200 Park Avenue
New York, New York 10166-0193
BY: ALEXANDER H. SOUTHWELL, ESQ.
THOMAS H. DUPREE JR., ESQ.
MATTHEW BENJAMIN, ESQ.
AMANDA AYCOCK, ESQ.

ALSO PRESENT:
VILAN TRUB, Videographer

1
2 MR. SOUTHWELL: This is Alexander
3 Southwell for the defendants along with
4 Matthew Benjamin and Tom Dupree and Amanda
5 Aycock.

6 MR. BOLAND: I'm Dean Boland for the
7 plaintiff, Paul Ceglia.

8 MR. ROSE: And I am Bryan Rose from
9 Stroz Friedberg.

10 THE VIDEOGRAPHER: This is tape 1.

11 (The witness was sworn in.)

12 MR. SOUTHWELL: Mr. Boland, before we
13 begin, I just want to put on the record our
14 objection to this videographer. We reserve
15 the right to object to the admissibility of
16 this videotaped deposition. The
17 videographer is not a certified legal
18 videographer, he doesn't appear, as I asked
19 him previously, to have any familiarity or
20 training in the Federal Rules of Civil
21 Procedure, the Federal Rules of Evidence,
22 the New York C.P.L.R., he has not used the
23 required statutory language to begin a video
24 deposition and he clearly is not following
25 any of the best practices set out by the

1
2 videographer associations, so obviously it's
3 your choice in what you want to do, but we
4 reserve the right to object to the
5 admissibility of this video deposition.

6 I don't know if you have something else
7 in mind with respect to the videoing of the
8 deposition, like are you planning to post
9 them on YouTube like you've done in other
10 cases.

11 MR. BOLAND: I just have plans for him
12 to videotape it, that's all; that's it so
13 far.

14 MR. SOUTHWELL: So you are not planning
15 to post that on YouTube?

16 MR. BOLAND: Not today.

17 MR. SOUTHWELL: Tomorrow?

18 MR. BOLAND: I have no plans for
19 tomorrow to post anything on YouTube.

20 MR. SOUTHWELL: At any point in the
21 future?

22 MR. BOLAND: I have no current plans to
23 post anything on YouTube.

24 MR. SOUTHWELL: Or otherwise make them
25 publicly available?

1

2

MR. BOLAND: I have no plans to do
that, no.

4

MR. SOUTHWELL: Okay.

5

6

MR. BOLAND: Can you just mark that
Exhibit 1, please, using a copy of this as
the report.

8

Or do you have one?

9

10

MR. SOUTHWELL: We have got our copy,
but we will hold on to it right now.

11

12

13

14

15

MR. BOLAND: I will also probably end
up using some of these exhibits tomorrow
again, I'll just use the same ones instead
of duplicating them all over again, giving
us multiple copies of the same thing.

16

17

MR. SOUTHWELL: Just to be clear, you
are using the filed version?

18

19

20

MR. BOLAND: I believe so. It has the
file stamp at the top. I don't have another
version.

21

22

23

MR. SOUTHWELL: Well, you have the
unredacted version which was provided to
you.

24

25

MR. BOLAND: Oh, yes, correct. No, I'm
just using the filed version.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(Exhibit 1, Stroz Friedberg report dated March 26, 2012, marked for identification, as of this date.)

B R Y A N J. R O S E, called as a witness, having been duly sworn by a Notary Public, was examined and testified as follows:

EXAMINATION BY

MR. BOLAND:

Q. Good morning, Mr. Rose.

A. Good morning.

Q. Before we get started here, did you have a conversation with any of the defense counsel before your testimony today in preparation for your testimony today?

A. I did.

Q. And when was that conversation, the most recent one?

A. The most recent one, we had a brief conversation this morning and then we had a meeting yesterday.

Q. And in that conversation did defense counsel alert you to some of the unique rules that the judge in this case has for people sitting for deposition?

1 B. Rose

2 A. What rules are you referring to?

3 Q. Well, let me just go over them.

4 The judge in this case has indicated
5 that anyone being deposed, if they are confused
6 about a question, should direct a request for
7 clarification to the person asking the question,
8 not the lawyers for, you know, the side that you
9 are on.

10 A. Okay.

11 Q. And that also, when we take breaks
12 during the deposition that the witness being
13 deposed can't have any conversations with the
14 lawyers from their side of the case about the
15 deposition.

16 A. I was made aware of that rule, yes.

17 Q. Those are the rules I'm talking about.

18 A. Yes.

19 Q. So I'm going to assume when I ask you
20 questions today that if you answer that question
21 you understood what I was asking, and if you
22 don't understand it -- well, is that a fair
23 approach?

24 A. That's a fair approach, and if I don't
25 understand your question I will ask for

1 B. Rose

2 clarification.

3 Q. Very good.

4 Can you look at what's been handed to
5 you and marked as Rose Exhibit 1 and just
6 identify that for the record.

7 A. This looks like a filed redacted copy
8 of Stroz Friedberg's report dated March 26, 2012.

9 Q. And you signed that report?

10 A. I did.

11 Q. And one other person signed the report
12 as well?

13 A. That's correct, Mike McGowan from Stroz
14 Friedberg also signed the report.

15 Q. And is all of the information you
16 relied on in preparing that report listed in the
17 report?

18 A. Yes.

19 Q. And is your CV that's listed in the
20 report current as of today or are there some new
21 additions that might be on a current version?

22 A. There would be some additional, at
23 least one additional speaking engagement, I
24 believe, but generally it's current.

25 Q. Is there any other training that you've

1 B. Rose

2 received since that CV was produced as part of
3 Exhibit 1 there?

4 A. No.

5 Q. In your preparation for today's
6 deposition were you provided transcripts of any
7 other witnesses' depositions in this case?

8 A. No.

9 Q. Did you discuss the testimony of
10 Mr. Broom with the defense counsel?

11 A. No.

12 Q. Did you discuss the testimony of
13 Mr. Grant with defense counsel?

14 A. No.

15 Q. Can you tell the Court how you were
16 paid for your work in preparing Exhibit 1?

17 A. Stroz Friedberg is compensated on an
18 hourly basis.

19 Q. And do you know what that rate was that
20 was charged to defense counsel for the
21 preparation of that report?

22 A. The rate would vary depending on the
23 person working on the report, so my current
24 billable rate is 650 an hour; Eric Friedberg, who
25 contributed to the report, would be, I believe,

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Rose

950 an hour, and then Mike McGowan and Jason Novak, who are two of our digital forensic examiners who contributed significantly to the report, would be -- I'm not sure of their exact current rates, but they'd be somewhere in the range of 400 to 500 dollars an hour.

Q. And do you know the total that was paid to Stroz Friedberg by the defendants for the production, for all the work involved in the production of that report?

A. I do not.

Q. Do you know who at Stroz Friedberg would have the answer to that question?

A. I think the -- I'm not sure anyone would have the answer to that question immediately at hand, you could certainly reconstruct it from a look at the invoices.

Q. And when was the last time you read Exhibit 1, the report that you produced in this case?

A. Last night.

Q. Did you read the entire report last night?

A. I did.

1 B. Rose

2 Q. And do you agree with all the
3 conclusions in the report as of that last reading?

4 A. I do.

5 Q. And can you describe for the Court --
6 let me ask you this question: Were you involved
7 in every page of that, the preparation of every
8 page of that report or just portions?

9 You mentioned there were several people
10 involved.

11 Did you have a division of labor in
12 producing that report?

13 A. It was a collaborative drafting
14 exercise so, you know, at some point in the
15 process I would have, yes, would have read,
16 reviewed and contributed to every section of the
17 report.

18 Q. So are there any portions of the report
19 that you would feel uncomfortable answering
20 questions about based on that division of labor
21 that you had?

22 A. No.

23 Q. Okay.

24 Is there any section of the report that
25 you would identify yourself as sort of the

1 B. Rose

2 primary investigator for?

3 A. No.

4 Q. Did anyone -- there were two people
5 whose CVs are included with the report; right?

6 A. I believe there are four CVs included
7 in the report.

8 Q. You're right.

9 There's two people who didn't sign the
10 report, but their CVs are attached to the report?

11 A. That's correct.

12 Q. And how would you describe the work
13 they did in preparing the report, the folks who
14 didn't sign it, the two of them?

15 A. Eric Friedberg is the co-president of
16 Stroz Friedberg, he was involved in overall
17 supervision and certainly read drafts of the
18 report and contributed editorial comments and
19 provided overall supervision.

20 Jason Novak, whose CV was also attached,
21 was one of the forensic examiners and he would
22 have assisted in the actual analysis of the
23 Ceglia media.

24 Q. So did Mr. Friedberg actually do any
25 analysis, get behind a computer and operate

1 B. Rose

2 software to do analysis?

3 A. No, neither Mr. Friedberg nor myself
4 would have done any actual analysis.

5 Q. So what role did you do, then, if you
6 didn't do actual analysis?

7 A. So I am responsible for supervising the
8 work of Mike McGowan and Jason Novak, discussing
9 overall strategy with them, reviewing the results
10 of their work and drafting the report.

11 Q. And you and Mr. McGowan signed the
12 report?

13 A. Correct.

14 Q. And the other two, Mr. Friedberg and
15 Mr. Novak, did not?

16 A. Correct.

17 Q. What's the reason that Mr. Novak, who
18 did some analysis in this case, did not sign the
19 report?

20 A. The decision was made that two
21 signatories were sufficient, so it was determined
22 that I would sign the report along with
23 Mr. McGowan.

24 Q. Is that the practice of Stroz Friedberg
25 to have individuals who do analysis in cases not

1 B. Rose

2 sign reports?

3 A. I don't think that's the practice of
4 Stroz Friedberg. It's certainly possible that
5 when issuing a report not every person who
6 contributed to the report would be a signatory.

7 Q. Now, you are not a certified document
8 examiner, paper document, I'm talking about?

9 A. I am not.

10 Q. Did you review the paper contract in
11 this case, the two-page paper contract?

12 A. I've seen it.

13 Q. How do you mean seen it, an actual --

14 A. I have seen copies, I don't think I've
15 seen the original.

16 Q. Did that factor in any part of your
17 analysis or your conclusions in the report,
18 Exhibit 1?

19 A. No.

20 Q. Now, would you agree with me that the
21 existence of that paper contract, which you've
22 seen copies of, proves that the StreetFax
23 contract that's talked about in your report is
24 not genuine?

25 MR. SOUTHWELL: I am just going to

1 B. Rose

2 object to the form.

3 Can you specify what you mean by the
4 paper contract, try to be a little more
5 specific about what you are referring to?

6 MR. BOLAND: Sure.

7 Q. Are you aware that a two-page document
8 is being offered by my client as an authentic --
9 a two-page paper document is being offered as an
10 authentic contract between him and Mark
11 Zuckerberg?

12 A. I am.

13 Q. And are you aware that that two-page
14 paper document was evaluated by a bunch of paper
15 document experts in about July of 2011?

16 MR. SOUTHWELL: You mean the original
17 of it?

18 MR. BOLAND: Yes.

19 Q. The two-page document was evaluated
20 in July 2011.

21 A. I'm aware that there was paper analysis
22 done in the case.

23 Q. Okay.

24 So when I'm referring to what I am
25 calling the Facebook contract I'm talking about

1 B. Rose

2 that two-page paper document that Mr. Ceglia has
3 attached a copy of to an amended complaint and
4 his claim obviously rests on that being an
5 authentic contract between him and Mr. Zuckerberg,
6 okay, that's what I am talking about.

7 A. Okay.

8 MR. SOUTHWELL: Just to be clear, I
9 don't think this witness has seen the actual
10 original document that's been proffered, so
11 you may want to be clear in your questions.

12 MR. BOLAND: Fair enough.

13 Q. So you haven't seen the original --

14 A. I have not.

15 Q. -- but you've seen copies of that
16 document?

17 A. Yes.

18 Q. Fair enough.

19 But you're aware that the original
20 exists?

21 A. I have not seen it. I understand some
22 analysis has been done of it, so I have no reason
23 to think it doesn't exist, yes.

24 Q. Did you read any other expert reports
25 in this case that the plaintiffs have submitted?

1 B. Rose

2 A. I read some of the paper analysis but
3 not the entire report.

4 Q. Which report are you referring to?

5 A. I don't recall.

6 Q. Would you agree with me the existence
7 of that two-page paper contract, the one we just
8 referred to, which you read some analysis of,
9 proves that the StreetFax contract that you
10 identified in Exhibit 1 can't be genuine?

11 A. I would not agree with that. I
12 wouldn't begin to speculate on the paper analysis.

13 Q. Well, assume for a second a
14 hypothetical for me. Assume that somewhere down
15 the line, tomorrow or the next day, the two-page
16 paper contract that we're talking about is
17 determined by the Court in this case or a jury to
18 be an authentic contract between Mark Zuckerberg
19 and Paul Ceglia, let's assume that.

20 Would you agree with me, then, if
21 that's determined to be an authentic contract
22 between those two parties, that the StreetFax
23 contract as you identified in Exhibit 1 has to be
24 not genuine?

25 MR. SOUTHWELL: Object to the form.

1 B. Rose

2 Q. Would you agree with that?

3 A. Mr. Boland, my expertise is in digital
4 forensics. I think clearly based on the digital
5 forensics we've conducted that the StreetFax
6 contract is the genuine contract in this case and
7 the Work For Hire contract offered by your client
8 is a fraud. Beyond that, you know, I wouldn't
9 speculate on what the paper analysis itself
10 would show.

11 Q. All right. Well, let's try this
12 hypothetical.

13 Let's say that Mark Zuckerberg is
14 deposed in this case at some point and concedes
15 that the two-page written contract that we're
16 talking about, the Facebook contract, is
17 authentic.

18 Would you then agree that the StreetFax
19 contract that's in your report must not be
20 genuine?

21 MR. SOUTHWELL: Object to the form.

22 A. I would think if Mr. Zuckerberg in a
23 deposition testified that the Work For Hire
24 contract was an authentic contract, I would think
25 that would mean that the Work For Hire contract

1 B. Rose

2 was an authentic contract.

3 Beyond that I think that's what it
4 means, exactly what you say it means, which is
5 that if Mr. Zuckerberg says that that is an
6 authentic contract then that is an authentic
7 contract. I don't necessarily think that would
8 affect my analysis of the StreetFax contract
9 itself as found on the digital forensics side.

10 Q. Well, let's talk about that.

11 You know there's a conclusion in your
12 report, Exhibit 1, that the StreetFax contract is
13 the authentic contract between the parties;
14 correct?

15 A. Correct.

16 Q. How did you arrive at -- let me back
17 up.

18 You are not an expert in digital image
19 analysis; correct? You are not certified or
20 qualified as an expert to analyze digital images
21 to determine if there are authentic or not?

22 A. What is digital image analysis, what do
23 you mean by that?

24 Q. I mean any electronic file that is in a
25 digital format like TIFF, JPEG, GIF, have you

1 B. Rose

2 ever been qualified in court to give an opinion
3 as to whether an image of that format is in fact
4 authentic or altered or a copy or an original,
5 things like this?

6 A. No.

7 Q. Do you have any training, classes
8 you've gone to, about how to evaluate digital
9 images to determine if they've been altered?

10 A. No.

11 Q. So it would be fair to say, then, that
12 the StreetFax contract as you identify it in
13 Exhibit 1 is comprised of two TIFF images?

14 A. Correct.

15 Q. It's not paper we're talking about;
16 right?

17 A. That's correct, it's an electronic file.

18 Q. And your analysis didn't find any paper
19 predecessor to that, those TIFF images; correct?

20 A. We were dealing with electronic media,
21 so, yes, that's correct.

22 Q. Okay.

23 And a TIFF image is a digital image,
24 you would agree with me?

25 A. Correct.

1 B. Rose

2 Q. As opposed to a Word document, which is
3 not really typically called by folks in your
4 industry as a digital image?

5 A. That's correct.

6 Q. Okay.

7 So let's talk about that digital image
8 that is the two TIFF images.

9 Who found those two TIFF images, by
10 the way?

11 MR. SOUTHWELL: Can you just clarify
12 what you mean by found?

13 MR. BOLAND: Well, I will ask him if he
14 doesn't understand.

15 MR. SOUTHWELL: Object to the form.

16 MR. BOLAND: Okay.

17 Q. Who was the person who first said to
18 anyone on your team there are two TIFF images
19 which appear to be a contract between the parties
20 that I've just located on some media? Someone
21 must have first said that.

22 A. I was informed of the discovery of the
23 TIFF images by Mike McGowan.

24 Q. Do you know if he is the one who
25 discovered them?

1 B. Rose

2 A. I believe he was.

3 Q. Okay.

4 Is he a digital image expert in the way
5 we defined it earlier in your testimony, do you
6 know?

7 A. I don't know.

8 Q. How long has he worked for Stroz
9 Friedberg?

10 A. Mike McGowan has worked -- he's been
11 there before I got there, I would say he's worked
12 there approximately 10 years.

13 Q. How long have you worked there?

14 A. In November it will be seven years.

15 Q. And you don't know if he is a digital
16 image expert, as you sit here today?

17 A. He's a digital forensic expert.

18 I mean, in terms of digital image
19 expert, Mike has been qualified in many courts to
20 offer testimony on the authenticity of electronic
21 documents, including image files, so whether he's
22 a document image expert, I think that term you're
23 using a little loosely, I'm not sure exactly what
24 that means in that context.

25 Q. Do you know if either one of these two

1 B. Rose

2 TIFF images that we're talking about that
3 comprise the StreetFax contract are original
4 images or copies?

5 A. I don't understand that question.

6 Q. Do you use a digital camera personally?

7 A. Yes, occasionally.

8 Q. Okay.

9 When you capture a picture with your
10 digital camera, I'm calling that an original, you
11 just hit the shutter button and the picture is
12 captured, it's on the card in the camera, that's
13 an original, okay, that's the definition I'm
14 using.

15 A. Okay.

16 Q. Have you ever captured digital images
17 like that and put them on a computer?

18 A. Yes.

19 Q. Now, once they're on a computer, for
20 example, pictures can have problems like red eye.

21 Are you familiar with that?

22 A. Yes.

23 Q. And are you aware that there's photo-
24 editing tools which allow you to correct red eye
25 in images?

1 B. Rose

2 A. Yes.

3 Q. What I'm calling an original would be
4 the picture as you captured it and would you
5 agree with me that if you went in and fixed a
6 red-eye defect in that image that's no longer an
7 original, it's been altered?

8 A. You've changed it, yes.

9 Q. You've changed it, right, not
10 significantly, but you've changed it.

11 So what I'm asking you about is these
12 TIFF images that are the StreetFax contract, is
13 it your opinion that those are originals or have
14 they -- were they altered before they landed
15 where they were found on the media where you
16 found them?

17 A. I think what we know from the digital
18 forensics is that they were created on the hard
19 drive and then e-mailed out within minutes, so I
20 think from the time they were created on the
21 computer there would not have been time to alter
22 them before sending them out.

23 Q. Fair enough.

24 How about before -- when you say
25 created on a hard drive, it's true that files can

1 B. Rose

2 be created on a hard drive in many ways; right?

3 A. True.

4 Q. They can come from a floppy disk years
5 ago; correct?

6 A. Sure.

7 Q. They can be copied off of a CD?

8 A. They can be, yes.

9 Q. Copied off of a USB device?

10 A. Correct.

11 Q. Copied from another hard drive to that
12 hard drive?

13 A. Correct.

14 Q. They could be downloaded from the
15 Internet?

16 A. Correct.

17 Q. How did those TIFF files get created on
18 that hard drive? Your report doesn't say.

19 Which one of those methods was the
20 method that created them on that hard drive?

21 A. They appear to be scans that we believe
22 were then copied to the hard drive, but that's
23 the extent of what we can determine from the
24 digital forensic evidence that's available.

25 Q. So you don't know if they were copied

1 B. Rose

2 from any of those various methods I just went
3 through in the previous question?

4 A. There is no digital forensic evidence
5 as to where they were copied from.

6 Q. So I understand your answer that when
7 they landed on the hard drive, from that point to
8 when you say they were e-mailed there wasn't
9 enough time really to alter them, I understand
10 what you're saying there.

11 That's your testimony; correct?

12 A. Correct.

13 Q. I'm asking you, before they landed on
14 that hard drive were they altered prior to that
15 time?

16 A. I wouldn't be able to speculate on
17 that.

18 Q. Do you know?

19 A. I don't know one way or the other.

20 Q. Now, did you read Mr. Broom's report,
21 the forensic expert for the plaintiffs?

22 A. Some time ago, yes.

23 Q. Do you recall a section of his report
24 where he talked about the physical size of the
25 two TIFF images that you found?

1 B. Rose

2 A. I do not.

3 Q. Do you know what the physical size is
4 of those two TIFF images?

5 A. I do not.

6 Q. You did mention in your report that the
7 resolution of those images was poor, you'd agree
8 with me?

9 A. I would, yes.

10 Q. And can you go to the page -- I'm going
11 to find it in a moment -- of your report where
12 you actually have a graphic of the TIFF images
13 printed in there?

14 I'm going to go look for the page
15 number, I'm going to make it quick, but if you
16 can just leaf through I think it will stand out.

17 It's page 90 of 102 I think is where I
18 am --

19 A. You are referring to the top-level
20 numbering?

21 Q. Yes, I am. That's a little confusing
22 for all of this, you're right.

23 Yes, page 90 of 102, it's the first
24 page of Exhibit H.

25 Do you see that document?

1 B. Rose

2 A. I do.

3 Q. Okay.

4 Does that appear to be or -- what is
5 it? Can you describe for the Court what that is
6 that you put into your report?

7 A. That appears to be the StreetFax
8 contract discovered on the Ceglia media.

9 Q. Is that both pages or just one page?

10 A. It's just the first page.

11 Q. And can you read that first page of
12 that contract, please.

13 A. I can't based on this, no.

14 Q. Why can't you read it?

15 A. It's a low-quality resolution and it's
16 too small.

17 Q. Can you read any words on that contract
18 based on the size that it appeared on the media
19 where you found it?

20 MR. SOUTHWELL: Objection. There's no
21 evidence that that's the size that he found
22 it. In fact, my version of that has it much
23 larger, so I'm not sure the version you've
24 handed the witness, it's very small and I am
25 not sure if that's a production issue in

1 B. Rose

2 terms of the copying.

3 MR. BOLAND: I can ask him.

4 Q. When you produced your report for
5 filing is the size that you are looking at on
6 page 90 of 102, was that the size that document
7 was produced in the report?

8 A. I did not produce this exhibit, so I
9 don't know.

10 Q. But you reviewed the report before it
11 was filed?

12 A. I did.

13 Q. Do you remember the size of that
14 exhibit?

15 A. I don't.

16 Q. Do you have any reason to doubt that
17 that's the size of the exhibit as you produced it
18 in the report that was filed?

19 A. I don't know one way or the other,
20 Mr. Boland.

21 Q. Very well.

22 Can you read -- and the size that that
23 is, which I understand Mr. Southwell is disputing
24 whether that's actually the size it was when it
25 was filed, I understand that, but the size that

1 B. Rose

2 that actually appears there, is that legible, is
3 any part of that legible?

4 A. Parts of it.

5 Q. So can you read the parts and describe
6 where you're reading from for the Court?

7 A. I can read the title, which says
8 StreetFax; I can read section 1, which says
9 general provisions; I can read certain headings
10 such as payment terms; that's essentially what's
11 legible based on this copy which you've handed me.

12 Q. And is page 2 of the TIFF -- do you
13 recall if page 2 of these two TIFF images was
14 placed into the report that you filed as an
15 exhibit itself?

16 A. I do not recall.

17 Q. And there's no other electronic
18 evidence that you reviewed, or is there
19 electronic evidence you reviewed before issuing
20 this report that is not listed in the report?

21 A. No.

22 Q. Is there any electronic evidence that
23 you reviewed -- you know, let me back up that
24 previous question. I used the phrase that you
25 reviewed.

1 B. Rose

2 Let me ask you, if you know, is there
3 any other electronic evidence that any of the
4 four people involved in this report reviewed
5 before issuing the report but it's not listed in
6 the report?

7 MR. SOUTHWELL: Objection to form.

8 I'm not sure what the --

9 Q. Let me break it down.

10 A. Sure.

11 Q. You supervised the people who
12 contributed to this report; correct?

13 A. Correct.

14 Q. Okay.

15 So that's Mr. Novak and Mr. McGowan,
16 you supervised them?

17 A. Correct.

18 Q. And I'm asking you if you know whether
19 those two individuals or you reviewed or analyzed
20 electronic evidence before you issued this report
21 but didn't list that evidence that you analyzed
22 in the report.

23 MR. SOUTHWELL: Are you talking about
24 any electronic evidence in the world?

25 MR. BOLAND: Related to this case.

1 B. Rose

2 MR. SOUTHWELL: Related to the report?

3 MR. BOLAND: Related to this case.

4 Q. Did you analyze any electronic evidence
5 related to this case before you issued the report
6 but didn't list that evidence that you reviewed
7 in the report?

8 A. Yes.

9 Q. Could you list what that is now,
10 please?

11 A. So we reviewed copies of Mark
12 Zuckerberg's Harvard e-mail, which I don't
13 believe is covered in the report; we also --
14 there was also a review conducted of certain
15 assets belonging to Mark Zuckerberg.

16 Q. Can you describe those, please.

17 A. They were various computers and other
18 hard drives that belonged to a computer or
19 computers that Mr. Zuckerberg had used
20 historically.

21 Q. When did he use those various other --
22 do you have a better description of those various
23 other? How many computers are we talking about
24 in that last answer you gave?

25 A. I don't know exactly. It was, I would

1 B. Rose

2 say, somewhere in the neighborhood of 15 to 20,
3 roughly.

4 Q. Who would know the exact answer of how
5 many computers of Mark Zuckerberg's that he
6 historically used that your team analyzed before
7 issuing the report?

8 A. Well, I would think it's possible Mike
9 McGowan would know the exact number from his
10 recollection, but as to who could tell you based
11 on recall, we certainly have an inventory of
12 those assets.

13 Q. You do have an inventory?

14 A. Yes, I do.

15 MR. BOLAND: Mr. Southwell, I will ask
16 you to produce that inventory of those
17 assets that were reviewed.

18 MR. SOUTHWELL: And your basis for that
19 request is what?

20 MR. BOLAND: It's part of the work he
21 did and --

22 MR. SOUTHWELL: It's not related to the
23 Court-ordered expedited discovery in the
24 report.

25 Q. Let's talk about those computers you

1 B. Rose

2 evaluated.

3 Why did you evaluate those 15 to 20
4 computers?

5 A. To look for evidence of the
6 authenticity or inauthenticity of the Work For
7 Hire contract.

8 Q. And do you know who did the analysis of
9 those 15 or 20 computers on your team?

10 A. I do not.

11 Q. And are there notes or any
12 documentation of what was found during the
13 analysis of those 15 or 20 computers?

14 A. There was nothing found.

15 Q. That's not my question.

16 Are there notes or documents of what
17 was found, what they --

18 A. Notes and documents of what was found?

19 Your question is what was found. I'm
20 telling you nothing was found.

21 In terms of whether there are notes or
22 documents about the analysis itself, I don't know
23 one way or the other.

24 Q. Would there typically be notes when a
25 computer expert evaluates a piece of media as to

1 B. Rose

2 how they approach that evaluation, for example,
3 search terms they might have used?

4 A. Typically.

5 Q. And software tools they might have used
6 to carve out data, would an analyst in your
7 company typically list the steps they went
8 through analyzing a piece of media?

9 A. Typically.

10 Q. And do you know if those records were
11 kept related to these 15 or 20 computers?

12 A. I don't know one way or the other.

13 Q. And why was the result -- were the
14 results of the analysis, specifically those 15 or
15 20 computers, not discussed in this report?

16 A. This report is based on the expedited
17 discovery ordered by the Court which covered the
18 Ceglia media and various other information
19 contained pursuant to subpoenas such as the
20 e-mails from Sidley & Austin, that's the focus of
21 this report is expedited discovery, so we limited
22 our report to that.

23 The assets themselves were not part of
24 that, were not part of that, were not part of
25 that expedited discovery, so they are not

1 B. Rose

2 included in the report.

3 Q. Why did you bother to evaluate them if
4 they are not part of expedited discovery?

5 A. We evaluated them well before expedited
6 discovery even started.

7 Q. Why?

8 A. Why?

9 Again, because we're looking for
10 evidence of the authenticity or inauthenticity
11 of the contract.

12 Q. And would you agree with me that the
13 Court-ordered expedited discovery is limited to
14 determining the authenticity or inauthenticity of
15 the contract?

16 A. I think the expedited discovery's very
17 clear that we are not to evaluate the authenticity or
18 inauthenticity of the contract based on our
19 analysis of the Ceglia media.

20 Q. I'm just asking you do you agree that
21 the court order, multiple court orders have
22 focused on determining the authenticity or the
23 inauthenticity of the contract.

24 A. Yes.

25 Q. Okay.

1 B. Rose

2 And you just stated that's one of the
3 things, the reasons why you looked at these 15 or
4 20 computers; correct?

5 A. I mean, that -- I think that underlies
6 all of the work in this case, I mean, that is the
7 central issue.

8 Q. And approximately what time did that --
9 what date did that analysis of those 15 or 20
10 computers take place?

11 A. I don't know. That was before my
12 involvement in the case.

13 Q. But you supervised the team members who
14 do it?

15 A. I did not supervise that portion, no.

16 Q. Who supervised that portion?

17 A. I don't know.

18 Q. And that analysis that we're talking
19 about, was that done on original media or
20 forensic copies of original media?

21 A. It would have been done -- I don't know
22 the answer to that question, I would speculate.

23 Q. Would it be practice of Stroz Friedberg
24 typically to not do analysis on original media
25 but to make a forensic image or forensic copy

1 B. Rose

2 first and analyze that?

3 A. In most circumstances you would prefer
4 to work off a copy, yes, that's correct.

5 Q. And do you know if that was the
6 circumstance for these 15 or 20 computers?

7 A. I've already said I don't.

8 Q. Do you know if -- okay.

9 Do you know where those 15 or 20
10 computers, whether they are originals or forensic
11 images, where they are at today?

12 A. I do not.

13 Q. Could they be in your locked, secured
14 facility at your offices? Is that possible?

15 A. I do not believe we've maintained
16 copies of those, no.

17 Q. Did you discuss the results of that
18 evaluation or analysis with defense counsel?

19 A. We did.

20 Q. And when was that discussion?

21 A. I don't know.

22 Q. Do you know who was present for that
23 discussion?

24 A. I don't know. There was one discussion
25 and no, I don't know who was present.

1 B. Rose

2 Q. But you were there?

3 A. Was I personally there?

4 Q. Or on the phone, whichever.

5 A. I don't recall being there, no.

6 Q. And you don't know who from Stroz
7 Friedberg was there?

8 MR. SOUTHWELL: Objection, asked and
9 answered.

10 A. I don't.

11 Q. Do you know which defense counsel were
12 there?

13 A. I don't.

14 Q. Okay.

15 Were any reports given to the
16 defendants regarding media that was analyzed but
17 is not listed in the report?

18 MR. SOUTHWELL: Objection.

19 What are you asking? I just want to
20 make sure you are not getting into
21 privileged areas.

22 Q. Did you provide a report?

23 I'm not asking what the report says.

24 Did you provide a report to the
25 defendants regarding the analysis of those 15 or

1 B. Rose

2 20 computers?

3 MR. SOUTHWELL: Can you just specify
4 what you mean by report?

5 Q. Anything from an e-mail to a formal
6 report like as in Exhibit 1, any communication
7 whatsoever regarding the results of that
8 analysis, did you report that to the defendants?

9 A. I don't know.

10 Q. Would there be records at the office
11 that would reflect that if it happened?

12 A. Yes.

13 Q. And who would be the person at Stroz
14 Friedberg who would know where those records are?

15 A. It would be whoever made the report.

16 Q. Now, is there any other electronic
17 evidence that you or your team reviewed after
18 issuing the report that's Exhibit 1?

19 A. Related to this case?

20 Q. Yes.

21 A. No.

22 Q. Did you or anyone -- well, first of
23 all, people from Stroz Friedberg have written
24 various articles in professional publications
25 about computer forensics; fair to say?

1 B. Rose

2 A. That's fair to say, yes.

3 Q. Have you written articles that have
4 been published in computer forensics publications?

5 A. No.

6 Q. Okay.

7 Would you agree with this general
8 statement that it's important for a computer
9 forensics expert to review all the available
10 evidence before producing a report?

11 A. I would agree that it's important for a
12 digital forensic expert to have examined all of
13 the relevant data and certainly, you know, you
14 are sometimes dealing with accessibility issues
15 here, so I think there are times when, you know,
16 I don't know what available means, there are
17 certainly things which might, you know, if you
18 move mountains, be available, but are not
19 certainly worth it in every case, but as a
20 general matter all of the reasonably accessible
21 data should be reviewed.

22 Q. And early on in -- well, I don't know
23 if it was early on, I shouldn't say that, but
24 your team at least twice either obtained or
25 received copies of Mr. Zuckerberg's Harvard

1 B. Rose

2 e-mail account; fair to say?

3 A. We have at various times either
4 collected or received copies of Mr. Zuckerberg's
5 Harvard e-mail account, yes.

6 Q. And the record reflects at least two
7 times that occurred; true?

8 A. Yes.

9 Q. Are there more than two?

10 A. I believe that we received three
11 separate deliveries, so -- and let me just go
12 through them so I can be clear.

13 We collected Mr. Zuckerberg's Harvard
14 e-mail on April 15th of 2011. We also received a
15 copy of Mr. Zuckerberg's e-mail from Harvard that
16 was made in or that was from October of 2010, I
17 believe that was the second delivery received,
18 and then we received a third delivery from
19 Harvard which included a November 2003 copy of
20 his data, a February 12, 2012 copy of his data,
21 and an additional copy of the October 2010 data,
22 and by additional copy I mean it's a duplicate.

23 Q. And you're aware that the defendants
24 had a duty under expedited discovery to produce
25 e-mails from Mark Zuckerberg's Harvard e-mail

1 B. Rose

2 account; correct?

3 MR. SOUTHWELL: Objection.

4 A. I don't know what their obligations
5 were.

6 Q. Were you or your team involved in
7 helping the defendants produce a set of
8 Mr. Zuckerberg's e-mails as part of expedited
9 discovery?

10 A. Yes.

11 Q. And do you know from which one of these
12 three separate deliveries that production came?

13 A. I do not.

14 Q. Now, Stroz Friedberg, you or no one
15 from your team analyzed the backup copies of
16 Harvard's e-mail servers; is that true?

17 A. What do you mean by analyze their
18 backup copies?

19 Q. Let me ask you a question.

20 Do most large organizations like a
21 university maintain backup copies of e-mail,
22 their e-mail servers, is that --

23 A. Most large institutions make backup
24 copies for disaster recovery purposes. Whether
25 they maintain them or not or how long they

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Rose

maintain them varies greatly from organization to organization.

Q. Do you know if Harvard in 2003-2004 made backup copies of their e-mail server?

A. I believe they did, yes.

Q. Did you obtain a forensic image of any backup copies of Mr. Zuckerberg's e-mail account from 2003 or 2004?

MR. SOUTHWELL: Object to the form, just being clear about what backup copies of Mr. Zuckerberg's e-mail account means.

Q. I just asked you and you confirmed that Harvard made backup copies of their e-mail server in 2003 and 2004; correct?

A. I said I believe they did.

Q. Do you have any reason to believe that that excluded Mr. Zuckerberg's e-mail account?

A. No.

Q. I'm asking about those backup copies. Do you know if those were on tape or on disc or what form those backups were in?

A. I don't know whether they would retain them from then.

Q. Did you ask Harvard about whether they

1 B. Rose

2 had backup copies from 2003 and 2004 that were
3 accessible?

4 A. We asked Harvard to identify all
5 historical copies of Mr. Zuckerberg's e-mail,
6 whether that's on a backup or anywhere else.

7 Q. Did they produce forensic copies from a
8 backup source to you?

9 A. Yes. I've just delineated, I think,
10 the copies they produced for us, so we collected
11 the April 15, 2011 e-mail, they produced data
12 from October 2010, February 2012, and November
13 2003; they said that and they indicated that
14 after a thorough search that was all the copies
15 of this historical e-mail they could identify.

16 Q. Let me just clarify that for my
17 understanding.

18 The first collection -- I'll use your
19 term -- of April 15, 2011, was that from their
20 actual e-mail server or --

21 A. Correct.

22 Q. So it was not from a backup copy?

23 A. That's correct.

24 Q. The copy that they -- that you received
25 from them which was you received in October 2010,

1 B. Rose

2 was that from their server or from a backup?

3 A. I don't know the source of that.

4 Q. Very well.

5 And then the third delivery from
6 Harvard, was that from their actual server, their
7 live server is the term I'm going to use, their
8 live server, e-mail server, or from a backup
9 copy?

10 A. Well, from November 2003 it would
11 necessarily not be from their live server, and
12 this is a copy of the e-mail box as it existed in
13 November 2003.

14 Q. So from a backup you would assume?

15 A. I don't know whether it was a backup,
16 whether they made a copy for some other reason.
17 I know they had a historical copy of his e-mail,
18 I don't know why it was made or from what the
19 source of it was.

20 Obviously, once you get past the
21 collection of a server on April 15th everything
22 else they provide us historically is a historical
23 copy, I don't know the source.

24 Q. Now, since we are on that topic, those,
25 at least between two of those copies, you

1 B. Rose

2 offered -- well, you've offered many declarations
3 in this case about different topics?

4 A. Correct.

5 Q. And one of them, if you recall, that
6 you offered a declaration about was some
7 differences that arose between the October 2010
8 e-mail collection and the April 2011.

9 Do you recall that declaration?

10 A. I do.

11 Q. And correct me if I'm wrong, but there
12 were two main explanations you provided in that
13 declaration as to why what appeared to be missing
14 e-mails actually weren't missing e-mails at all.

15 Do you remember providing explanation
16 for that?

17 MR. SOUTHWELL: Object to the form.

18 Q. Do you remember providing an
19 explanation for that?

20 A. I do.

21 Q. And you indicated in that declaration
22 that the cause of that apparent deleted e-mails,
23 which wasn't deleted e-mails at all, were minor
24 formatting differences; do you remember saying
25 that?

1 B. Rose

2 A. Do you have a copy of the declaration?

3 Q. Hold on a second. I may have a copy
4 here.

5 You know what, I don't have it handy,
6 Mr. Rose, so if your memory doesn't serve you, we
7 will go from there.

8 A. I do remember there being minor
9 formatting differences which were part of the
10 discrepancy.

11 Q. And do you recall using the term, and
12 in addition to minor formatting differences
13 technical issues arose, if you remember using
14 that in your declaration?

15 A. I don't recall that specific language.

16 Q. And is it your opinion that some --
17 that Stroz Friedberg somehow was engaged in some
18 fraud which caused the minor formatting
19 differences in those e-mails?

20 A. Absolutely not.

21 What caused the differences was for
22 some in the collection process, as I recall,
23 there were two issues, one, some minor formatting
24 inconsistencies, for instance, and not even
25 apparent on the surface of the document, if you

1 B. Rose

2 look at it, for instance, it's an extra white
3 space in the subject line, when we compare the
4 two e-mails they were identical except for that
5 minor formatting difference.

6 I believe the technical issue was one
7 e-mail that got split into two different e-mails,
8 so of course it doesn't dedupe out, but I can't
9 imagine how you could equate that to fraud.

10 Q. How did those minor formatting
11 differences occur?

12 A. I don't know.

13 Q. Was it done manually by anyone at Stroz
14 Friedberg?

15 A. No.

16 Q. Was it done even in an automated
17 fashion, intentionally by someone at Stroz
18 Friedberg inserting those formatting differences?

19 A. Why would anyone at Stroz Friedberg
20 insert formatting differences into an e-mail?

21 Q. Well, the rules here are that I get to
22 ask the questions.

23 Was it done automatically by someone at
24 Stroz Friedberg intentionally trying to create
25 formatting differences?

1 B. Rose

2 A. Absolutely not.

3 Q. So those formatting differences do not
4 indicate fraud by Stroz Friedberg; fair to say?

5 A. Mr. Boland, that's an outrageous
6 accusation, that anyone at Stroz Friedberg would
7 insert a white space in an e-mail so that it
8 would not dedupe out against a prior collection
9 of e-mail.

10 Q. I'm just asking you if you agree with
11 the statement it's not fair to accuse Stroz
12 Friedberg of committing fraud because minor
13 formatting differences appear in these e-mails.

14 Is that fair to say?

15 A. I think Stroz Friedberg would have
16 absolutely no motivation to insert an extra white
17 space into a subject line.

18 Q. Well, my question is not about
19 motivation, my question is, is it fair to say
20 that it is not proof of Stroz Friedberg
21 committing fraud because minor formatting
22 differences occurred in these e-mails.

23 A. I think given the circumstances you're
24 considering, which is that Stroz Friedberg is
25 engaged in a process of collecting e-mail and

1 B. Rose

2 deduping out against a prior set, so having an
3 aggregate set of data for review, if you're
4 talking about those circumstances, the idea that
5 an extra white space would be inserted so that
6 those documents in fact don't dedupe out, the
7 only effect of that being that there are
8 additional documents which Gibson, Dunn or Stroz
9 Friedberg then has to review, the idea that that,
10 there's any motivation for fraud there, the idea,
11 given those circumstances, that that would be
12 fraudulent conduct, is outrageous.

13 Q. So is the answer to my question yes,
14 that it is not evidence -- I'll ask it again.
15 It's not -- because the paragraph you just gave
16 me did not answer the question, sir.

17 Would you agree with me that it is not
18 evidence of fraud by Stroz Friedberg merely
19 because in your possession somehow, we don't know
20 how, minor formatting differences appeared in
21 these e-mails?

22 MR. SOUTHWELL: Objection, asked and
23 answered, he answered the question.

24 A. What I'm saying is given the
25 circumstances it's clearly not fraud.

1 B. Rose

2 Q. Did you or anyone on your team review
3 any electronic evidence related to any prior
4 cases that Mr. Zuckerberg has been involved in as
5 a defendant or as a party?

6 A. Again, we reviewed the assets,
7 Mr. Zuckerberg's assets, I believe those did
8 include some forensic images that have been made
9 in prior litigations.

10 Q. And what prior litigation were those
11 images involved in?

12 A. I don't recall.

13 Q. Are you familiar with the case against
14 Mr. Zuckerberg involving an organization called
15 ConnectU?

16 A. I recognize the name, yes.

17 Q. Are you familiar with litigation
18 involving two twins from Harvard named the
19 Winklevoss twins?

20 A. I am familiar with it, yes.

21 Q. Do you know if you or anyone on your
22 team reviewed evidence from the ConnectU
23 Winklevoss case?

24 A. It is my recollection that some of the
25 assets were related to the ConnectU case.

1 B. Rose

2 Q. Do you know if you reviewed all of the
3 electronic assets related to the ConnectU case?

4 A. I don't.

5 Q. Did you ask to see all those assets?

6 A. We asked to see all of the historical
7 Mark Zuckerberg assets.

8 Q. And who did you ask that question to?

9 A. Well, I mean, we were in consultation
10 with Gibson, Dunn and attorneys from McManis
11 Faulkner, Mr. Zuckerberg's personal attorneys.

12 Q. Did you or anyone from your team review
13 any electronic evidence from a case involving
14 Eduardo Saverin?

15 A. I don't know.

16 Q. Does that name ring a bell?

17 A. It does.

18 Q. Are you aware that he and
19 Mr. Zuckerberg were involved in litigation years
20 ago regarding Facebook?

21 A. I've seen "The Social Network," but
22 beyond that --

23 Q. Did you ask to see any evidence from
24 that case, any electronic evidence from that
25 case?

1 B. Rose

2 A. We didn't have discussions about
3 electronic assets for specific cases. What we
4 were provided was our understanding was the
5 existing historical assets for Mr. Zuckerberg.

6 Q. You know who Orin Snyder is; right?

7 A. I do.

8 Q. Have you met with him before?

9 A. I have.

10 Q. Pardon me?

11 A. I have, yes.

12 Q. Have you met with him about this, in
13 preparation for your deposition today?

14 A. No.

15 Q. Would you agree with the statement that
16 Mr. Snyder made about this issue of the minor
17 formatting differences we were talking about with
18 the Harvard e-mails, can you tell me if you agree
19 with this statement?

20 MR. SOUTHWELL: Can you just be clear
21 what you are referring to?

22 MR. BOLAND: A statement from
23 Mr. Snyder December 13, 2011, during the
24 oral argument we had that day.

25 Q. Mr. Snyder said "It's possible the

1 B. Rose

2 differences in storage format or the conversion
3 process can create minor format discrepancies
4 between two copies of the same e-mail."

5 Do you agree with that statement?

6 A. Can I read that, do you mind?

7 Q. Sure. Page 163 of that, and I started
8 reading "It's possible."

9 Do you see where I am pointing there,
10 line 17?

11 MR. SOUTHWELL: Can we see the page
12 before? This relates to the issue you are
13 asking about?

14 MR. BOLAND: It does, I'll represent to
15 you that it does.

16 You can see the page before, that's
17 fine. It relates to an argument -- well, I
18 will let the witness read that.

19 Q. Just tell me if you agree with that
20 statement he makes about minor formatting
21 differences.

22 A. I mean, as a general matter, I would
23 agree with that.

24 Q. Very well.

25 So the accidental or unintentional

1 B. Rose

2 insertion of a formatting difference into a
3 document, you would agree with me, is not by
4 itself proof of fraud?

5 A. Accidental -- so accidental and
6 unintentional insertion?

7 Q. Correct.

8 A. I would say since fraud involves
9 intent, I would say by definition that would not
10 be fraud.

11 Q. And we just went over that such
12 formatting differences can be caused
13 unintentionally as Stroz Friedberg unintentionally
14 caused them somehow?

15 MR. SOUTHWELL: Objection to the form.
16 What are you referring to as such
17 formatting differences?

18 Q. Formatting differences between the sets
19 of Harvard e-mails that we talked about were
20 caused unintentionally; right?

21 A. If you are doing forensic collection
22 and you're collecting e-mail, it is possible in
23 the conversion process or based on storage
24 formats for there to be formatting differences
25 introduced.

1 B. Rose

2 Q. Now, is that the only way in the whole
3 world of computers is just forensics where these
4 formatting differences can occur?

5 A. I don't understand that question.

6 Q. People trading files on CDs or
7 e-mailing files to each other, can formatting
8 differences occur in that process?

9 A. Can you be specific? That seems very
10 hypothetical.

11 Q. You have a Microsoft Word document and
12 you send it to me and I open it in Microsoft
13 Word, can formatting differences occur depending
14 on how you have Microsoft Word set and how I have
15 it set on my computer?

16 A. I think in general that should not
17 occur.

18 Q. My question is not whether it should
19 not occur.

20 Does that occur for people, do they
21 get --

22 A. I am not aware of that occurring.

23 Q. You have never received a document that
24 somehow the formatting got altered from what the
25 recipient created?

1 B. Rose

2 MR. SOUTHWELL: Objection to form.

3 Q. Has that ever happened?

4 A. I don't know, Mr. Boland.

5 Q. Fair enough.

6 Can you look at Exhibit 1, page 24, we
7 are in the upper -- I think we are in the upper
8 corner still of those page numbers.

9 A. Okay.

10 Q. So fair to say this page is generally
11 some discussion about the Sidley Austin server
12 and there's some header information in the middle
13 of the page; correct?

14 A. I would say it's a discussion of the
15 StreetFax e-mails found at Sidley & Austin and
16 particularly the Internet header information
17 appended to those e-mails.

18 Q. And your report notes in footnote 9 --
19 I mean, there's a whole paragraph there, but
20 there is a note there that the server --

21 MR. BOLAND: Scratch that.

22 Q. Right at the bottom, the last sentence
23 of that footnote, the time zone setting was
24 incorrectly set to Eastern time.

25 Do you see that sentence, the last half

1 B. Rose

2 of the last sentence of footnote 9?

3 A. I do see that sentence.

4 Q. And that's referring to the Sidney
5 Austin e-mail server; correct?

6 A. It is referring to one of the
7 intermediary Sidney & Austin e-mail servers,
8 specifically Mail 02.

9 Q. Did your computer forensic analysis
10 reveal any fraud regarding Sidney Austin and
11 e-mails?

12 A. No.

13 Q. And did your forensic analysis reveal
14 any fraud by Mr. Zuckerberg in relation to
15 e-mails from his Harvard e-mail account?

16 A. No.

17 Q. Now, on that same page, the time stamps
18 regarding the sent items from Mr. Ceglia's
19 parents' computer, this Kole e-mail, and the
20 received time of that e-mail on the Sidney Austin
21 server, this is my calculation, but they differ
22 by more than 144 seconds; is that a fair bit of
23 math?

24 MR. SOUTHWELL: What are you referring
25 to? I'm sorry.

1 B. Rose

2 Q. The time stamps on the sent item from
3 Mr. Ceglia's parents' computer of the Kole e-mail
4 and the time it was received by Sidley Austin,
5 they differ by about a little over two minutes.

6 A. There are two e-mails, so can we
7 clarify which one we're talking about?

8 Q. Let's start with the first one.

9 A. Okay.

10 MR. SOUTHWELL: By the first one, are
11 you referring to page 24 of the report?

12 A. Or page 23.

13 Q. Let's look at where you have detailed
14 when those e-mails were sent.

15 Do you see on page -- yes, go back to
16 page 23 under the number 1.

17 There's an e-mail sent at 10:37 a.m.

18 Do you see that reference?

19 A. Yes.

20 Q. So there were two StreetFax e-mails
21 that you talk about being sent here on this page?

22 A. Yes.

23 Q. The first one sent at 10:37 a.m.
24 Eastern Standard Time.

25 A. Yes.

1 B. Rose

2 Q. And then you talk about it being
3 received on the top of page 24, it's received by
4 the Sidley Austin server at 9:38 Central time.

5 A. Correct.

6 Q. That's a difference of a minute,
7 roughly, or a little under a minute; is that fair
8 to say?

9 A. That is a difference of 51 seconds.

10 Q. And in the second e-mail is in the
11 middle of page 24, it's sent at 10:39; right?

12 A. Correct.

13 Q. And it's received, at the bottom of 24
14 it's received by the Sidley Austin server at 9:41.

15 A. Correct.

16 Q. So that's a little more than a minute,
17 a minute and a half, roughly; correct?

18 A. Let me just do the math.

19 Yeah, that's roughly correct.

20 Q. Now, on the computer where the Kole
21 e-mail was found your report identifies it as
22 part of the Ceglia media; fair to say?

23 A. Right.

24 Q. And do you know who was the actual
25 owner and user of that computer? Was it Paul

1 B. Rose

2 Ceglia?

3 A. I don't know.

4 Q. Do you know if he ever used that
5 computer?

6 A. I don't know one way or the other.

7 Q. And these e-mails, these two TIFF
8 images that were sent by these two e-mails, you
9 would agree with the notion that from a computer
10 forensic standpoint you can't -- no one can say
11 whose butt was actually in the seat at that
12 computer?

13 A. So -- and let me maybe amend my last
14 answer a little bit.

15 From a forensic standpoint it is
16 difficult from the forensics to tell who's
17 actually sitting in the seat, so what you have to
18 look for is other contextual evidence.

19 So given the fact that what we have in
20 this case is two e-mails from a computer
21 belonging to -- used by someone at the Ceglias',
22 assuming that, you have one of the e-mails that's
23 signed by Paul that sets forth a phone number
24 that is sent to his attorney at Sidley & Austin,
25 Jim Kole.

1 B. Rose

2 From those circumstances I would say
3 that, yes, at least for the purpose of sending
4 those StreetFax e-mails, Mr. Ceglia, Paul Ceglia
5 specifically, did use that computer.

6 Q. Now, in sending that e-mail -- so it's
7 your position that the forensic evidence -- and
8 if I'm using the wrong word correct me -- proves
9 that Paul Ceglia was sitting at the computer that
10 sent those e-mails?

11 A. I think the forensic evidence is yes,
12 that Mr. -- that the evidence, the forensic
13 evidence and I would say the other evidence, for
14 instance, I don't know whether I would
15 characterize the fact that Paul signed the e-mail
16 as forensic evidence, but it's certainly evidence
17 obtained in a forensic analysis, yes. I would
18 say that it shows that Paul Ceglia sent those
19 e-mails to Mr. Kole.

20 Q. Now, when you say the word "signed the
21 e-mail" you're talking about his name was typed
22 at the bottom of the e-mail?

23 A. Correct.

24 Q. Not a handwritten signature?

25 A. Correct.

1 B. Rose

2 Q. And not even a scanned image of a
3 handwritten signature?

4 A. That's correct.

5 Q. And anyone can type those four letters
6 that are his name; right?

7 A. Anyone could, yes.

8 Q. Isn't it true that a person could be
9 sitting at the computer, as you are positing
10 here, and send that e-mail; true?

11 A. Could you repeat that?

12 Q. As you said, a person, one of the ways
13 this e-mail could have been sent is Paul Ceglia
14 sitting at the computer typing?

15 A. Correct.

16 Q. It could also have been sent by another
17 person sitting at the computer typing everything
18 that was in that e-mail; true?

19 A. Hypothetically true. I don't think in
20 the case the evidence supports that, no.

21 Q. And are there ways -- there are ways
22 for people to get, for example, GoToMyPC is a
23 program you are familiar with, a service you are
24 familiar with?

25 A. Yes.

1 B. Rose

2 Q. So a person could be in one state and
3 use GoToMyPC and get remote access to their
4 computer; right?

5 A. You can get remote access, yes.

6 Q. And using that remote access you can
7 operate that computer as if you're sitting in
8 front of it; true?

9 A. If you -- yes, that's true.

10 Q. Including you can send an e-mail from
11 the e-mail program on that computer while you are
12 in another state?

13 A. Correct.

14 Q. Did your forensic evidence indicate
15 whether remote access to this computer by
16 GoToMyPC happened with Mr. Ceglia?

17 A. I think remote access is unlikely given
18 the fact that the scanned documents were copied
19 to the actual physical hard drive, so I think
20 what we are looking at is physical access to the
21 machine, that would be our conclusion from the
22 forensics.

23 Q. Well, let's talk about that.

24 You testified just earlier that there's
25 a variety of ways that those TIFF images could

1 B. Rose

2 have been created on that hard drive.

3 Do you remember testifying about that?

4 MR. SOUTHWELL: Objection,
5 mischaracterizes the testimony.

6 Q. Do you remember testifying that there
7 are a variety of ways that those TIFF images
8 could have been created on to that hard drive?

9 A. I believe your question was a general
10 question about the way in which documents can in
11 fact be created on hard drive, if I'm recalling
12 that correctly.

13 Q. Well, let me clarify that, then.

14 You agree with me that there's multiple
15 ways that a file in a general sense can be
16 created on a hard drive; right?

17 A. Correct.

18 Q. And I asked you this before, they can
19 be copied from a CD?

20 You have to --

21 A. Yes.

22 Q. Floppy disk in the old days?

23 A. Yes.

24 Q. USB drive?

25 A. Yes.

1 B. Rose

2 Q. Another hard drive?

3 A. Yes.

4 Q. And the Internet?

5 A. Yes.

6 Q. Which one of those ways -- I asked you
7 before, I'm pretty clear on this, but I will do
8 it again.

9 Which one of those ways was the way
10 these two TIFF images got on to that hard drive
11 where you found them?

12 A. I don't know.

13 Q. You don't know.

14 So that necessarily means, then, it's
15 correct that a person, Paul Ceglia or whoever
16 using GoToMyPC, for example, can remotely access
17 this computer where you found these TIFF images
18 and put them there; true?

19 A. I don't know specifically how
20 GoToMeeting operates. I mean, for instance,
21 there are remote access clients where I can go on
22 and get documents, for instance, on a desktop,
23 but I can't actually save things to my physical
24 hard drive, so I think it would depend on how
25 that actually operated.

1 B. Rose

2 Q. Do you know if -- and just to correct
3 you, I think you just misspoke, I'm not talking
4 about GoToMeeting, I'm talking about GoToMyPC.

5 A. Oh, I'm sorry, yes.

6 Q. Do you know if GoToMyPC does or does
7 not have that function?

8 A. I don't.

9 Q. If the product like GoToMyPC allows
10 remote access and has that function allowing you
11 to save files to that remotely accessed computer,
12 that's one way Mr. Ceglia or whoever could have
13 put those TIFF images on that computer; would you
14 agree with me?

15 A. It's possible that's a way Mr. Ceglia
16 could have saved those to that computer, yes.

17 Q. Is GoToMyPC the only way to get remote
18 access to a computer?

19 A. No.

20 Q. What are the other ways, if you could
21 list them, please?

22 A. I couldn't list all of them.

23 Q. List as many as you can, if you would.

24 A. I mean, there are various clients like
25 that that allow remote access, there is, you

1 B. Rose

2 know, VPN access to a computer, there -- you
3 know, there are certainly other ways, I mean,
4 there are really innumerable ways to gain remote
5 access.

6 Q. Now, the ways you just went through,
7 VPN and other clients like that, those aren't
8 hacking tools, are they?

9 A. They're not, they're generally software
10 actually installed on the computer.

11 Q. In your experience as a computer
12 forensics expert, you know that individuals
13 around the world have the ability to remotely
14 access other people's computers without their
15 authorization?

16 A. There are people who do that. I mean,
17 obviously that would require -- you know, that
18 would require the installation of some kind of
19 software, you know, malware program, depending on
20 how you want to characterize it, that would allow
21 for both that remote access and also the kind of
22 control over the computer itself that you would
23 need to perform those functions, but assuming
24 that that software, malware is installed on the
25 computer, sure, that's a possibility.

1 B. Rose

2 Q. And your report doesn't discuss any
3 malware on any of the media?

4 A. No.

5 Frankly, I regard the malware
6 explanation as completely implausible in this
7 case.

8 Q. Well, my question is your report
9 doesn't indicate -- well, let me ask you that
10 question.

11 Before you produced that report did you
12 scan any of the media for malware?

13 A. We did not.

14 Q. Is that standard practice for your firm
15 to not scan media for malware?

16 A. That is not a standard practice, no.

17 Q. Have you had a chance to read
18 plaintiff's expert's report in this case?

19 A. I have.

20 MR. SOUTHWELL: Can you just clarify
21 which one?

22 MR. BOLAND: I'm sorry, Mr. Broom.

23 Q. And you are aware, then, from reviewing
24 that, that he did scan the media in this case for
25 malware?

1 B. Rose

2 A. I am aware of that, yes.

3 Q. Are you aware that he found malware?

4 A. I am.

5 Q. And he found something called a rootkit
6 as well?

7 A. I don't --

8 MR. SOUTHWELL: Objection to the
9 specifics of what was found or where.

10 A. I don't recall that specifically, no.

11 Q. You don't recall that from reading his
12 report?

13 A. No.

14 Q. But generally you recall he found
15 malware?

16 A. Correct.

17 Q. What types of malware would allow
18 someone to have remote access to a computer, if
19 you know?

20 A. I wouldn't even know how to answer that
21 question, I mean, there are all kinds of
22 variations of malware that would permit remote
23 access.

24 Q. Can you list a few of them?

25 A. No.

1 B. Rose

2 Q. Do you know any of them that allow that?

3 A. I mean, there are kinds, but again,
4 you'd be talking about specific pieces of
5 malware, right, so there are literally tens of
6 thousands of these things cataloged, so I think
7 any analysis of malware would have to start with
8 what is -- not a general analysis, but what is
9 the specific malware found on the computer and
10 what capabilities does that malware provide, so,
11 for instance, you know, what is notably lacking
12 from Mr. Broom's report is any analysis of how
13 any of the malware he actually found would, A,
14 existed in 2003 and, B, would have provided the
15 kind of control over the computer that you would
16 need for remote access to be an explanation for
17 this.

18 Q. Which ones -- did you or your team
19 evaluate the malware in Mr. Broom's report to
20 determine if it existed in 2004?

21 A. We researched that malware to both
22 determine whether any of those pieces of malware
23 existed in 2003 and had the capabilities that
24 would provide the kind of remote access necessary.

25 Q. And what was your evaluation?

1 B. Rose

2 A. That none of those pieces of malware
3 would have provided the ability to do that.

4 Q. Now, do people, hackers, in general,
5 who gain remote access to a computer, sometimes
6 they leave evidence behind of that intrusion;
7 fair to say?

8 A. Yes.

9 Q. Are there occasions where they do not
10 leave evidence behind that can be detected of
11 that intrusion?

12 A. It's hypothetically possible. I mean,
13 generally what you would see is either evidence
14 of the access or evidence of the cleanup, but
15 it's certainly possible to have as part of the
16 malware essentially a cleanup of the malware on
17 the machine.

18 Q. And you don't know, from your
19 evaluation of Paul Ceglia's parents' computer
20 where the Kole e-mail was found, what malware was
21 on that computer in 2004?

22 MR. SOUTHWELL: Object to the form.

23 Q. True?

24 A. No.

25 Q. You don't know if there was any malware

1 B. Rose

2 on that computer in 2004?

3 A. I do not.

4 Q. And you don't know if it was littered
5 with hundreds of types of malware in 2004?

6 A. I don't know anything about the state
7 of the computer in 2004.

8 Q. And do you think it's a reasonable
9 conclusion that if a computer in 2011 has the
10 list of malware on it that you saw on Mr. Broom's
11 report that that makes it more likely that that
12 computer had malware on it sometime prior to 2011?

13 A. I would not agree with that, no.

14 Q. Do you know when all that malware
15 landed on that computer?

16 A. I do not.

17 Q. Do you know if any of that malware had
18 earlier versions that were in existence in 2004?

19 A. I'm not sure I understand the question.

20 Q. Well, you know Microsoft Word --

21 A. Sure.

22 Q. -- it's got some version number for the
23 current version of today, let's call it the 2012
24 version, and eight years ago it had a prior
25 version, maybe called Microsoft 2003.

1 B. Rose

2 You are aware that Microsoft works that
3 way?

4 A. Sure.

5 Q. So I'm asking about the malware that's
6 currently on the computer that Mr. Broom found,
7 do you have any evidence of what prior versions
8 of that malware existed before?

9 A. I guess that I don't really understand
10 the premise of the question in the sense that,
11 you know, people who produce malware generally
12 don't version like Microsoft Word does. They'll
13 create, I guess, what I would consider new
14 malware and maybe it's just a matter of semantics,
15 but, you know, certainly it is possible for, you
16 know, pieces of malware to, you know, once
17 malware, for instance, is discovered and shut
18 down and picked up by the virus scans, they may
19 adapt that and create a new piece of malware, you
20 know, that's a variation off that.

21 Q. Now, in your report there's -- let me
22 find the page -- you talk about a sent items DBX
23 file in various places in the report; do you
24 recall that?

25 One of them is -- I just found the

1 B. Rose

2 first one just for purposes of the question, it's
3 referred to on page 15, you talk about the sent
4 items DBX file?

5 A. Yes.

6 Q. And it's other places in the report as
7 well, you would agree?

8 A. Yes.

9 Q. Can you look at page 16 of 102 of your
10 report.

11 A. Are you referring to the top line
12 numbers?

13 Q. Top line numbers, yeah.

14 A. Yes.

15 Q. Now, you have a graphic there of the
16 sent items folder of Vera Ceglia's e-mail
17 account; true?

18 MR. SOUTHWELL: Object to the form.

19 A. In terms of what do you mean by Vera
20 Ceglia's e-mail account?

21 Q. Well, the e-mail associated with --
22 what was the e-mail associated with this account?

23 A. The user name that resolves when you
24 send an e-mail is Vera Ceglia.

25 Q. Any reason to believe that that is not

1 B. Rose

2 Vera Ceglia's e-mail account?

3 A. Well, I believe the account is
4 registered to Carmine Ceglia.

5 Q. So whose account did your forensic
6 analysis determine that that was, Vera's or
7 Carmine's, or did they both use it?

8 A. I think our forensic analysis showed
9 and, again, forensics and the information we
10 obtained during the analysis showed the account
11 was registered to Carmine Ceglia, that the user
12 name that resolves is Vera Ceglia and that in the
13 case, at least in the case of the two StreetFax
14 e-mails, the account was used by Paul Ceglia.

15 Q. So you mention -- you list there five
16 sent items, three of them are blacked out.

17 Do you see that?

18 A. That's correct.

19 Q. Did it seem unusual to you that on
20 average only one e-mail was sent per year that
21 that account or that that DBX file existed from
22 Outlook?

23 MR. SOUTHWELL: Objection.

24 A. I don't think you can -- I mean, I
25 think that's a faulty premise. You certainly

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Rose

can't conclude from the fact that only five e-mails are here that that's the extent of the sent e-mails.

Q. Where would other sent e-mails be?

A. They could have been deleted.

Q. Did your forensic analysis find evidence that sent e-mail items were deleted?

A. No.

Q. So where are they, the rest of the ones that -- other than those five that were sent in five years, what evidence do you have?

A. I don't know whether they exist.

I'm saying that based on an analysis of the current contents of a mailbox you can't conclude that that is a complete historical record of everything that was sent, nor to the extent e-mails were deleted over time are you necessarily going to be able to recover evidence of those deleted e-mails, so what I'm saying is what this is evidence of is what resided in this mailbox at a particular historical point in time.

Q. Now, would that statement, those series of statements you just gave also apply to Mark Zuckerberg's Harvard e-mail account?

1 B. Rose

2 A. Could you be specific about which
3 statements you want me to apply to his e-mail
4 account?

5 Q. Let's break them down.

6 A. Sure.

7 Q. It's true that it's your opinion based
8 on page 24 there that that's not necessarily all
9 of the sent items, all of the items that were
10 ever sent from that e-mail account?

11 A. Again, it is a snapshot, a historical
12 record of a particular point in time.

13 Q. So it would be true, then, that the
14 items that you found in the equivalent sent items
15 folder of Mark Zuckerberg's Harvard e-mail
16 account, not necessarily all of the e-mails he
17 ever sent?

18 A. I think that's true of everyone's
19 e-mail, yes.

20 Q. And there could be e-mails that were
21 deleted that you were not able to recover, that
22 he had sent but then got deleted?

23 A. There could have been e-mails deleted
24 either through user action or through system
25 processes that we were not able to recover,

1 B. Rose

2 that's correct.

3 Q. Did you ask Mr. Zuckerberg if he
4 deleted any e-mails from his Harvard e-mail
5 account?

6 A. I have not spoken to Mr. Zuckerberg.

7 Q. Why didn't you ask him that?

8 MR. SOUTHWELL: Objection. He just
9 said he didn't speak to him.

10 A. I have never spoken to Mr. Zuckerberg.

11 Q. I understand you've never spoken to him.
12 Why didn't you speak to him and ask him
13 whether he deleted e-mail from his account?

14 A. Again, I'm doing a forensic analysis.
15 You know, to the extent that others -- the
16 strategy about whether interview Mr. Zuckerberg
17 is beyond what we were charged to do in the
18 expedited discovery. I was asked to do a
19 forensic analysis of the Ceglia media.

20 Q. Is it of no value to your forensic
21 analysis to know how somebody who's a user of a
22 computer tells, that actually states how they
23 used it, that's not relevant to your analysis?

24 A. I don't think that would have been
25 relevant to our report, no.

1 B. Rose

2 Q. I'm saying is it relevant to your
3 analysis to know how Mark Zuckerberg used his
4 e-mail account.

5 A. To our expedited discovery analysis
6 or --

7 Q. Is it relevant to you at all?

8 A. Look, again, you know, the Harvard
9 e-mail was not included here, it was not part of
10 the expedited discovery, so to the extent we are
11 talking about my report, and that's what I
12 thought we were here talking about is Stroz
13 Friedberg's report, talking to Mr. Zuckerberg
14 about his practices with e-mail would not be
15 relevant.

16 In understanding, you know, the Harvard
17 e-mail, right, our analysis of that was limited
18 to trying to collect it all and provide it in a
19 format that could be reviewed and looking for the
20 existence of the purported e-mails and various
21 correspondence with StreetFax employees, that
22 was our analysis and that was what we were
23 limited to.

24 What we were charged with, knowing
25 Mr. Zuckerberg's historical practices, would not

1 B. Rose

2 have been relevant. Whether that's relevant to
3 the broader case and whether that's an analysis
4 that should be done, I mean, that's really a
5 strategic question that I would leave to the
6 attorneys.

7 THE VIDEOGRAPHER: I need a card
8 change.

9 MR. BOLAND: All right. We will go off
10 the record for a moment so he can change the
11 card.

12 Q. Do you want to take a 10-minute break
13 so you can run to the bathroom or whatever?

14 A. Sure.

15 (Recess taken.)

16 (Rose Exhibit 2, declaration of Neil
17 Broom, marked for identification, as of this
18 date.)

19 MR. BOLAND: Could we start the video
20 back up again?

21 THE VIDEOGRAPHER: Recording tape 2.

22 MR. BOLAND: We are back on the record.

23 BY MR. BOLAND:

24 Q. Mr. Rose, we just had about a 10 or so
25 minute break.

1 B. Rose

2 Did you chat with defense counsel about
3 the deposition during the break?

4 A. I did not.

5 Q. I'm going to back up to a topic briefly
6 and then we will move ahead to ask you a couple
7 more questions.

8 The 15 or 20 computers that
9 Mr. Zuckerberg had used historically and you
10 indicated members of your firm had analyzed;
11 true?

12 A. Correct.

13 Q. And who at Stroz Friedberg actually
14 obtained that evidence?

15 A. I do not know.

16 Q. Where did they physically go
17 geographically to get that evidence?

18 MR. SOUTHWELL: Objection. He just
19 said he doesn't know.

20 MR. BOLAND: I asked him who obtained
21 it, he doesn't know.

22 Q. Where --

23 MR. SOUTHWELL: He previously testified
24 he doesn't know about this, so --

25 Q. Where was that evidence located?

1 B. Rose

2 A. I believe generically it was in
3 California.

4 Q. Who supervised that collection of that
5 evidence?

6 A. I don't know.

7 Q. And who did the actual work and
8 analyzing those 15 or 20 computers?

9 A. I don't know.

10 Q. If you could look at what's been marked
11 Rose Exhibit 2 and tell me if you've seen that
12 before.

13 A. I have.

14 Q. And that in fact for the record, for
15 the Court, is Mr. Neil Broom's report, the
16 plaintiff's computer forensics expert; true?

17 A. That's my understanding, yes.

18 Q. Could you go to page 21, again, in the
19 upper right-hand corner page numbers in the
20 report.

21 MR. SOUTHWELL: Can we pause for just a
22 second? Our computer is not connected to
23 the Livenote.

24 THE COURT REPORTER: Do you want to go
25 off the record?

1 B. Rose

2 MR. BOLAND: We can go off the record,
3 that's fine, sure.

4 (Discussion off the record.)

5 BY MR. BOLAND:

6 Q. So we are back on the record.
7 If you could just look at page 21 of
8 Mr. Broom's report.

9 Are you on that page?

10 A. Yes, referenced by the top-line number,
11 I believe they are the same.

12 Q. Do you see in the second full paragraph
13 Mr. Broom discusses the dimensions of the scanned
14 documents that would have been needed to create
15 the TIFF images attached to the Kole e-mail? Do
16 you see that description of the size?

17 A. I see a description of the dimensions
18 of the scanned documents, yes.

19 Q. Right.

20 The dimension dimensions he calculated
21 are 2.4 by 3.2 inches in size; correct?

22 A. That's what he states.

23 Q. Do you have any different opinion on
24 what size of a document would be needed to be
25 scanned to generate the size of the dimensions

1 B. Rose

2 for the TIFF images that you found? Do you
3 disagree with his calculation of that size?

4 A. Would you repeat that question?

5 Q. Do you disagree with his calculation of
6 2.4 by 3.2 inches in that paragraph?

7 MR. SOUTHWELL: Are you talking
8 about -- object to the form. Are you
9 talking about his calculation of the TIFF
10 file?

11 MR. BOLAND: Yes.

12 A. As I understand it, that's the
13 dimensions he calculated for the TIFF images.

14 Q. That's the dimensions he has -- well,
15 I'm just asking you if you disagree with that
16 calculation in that paragraph.

17 Take your time to read that paragraph
18 and tell me if you disagree with the calculation
19 that he has there.

20 A. I think that paragraph is ambiguous as
21 to what scanned documents means. I don't know
22 whether he is referring to the scanned images
23 themselves as they appear on the computer or
24 whether he is referring to the dimensions of the
25 pieces of paper that were scanned at some point

1 B. Rose

2 to create the TIFF images.

3 Q. Well, in that paragraph -- well, let's
4 back up.

5 The TIFF images as they appear on your
6 report, or Exhibit 1 that I have shown you, let's
7 put it that way, Exhibit 1, are much smaller than
8 an 8-1/2-by-11 piece of paper; true?

9 We looked at them earlier.

10 MR. SOUTHWELL: Objection. You didn't
11 look at the one that was filed. You are
12 looking at your printout. The one that's
13 filed is not that small.

14 Q. I'm talking about Exhibit 1 that I
15 showed you.

16 MR. SOUTHWELL: That's your printout of
17 Exhibit 1, that's not what it looked like
18 when it was filed.

19 MR. BOLAND: Fair enough.

20 Q. I am saying, on Exhibit 1, the size of
21 that image --

22 MR. SOUTHWELL: You're on Mr. Boland's
23 printout of Exhibit 1 --

24 MR. BOLAND: I am not deposing you,
25 Alex, I'm just asking him to look at the

1 B. Rose

2 exhibit.

3 MR. SOUTHWELL: You seem to be implying
4 that the actual exhibit in the record was
5 small.

6 MR. BOLAND: Whatever I'm implying,
7 though, you can't coach the witness.

8 MR. SOUTHWELL: I'm just trying to get
9 a clear record about you're talking about.

10 MR. BOLAND: And I am making very
11 clear.

12 Q. Exhibit 1, which we looked at before,
13 has an image in it of page 1 of the TIFF?

14 A. Correct.

15 Q. And the image in that exhibit -- that's
16 all I'm talking about, is that Exhibit 1 -- makes
17 that image is much smaller than an 8-1/2-by-11
18 piece of paper.

19 A. The image in the printed copy you've
20 handed me that we've looked at in Exhibit 1 is
21 smaller than 8-1/2 by 11, correct.

22 Q. And the physical -- did you do a
23 measurement or did anyone from Stroz Friedberg
24 measure the dimensions of the TIFF images that
25 you found?

1 B. Rose

2 A. Not that I know of.

3 Q. Do you have any reason to disagree with
4 Mr. Broom's calculation that the dimensions of
5 those TIFF images are what he puts in paragraph 2?

6 A. I don't have any information to
7 evaluate that calculation.

8 Q. And then in paragraph 4 of that same
9 page Mr. Broom again calculates that the
10 resulting dimensions of the TIFF file are about
11 30 percent the size of a regular piece of paper.

12 Do you see where he says that?

13 A. Are you referring to the fourth
14 paragraph?

15 Q. Yes, fourth full paragraph.

16 A. Let me read it.

17 Q. Sure.

18 A. Okay, I've read it.

19 What's your question, again?

20 Q. Do you have any reason to disagree with
21 his calculation there that the physical
22 dimensions of the TIFF images you found or your
23 team found are about 30 percent the size of a
24 regular piece of paper?

25 A. Well, as I understand it, what he's

1 B. Rose

2 saying is he took an 8-1/2-by-11-inch piece of
3 paper, he then put it on a copier, copied it at
4 30 percent the size of the original and then
5 scanned that with the scan area set to 2.4 by 3.2
6 inches and the resulting files were 945 kilobytes
7 and 123 kilobytes.

8 Q. Did you look at the metadata related to
9 the TIFF images attached to the Kole e-mail?

10 A. Yes.

11 Q. And isn't it true that that metadata
12 includes the dimensions of the image?

13 A. I don't specifically recall, but it
14 could.

15 Q. And do you have any reason to dispute
16 Mr. Broom's reading of that metadata that he,
17 from where he derived those dimensions?

18 A. Again, I don't have any information in
19 my possession right now that I could evaluate his
20 conclusions one way or the other.

21 Q. And you -- the version of this report
22 that was actually -- I'm sorry, looking at
23 Exhibit 1 again that I showed you --

24 A. So you are referring to our report?

25 Q. Correct. Well, Exhibit 1 there.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Rose

Do you agree or not that the size of that TIFF image as it appears in Exhibit 1, is that different than the size of that TIFF image as it appeared in the report you filed with the Court?

A. I don't know.

Q. Did you or anyone from Stroz Friedberg magnify the TIFF image, magnify it and print it as an exhibit to your report before you filed it?

A. Not that I recall.

Q. The TIFF images attached to the Kole e-mail have -- it's true they have the file names Scan0001.tif for the second page of the contract; true?

A. I would have to refresh the report. My recollection is that Scan0001 is in fact the first page of the report.

Q. If you could grab your report there, do you see -- I'll get you there quickly.

Let's go to page 19 of 102 in the upper right-hand corner, do you see that table that's in the middle of page there, it has a blue top line?

A. Yes.

1 B. Rose

2 Q. So does that refresh your recollection
3 as to the page 1 of the StreetFax contract being
4 file name Scan0002.tif?

5 A. Again, let's -- I don't want to confuse
6 the issue here.

7 What you are referring to is a table
8 that has the subject so that it was denominated
9 by the sender, Paul Ceglia, as page 1 of 2 for
10 StreetFax contract and what was attached to that
11 was Scan0002.tif. In fact, if you look at the
12 image, that is in fact a copy of page 1 of the
13 contract, in other words, it is a misdescription
14 in the subject line and they were sent out of
15 order, but the names are in fact accurate in
16 terms of 1 and 2 being -- 1 being the first page
17 of the contract and 2 being the second page of
18 the contract.

19 Q. And that file-naming convention there
20 appears to be a default file name that a scanner
21 would use or scanner software, let's put it that
22 way?

23 A. Yeah, it's consistent with that.

24 Q. Did you find any evidence in your
25 analysis different than that that indicated

1 B. Rose

2 that's not a default file name from software?

3 A. I don't know what we would find in a
4 forensic analysis of the Ceglia media that would
5 show us what the default naming scheme for a
6 particular scanner was; that is a typical default
7 naming convention for scanned documents.

8 MR. SOUTHWELL: Mr. Boland, if I may
9 interrupt, attached as Exhibit F and G to
10 the report are the scans that go along with
11 it. I just want to make -- I just want to
12 make sure it's clear. Maybe you are under
13 the misapprehension about the 002 whether it
14 is the first page or second page.

15 MR. BOLAND: No, I'm fine. Thank you.

16 Q. So let's continue on with this table
17 here, Scan0002.tif, was that file scanned, was
18 that the earliest of the two pages that was
19 scanned, based on your report?

20 A. Yes, so that -- well, I should say what
21 we know is that that would have been the one that
22 was first created on the Seagate hard drive.

23 Q. And then the Scan001.tif was created
24 later?

25 A. That's correct.

1 B. Rose

2 Q. Now, in your experience with default
3 file names of scanner software, wouldn't you
4 agree with me that if you scan four different
5 jobs, the scanner software by default is going to
6 continue to count forward and not backward?

7 A. Generally.

8 Q. And yet here we have the earlier
9 scanned image having a higher number than the
10 later scanned image, as you just testified;
11 correct?

12 A. I don't believe I testified -- I'm
13 sorry, what was your question?

14 Q. The file name Scan0002 was created on
15 the hard drive before the file name Scan0001, you
16 just testified to that; correct?

17 A. That's correct.

18 Q. So if they were scanned, how did
19 that -- if they were scanned onto that hard
20 drive, that's one way they could have gotten on
21 to that hard drive; true?

22 A. That's one possible way they could have
23 gotten on the hard drive.

24 Q. So how would that happen? If
25 hypothetically they were scanned onto that hard

1 B. Rose

2 drive, how would that scanner have been counting
3 backwards?

4 A. The scanner would not have to have been
5 counting backwards, so there are a couple of
6 possibilities; one is that they were copied to
7 the hard drive in a different order than they
8 were scanned so that scan 2 was the second scan
9 but it was copied to the hard drive first, in
10 other words, not a direct scan. It's also
11 certainly possible that when you put something
12 into a scanner that the first item to be scanned
13 would be the second page; right? Scanners scan
14 things depending upon how you feed documents in,
15 and it is certainly possible to feed documents in
16 in a backwards order, so it is not the scanner
17 counting backwards, but it's the way in which the
18 user scanned it.

19 Q. And what evidence did you find in
20 analyzing the Ceglia media of either one of those
21 two things happening?

22 A. I don't think we found any evidence as
23 to the order of scan, of direct scanning, right,
24 or of how a user was feeding documents into the
25 scanner. I mean, it seems clear -- the only

1 B. Rose

2 thing we can say from the evidence is I would
3 agree that it appears as if the second page of
4 the contract was scanned first.

5 Q. Well, and it's obvious from your
6 analysis that the file name Scan0002 was created
7 first as well?

8 A. What do you mean by created?
9 Scan0002 was created first on the
10 Seagate hard drive.

11 Q. Yes. And then the Scan0001 was created
12 second on the Seagate hard drive?

13 A. Yes. Which could be a function of them
14 just being copied in that order.

15 Again, I'm not offering an opinion as
16 to, you know, the origination of the document,
17 but rather, what I can tell you from the metadata
18 associated with the creation dates of the files
19 is what order they were copied to that computer in.

20 Q. Let's ask about those creation dates
21 for a second.

22 The creation dates associated with
23 those two TIFF image files, are those accurate?

24 A. I believe so, yes.

25 Q. Based on what?

1 B. Rose

2 A. I think that was the time recorded by
3 the computer and it appears to be an accurate
4 time.

5 Q. What are all the facts you have that
6 those dates are accurate, the creation dates of
7 those two TIFF images are accurate dates and
8 times? Can you list for me the facts that
9 support that conclusion?

10 A. Sure.

11 So we have the creation date of the
12 files, right, so -- and let me refresh my
13 recollection of the report to give you the exact
14 creation dates.

15 So you have an initial creation date of
16 approximately 10:37 for the first e-mail, which
17 again contains the second page of the contract,
18 so that was 10:37 a.m.

19 You then have that being sent out via
20 e-mail and an initial time being appended in the
21 Internet headers by the Adelphia servers which is
22 immediately following which is consistent
23 evidence that in fact that time setting on the
24 computer is correct because then you're dealing
25 with a consistent time set by an independent

1 B. Rose

2 server.

3 You then also have times appended by
4 two servers at Sidley & Austin, including the
5 intermediary server and the final server
6 receiving it.

7 All of those which are independent of
8 each other all indicate consistent times, so in
9 fact I think based on that evidence we can
10 conclude that in fact the creation and the sent
11 time of the e-mail on the computer is the same.

12 I will also say that you also have the
13 e-mails then being forwarded on by Mr. Kole
14 shortly after again with a consistent time, so
15 all of those times appended by servers that are
16 independent of this clock setting demonstrate
17 this time is accurate.

18 Q. So it's those, the Adelphia e-mail
19 server is one factor that confirms this time in
20 your mind?

21 A. You have the fact that the system clock
22 has recorded the time and then -- so look for
23 evidence outside of the system clock, right,
24 correct, the first piece of evidence I would look
25 to is the Adelphia server, which is the first

1 B. Rose

2 server it hit after being transmitted.

3 Q. And then the server at Sidley & Austin?

4 A. Two servers at Sidley & Austin.

5 Q. So two e-mail servers?

6 A. Correct.

7 Q. So three e-mail servers now, Adelphia
8 and two at Sidley Austin, those help bolster your
9 confidence in the creation date of the two TIFF
10 images?

11 A. Correct.

12 Q. Anything else?

13 A. I think that's it.

14 Q. Without those e-mail servers,
15 hypothetically, say you had no evidence of e-mail
16 servers at all, would you still be confident in
17 that creation date, that time being accurate?

18 A. I mean, that's a complete hypothetical,
19 since I have those e-mail servers, so it's a
20 little hard to evaluate that outside the context
21 of having those e-mail servers, which I think
22 clearly demonstrate the times are correct.

23 If all we had was the system clock,
24 which is not the case here, I would say that, you
25 know, we would look for evidence of system clock

1 B. Rose

2 manipulation.

3 Absent that, I think, you know, we
4 would proceed as if it were the correct time,
5 but, you know, your confidence of not having all
6 of those external factors would be much less than
7 it is when you have external evidence that's all
8 consistent with the time.

9 Q. Well, what about -- okay.

10 And you've been an expert in other
11 cases; right, an expert witness?

12 A. I have not been an expert witness in
13 other cases.

14 Q. This is the first time you have ever
15 even sat for a deposition?

16 A. Well, I have sat for a deposition
17 before.

18 Q. Have you ever been asked hypotheticals
19 at those depositions?

20 A. Yes.

21 Q. Okay.

22 So you know that's a fair question for
23 experts, hypotheticals?

24 A. Yes.

25 Q. So the hypothetical I asked you was if

1 B. Rose

2 the three e-mail servers didn't exist, none of
3 that data existed, it's fair to say you'd have
4 less confidence in the creation date of those two
5 TIFF images; true?

6 A. I mean, again, your hypothetical asks
7 me to discard the servers, it doesn't -- I mean,
8 we would look for other, you know, other evidence
9 outside of that.

10 Assuming the only thing I have -- maybe
11 this is your hypothetical -- the only thing I
12 have is the time appended by the computer
13 itself --

14 Q. Yes, assume that.

15 A. -- would I be as confident as I am in a
16 case where I also have consistent evidence from
17 external servers?

18 No, I would not be as confident.

19 Q. And if you found evidence of a system
20 clock being manipulated along with only having
21 the date appended to that file, would you be even
22 less confident in the accuracy of that creation
23 date?

24 A. I think that would depend on the system
25 clock manipulation and our evaluation of how it

1 B. Rose

2 would have affected that particular e-mail.

3 These are all very context -- the
4 problem with the hypotheticals is they are all
5 very contextual, so it really depends on the
6 other evidence, you know, in terms of if I have a
7 system clock manipulation that appears to have
8 impacted that time, I wouldn't be confident in it
9 at all.

10 Q. How would you know if a system clock
11 manipulation affected a particular file's
12 creation date?

13 A. Well, if you -- I mean, if I can show
14 that at the time the file was created on the
15 computer the system clock was backdated, that
16 would be one way.

17 Q. Are you aware that Mark Zuckerberg --
18 related to the TIFF images attached to the Kole
19 e-mail, your expert opinion in that report was
20 that that is the authentic contract between the
21 parties; true?

22 A. The TIFF images, the StreetFax contract,
23 yes.

24 Q. And you are aware that Mark Zuckerberg
25 has never offered a declaration in this case

1 B. Rose

2 agreeing with that position, that that is the
3 authentic contract between the parties?

4 A. I am not aware one way or the other of
5 what Mr. Zuckerberg has offered in the way of
6 declarations.

7 Q. Are you aware that none of the other
8 experts in this entire case have offered an
9 opinion that the StreetFax contract is the
10 authentic contract between the parties?

11 A. I don't know that one way or the other.

12 Q. Now, we talked a little bit earlier
13 about rootkits and malware; you remember I was
14 discussing that?

15 A. Yes.

16 Q. And rootkits can be used by hackers,
17 you would agree?

18 A. Rootkits can be used by hackers, I
19 would agree with that.

20 Q. Can hackers take over the operation of
21 a computer, is that one of the things hackers
22 have the ability to do?

23 A. It depends, again, on the specific
24 circumstances. I mean, if they have the proper
25 access and, you know, that the software which

1 B. Rose

2 would allow that kind of control is in place,
3 yes.

4 Q. Does that kind of software exist for
5 them to do that, for hackers to do that?

6 A. Does it exist in the world?

7 Q. Yes.

8 A. Yes.

9 Q. Can hackers take over e-mail programs?

10 A. What do you mean, take over e-mail
11 programs?

12 Q. Intrude on someone's computer and send
13 out e-mails on their behalf.

14 A. Yes.

15 Q. Can hackers intrude on someone's
16 computer and deposit files onto that person's
17 computer?

18 A. There's no questions about what hackers
19 are capable of doing in the world today, yes.

20 Yes.

21 Q. Well, let's talk about back in 2004,
22 then.

23 Would you amend any of my answers if I
24 asked you those questions and said in 2004 can a
25 rootkit be used by a hacker, is there a different

1 B. Rose

2 answer?

3 A. I think the same general answer would
4 apply to 2004.

5 Q. Very well.

6 Did your work on this case cause you to
7 learn that anyone involved in this case has some
8 ability for computer hacking?

9 MR. SOUTHWELL: Object to the form.

10 A. Could you rephrase that?

11 Q. You analyzed a bunch of computers in
12 this case; right?

13 A. Right.

14 Q. Some were provided or produced by Paul
15 Ceglia; correct?

16 A. Correct.

17 Q. Some were produced by Mark Zuckerberg?

18 A. Correct.

19 Q. In part of your analysis of those
20 computers did you learn that anyone involved in
21 this case has hacking ability?

22 A. Nothing in my analysis indicated that
23 anyone involved in the case had hacking ability,
24 no.

25 Q. Are you aware from things outside of

1 B. Rose

2 your analysis that Mark Zuckerberg has some
3 proficiency as a computer hacker?

4 A. I am aware in a general sense that
5 Mr. Zuckerberg has been accused of some actions
6 which were called hacking in the past; I do not
7 have any information regarding his proficiencies
8 or his ability to do that.

9 Q. Are you aware that his company Facebook
10 has a hacking contest every year amongst
11 employees?

12 A. No.

13 Q. Are you aware that Mr. Zuckerberg has
14 hired renowned hackers to be employees?

15 A. I'm not aware of that one way or the
16 other.

17 Q. Did you look for evidence of hacking on
18 Paul Ceglia's parents' computer where these TIFF
19 images supposedly originated from?

20 A. We did not.

21 Q. But even if you looked at it, is it
22 possible that a hacker who accessed a computer
23 could leave no trace of that intrusion? Isn't
24 that possible?

25 A. It is theoretically possible for a

1 B. Rose

2 hacker to leave no trace.

3 Q. Now, the StreetFax contract that we've
4 been talking about you found on two different
5 pieces of media; correct? I think you say that
6 at the top of 15, page 15 of Exhibit 21?

7 A. Yes, that's correct.

8 Q. And let's just be clear for the Court,
9 because later on on that page -- correct me if
10 I'm wrong -- you say, you clarify that the
11 StreetFax contract was found on a hard drive that
12 you analyzed and a forensic copy of that same
13 hard drive that you analyzed.

14 Is that a fair statement?

15 A. I don't think we're clarifying anything.
16 I think we're being very clear about the pieces
17 of media we analyzed. The StreetFax contract was
18 on two different hard drives. I think we're very
19 clear on that very page; right? I think actually
20 in the first paragraph in the second sentence
21 that in fact one is a copy of a hard drive that
22 we made and was produced to us in July and the
23 other, again, was a copy we made of StreetFax in
24 July that we determined upon analysis was a
25 actually a forensic image of the hard drive, so

1 B. Rose

2 we have the Seagate hard drive that's produced to
3 us, we have a Western Digital, we determined the
4 Western Digital hard drive was in fact a forensic
5 copy that had been previously made of that, and I
6 think we're very clear about that in the second
7 sentence.

8 Q. So the forensic copy was that physical
9 hard drive that had that forensic copy on it,
10 that was not produced by Paul Ceglia, that was a
11 copy made of something he produced; true?

12 A. Are you referring to the Western
13 Digital hard drive?

14 Q. I'm referring to the forensic copy that
15 you mentioned on page 15.

16 A. Okay.

17 The forensic copy was on a Western
18 Digital hard drive that was produced to us in
19 Chicago by Mr. Lake as part of the Ceglia media.
20 To me, that's produced by Paul Ceglia, so I would
21 say that both of them in fact were produced to us
22 by Paul Ceglia.

23 Q. Now, the computer where these TIFF
24 images were found, did you read Paul Ceglia's
25 father's declaration that was filed in this case

1 B. Rose

2 that was document number 419?

3 A. I may have read it at one point in
4 time, I don't have a specific recollection of
5 that.

6 Q. Well, let's assume, since you don't
7 have a recollection of that, that Mr. Ceglia's
8 father declared that his son, Paul Ceglia, the
9 plaintiff, never had access to the computer on
10 which the Kole e-mail originated, let's assume he
11 says that.

12 A. Rather than assuming it, can we
13 actually look at a copy of the --

14 Q. This is a hypothetical for now.

15 Let's just assume he said that, which
16 I'll represent to you he did say that in document
17 419, but I'll let you answer the question with an
18 assumption, you don't have to accept the fact as
19 true, we'll just do the hypothetical.

20 Would that change your opinion that
21 Paul Ceglia sent those e-mails if his father
22 declared under the penalty of perjury that Paul
23 Ceglia never had access to that computer?

24 MR. SOUTHWELL: Mr. Boland, are you
25 referring to document 419?

1 B. Rose

2 MR. BOLAND: That's what my notes say,
3 yeah.

4 MR. SOUTHWELL: Because that's not what
5 it says. It doesn't say anything about he
6 never had access. It asserts my son Paul
7 Ceglia never used the computer, which is
8 contrary to some earlier declarations he's
9 provided, but --

10 MR. BOLAND: Let's clarify that.

11 Q. Let's just say hypothetically Mr. Ceglia
12 does offer a declaration of the father, Carmine
13 Ceglia, saying that Paul Ceglia never had access,
14 never used, never got anywhere near that
15 computer.

16 Would that declaration change your
17 opinion regarding your conclusion that Paul
18 Ceglia sent those e-mails?

19 A. Based on the forensic evidence, I think
20 it is clear that Paul Ceglia sent those e-mails.
21 I would not regard a statement like that from
22 Mr. Ceglia to be credible in light of the
23 evidence that's been uncovered in this case, so
24 no, it would not change my opinion.

25 Q. And how did, in your opinion, based on

1 B. Rose

2 your forensic analysis, how did Paul Ceglia send
3 this e-mail, meaning was he physically at the
4 computer and hit the keys on the keyboard to send
5 it or did he somehow remotely access the computer
6 and then send the e-mail that way?

7 A. Again, given the fact that the files
8 were copied physically to the hard drive, I would
9 think the most likely explanation is in fact a
10 physical access to the computer, but, you know, I
11 can't eliminate remote access as a possibility.

12 Q. So you're saying one's more likely? Is
13 that your --

14 A. I believe so.

15 Q. And define the term "likely." What
16 does that mean? How did you rule out the
17 likelihood of remote access?

18 A. Define likely?

19 I think if I had to from -- if you
20 asked me do I think he had physical access or
21 remote access, I think there's a greater
22 probability, meaning more likely that he had
23 physical access, that's likely.

24 Q. And what's the forensic evidence that
25 supports that opinion?

1 B. Rose

2 A. Again, I think the copying of the
3 scanned image to the hard drive immediately
4 beforehand to me is more consistent with physical
5 access, but, again, you know, you're asking
6 whether remote access is possible? Yes.

7 And I should say, you know, I mean, I'm
8 talking remote access theoretically. You know,
9 whether under the circumstances and the
10 capabilities that, you know, Adelphia had at the
11 time in terms of whether it offered Web access
12 and all of that, that's a specific question as to
13 whether in these circumstances remote access is
14 possible, I don't know that.

15 As a general matter, I can't eliminate
16 remote access as a possibility.

17 Q. Did your investigation reveal where
18 Paul Ceglia resided at the time that e-mail was
19 sent?

20 A. Our forensic analysis of the Ceglia
21 media did not reveal where Mr. Ceglia resided at
22 the time this was sent.

23 Q. And did it reveal where Paul Ceglia's
24 parents' computer was physically located at the
25 time those e-mails were sent?

1 B. Rose

2 A. There is some evidence that in 2010
3 that IP address was registered to the Buffalo,
4 New York, area, so I think there's some support
5 for the fact that the computer resided somewhere
6 in upstate New York, but in terms of drawing a
7 definitive conclusion about where that resided, I
8 can't do that from the forensics.

9 Q. Well, you'd agree with me that your
10 conclusion about -- again, another
11 hypothetical -- your conclusion about Paul Ceglia
12 having most probably physical access to the
13 computer to send the e-mails, if he resided
14 outside the state of New York and was physically
15 outside the state of New York at the time those
16 e-mails were sent, the likelihood of him being
17 the one who sent the e-mails is very low, since
18 he wasn't physically accessing the computer at
19 that time; true?

20 MR. SOUTHWELL: Object to the form.

21 A. I completely disagree with that.

22 I mean, the question is not where did
23 he reside, the question is where he is at a
24 particular point in time.

25 I reside in New York, I visit my

1 B. Rose

2 parents frequently in Indiana, so I don't
3 think -- and I use their computer when I'm there,
4 so I don't think you can possibly conclude from
5 where somebody purportedly resides that there's a
6 low likelihood they were at their parents' house
7 or at a location where their parents resided at
8 any particular point in time.

9 Q. Well, let's not use reside. I'll be
10 more precise.

11 What if hypothetically on the date and
12 time these e-mails were sent he was not
13 physically in Buffalo, New York, he was in
14 another state, then what's the likelihood he sent
15 the e-mails then, what's the probability he was
16 the one who sent the e-mail?

17 A. I wouldn't want to put a number on it.

18 Again, you know, remote access is
19 possible. I think it is more likely explained by
20 physical access, but in terms of if Mr. Ceglia
21 was in a particular location, what's the
22 likelihood he sent the e-mails, I think it is
23 absolutely clear from all of the evidence in this
24 case, from the StreetFax e-mails themselves, from
25 the attempt to manipulate the Work For Hire

1 B. Rose

2 document, attempt to create fraudulent Work For
3 Hire documents, from all the manipulation of the
4 computer we see in this case I think it is
5 absolutely clear that the StreetFax e-mails, that
6 those e-mails are genuine, were sent by Paul
7 Ceglia and contain the authentic contract, so I
8 think the probability that Mr. Ceglia sent those,
9 regardless of where he was at any particular
10 point in time, is exceedingly high.

11 Q. So it's your testimony that if at the
12 precise moment those e-mails were sent he was in
13 Florida or New Mexico when these were sent from
14 New York, same probability he sent them as if he
15 was in Buffalo?

16 A. His location would not change my
17 assessment that Paul Ceglia sent those because I
18 think the evidence is absolutely overwhelming.

19 The only thing that would do would
20 change my conclusion about the form of access to
21 the computer, it would not impact my
22 determination as to who sent it at all because,
23 again, the forensics in this case is absolutely
24 overwhelming.

25 Q. Outlook Express, which was the e-mail

1 B. Rose

2 account from which this was sent, has the
3 capacity to synchronize with a Web-based account;
4 true?

5 A. As a general principle, yes, that's
6 true.

7 Q. Do you find any evidence that this
8 Outlook Express account was unable to synchronize
9 with a Web-based account?

10 A. No. Again, you know, I don't know the
11 specifics in terms of versioning and how and what
12 particular data was syncing, you know, those can
13 vary across time, so I don't know how this version
14 of Outlook Express operated in conjunction with
15 an Adelphia account, but I have no reason to
16 believe that there wasn't some syncing capability
17 because that's generally something that Outlook
18 Express offers.

19 Q. And when Outlook Express synchronizes,
20 when it's set up that way, with an external
21 e-mail account, it can synchronize and pull down
22 everything, the inbox, the deleted files,
23 attachments, et cetera; true?

24 A. I think it depends, again, on how it's
25 set up to sync. There is certainly a possibility

1 B. Rose

2 that -- and by deleted items I assume you are
3 talking about deleted items that still physically
4 reside in some kind of trash bin or something.

5 Q. Yes, that is possible.

6 A. There are certainly programs that sync
7 everything, there are programs that sync only the
8 inbox, there are programs that sync the inbox and
9 the sent mail, there are programs which sync
10 everything, it really depends, and a lot of
11 programs can be configured in different ways, so,
12 I mean, as a general matter, if you're asking me
13 is it possible, do there exist programs in the
14 world that allow you to sync the entire contents
15 of a Web mail account to a program like Outlook
16 Express, yes, that's true.

17 Q. And I'm asking about Outlook Express
18 specifically, does it have the capability to
19 synchronize with a Web-based e-mail account?

20 A. It does, again, but, you know, what
21 items specifically are synced I think could vary
22 from version to version and from configuration to
23 configuration, so as to this version of Outlook
24 Express, I don't know.

25 As a general principle, yes, Outlook

1 B. Rose

2 Express does sync with Webmail accounts.

3 Q. So if I have an Outlook Express account
4 and I have it synchronizing with my Web-based
5 account and I'm nowhere near my office computer
6 which has Outlook Express on it, but I'm here at
7 the offices of Gibson, Dunn and I get online to
8 my Web-based e-mail, the one that's synchronizing,
9 and I send an e-mail out with a couple of
10 attachments.

11 Are you with me so far?

12 A. Yes.

13 Q. Okay.

14 And I go back to my office two days
15 later and turn on my computer and Outlook Express
16 is configured to synchronize my entire inbox and
17 sent e-mails with my Web-based account.

18 You'd agree with me that that function
19 would pull down from my Web-based account an
20 e-mail that I sent here at Gibson, Dunn along
21 with the attachments that I sent?

22 A. So your hypothetical is if you from
23 Gibson, Dunn sent two e-mails using your Webmail
24 account and then you returned to your offices and
25 opened Outlook Express would it sync?

1 B. Rose

2 I mean, I think that would depend on
3 how it was configured. My guess would be you
4 would actually probably have to access the
5 Webmail account being synced, and I don't know
6 that there's --

7 Q. But depending on how it was configured,
8 that could happen?

9 A. Again, I think if you went and you
10 accessed your Webmail account and it was set up
11 to sync, yeah, I would think that certainly would
12 be possible.

13 Q. Let's talk about the -- you are
14 familiar with the getzuck e-mail account, it's in
15 your report?

16 A. Yes.

17 Q. And you claim there that Mr. Ceglia
18 deleted e-mails from that account.

19 A. Can I go to the part of the report
20 where we discuss that?

21 Q. Let me ask you, do you recall that
22 conclusion, that he deleted e-mails from the
23 account?

24 A. I recall the conclusion that e-mails
25 had been deleted from the account, it is in my

1 B. Rose

2 recollection that we had evidence that that
3 account had been in use through 2011 and that
4 there were no e-mails existing in the account
5 prior to sometime in January, so the logical
6 conclusion is that something has been deleted.

7 Q. Now, by the phrase you just used, the
8 account was in use, you mean the account was
9 opened at a certain date, that's what you're
10 calling in use?

11 A. That's not what I'm calling in use.
12 What I'm calling in use, I'm saying the
13 account was actually used, not just opened.

14 Q. And used for -- in what way?

15 A. I would have to refresh my recollection
16 with the report for the specifics. I know it was
17 used -- it was used in some way in connection
18 with a receipt of something from Facebook or
19 something like that, we found evidence of that,
20 and so it was evidence of actual use and not just
21 the fact that the account was opened.

22 Q. Let's look at page 52 of your -- of the
23 Exhibit 21 you have in front of you --

24 A. 52, the top page?

25 Q. Yes.

1 B. Rose

2 And I think section D is where you talk
3 about deletion of data from the getzuck Webmail
4 account.

5 Do you see that?

6 MR. SOUTHWELL: Are you referring to
7 Exhibit 1?

8 MR. BOLAND: What did I say?

9 MR. SOUTHWELL: You said Exhibit 21.

10 MR. BOLAND: I'm sorry, Exhibit 1.

11 Thank you for the correction.

12 MR. SOUTHWELL: And we're on page 52 in
13 the upper right?

14 MR. BOLAND: Page 52.

15 A. Yes.

16 Q. So the activity that you found --
17 correct me if I'm wrong -- was that the Ceglia
18 media was used to read an e-mail on April 18,
19 2011.

20 Do you see that phrase there?

21 A. Mm-hm.

22 Q. And that was an e-mail received from
23 Facebook, actually, on the activation of a
24 Facebook account; right?

25 A. Yes.

1 B. Rose

2 Q. And do you know how Facebook accounts
3 get set up?

4 A. Not specifically.

5 Q. Do you know if Mr. Ceglia had to send
6 an e-mail to someone at Facebook to set up that
7 account, if you know?

8 A. I don't know.

9 Q. So what you do know is an e-mail was
10 received from Facebook, so there's one; right?

11 A. Yes.

12 Q. And there's no evidence you found of
13 any e-mails being sent from that account; true?

14 A. I believe the evidence we have, again,
15 is the evidence that's outlined here, that that
16 e-mail address was used to receive an e-mail
17 related to the Facebook account, yes.

18 Q. And so my question is, no evidence that
19 e-mails were ever sent from that account; true?

20 A. Well, I don't know whether that's the
21 case because I don't know whether in fact the
22 post-January 28, 2012 e-mail included sent
23 e-mails or not.

24 Q. I'm just saying your report doesn't
25 show any evidence that he ever sent an e-mail

1 B. Rose

2 from that account.

3 True?

4 A. Again, that's not relevant to our
5 report; right?

6 We received that e-mail data, we looked
7 at it for only two things; one, we reviewed it
8 for presumptively relevant materials that would
9 be produced to you and then subsequently to
10 Gibson, Dunn to pass privilege review.

11 We identified no such data in the
12 existing data. We did know from an Internet
13 analysis from the Ceglia media that in fact that
14 e-mail was in use for the purposes of receiving
15 an e-mail from Facebook in April 2011 and despite
16 that there was no content for any of 2011 up to
17 January 28th of 2012. That indicates to me the
18 e-mail's been deleted. I don't know who deleted
19 it, I don't know what the activity was that led
20 to the deletion, I don't know how much data was
21 received or sent prior to January 28, 2012.

22 Your question to me was do I have any
23 evidence that it was used to send e-mail.

24 What I'm saying is it's possible that
25 we have sent e-mail from after January 28, 2012.

1 B. Rose

2 I don't know, because my only analysis of that
3 media, of that data was to see whether there were
4 presumptively relevant materials.

5 Q. But I'm talking about your conclusion
6 that my client did have e-mails in that account
7 and he deleted them.

8 It's fair to say your report indicates
9 that he actually had e-mails which he deleted
10 from that account; true?

11 A. Yes, based on the conclusion, again,
12 that we have evidence it was in use and there's
13 no e-mail.

14 Q. All right.

15 Let's ask about the Harvard e-mail
16 account of Mr. Zuckerberg.

17 You are aware that there are no e-mails
18 at all in that account from -- related to
19 Mr. Ceglia and Zuckerberg from, the earliest one
20 being June 2003, you are aware of that, that's
21 the earliest e-mail?

22 A. I have not done a date analysis of that
23 e-mail, no.

24 Q. Well, your team worked to produce the
25 e-mail that was provided us from that account;

1 B. Rose

2 true?

3 A. Correct.

4 Q. And were you aware that the e-mail that
5 your team produced using a variety of search
6 terms which included my client's name and
7 Mr. Zuckerberg didn't produce a single e-mail
8 between those two individuals until June of 2003?
9 Are you aware of that?

10 A. I am not aware of the content of that
11 production.

12 Q. All right.

13 Well, let's say that that's what
14 happened, okay, let's use a hypothetical.

15 Are you aware that the contract in this
16 case, the paper contract that's being disputed
17 has a signing date of April 28, 2003? Are you
18 aware of that?

19 A. Again, I don't think I've seen the
20 paper contract.

21 Q. Copies that you've seen.

22 A. Yes, the copies I've seen have a signing
23 date of that date.

24 Q. Okay.

25 And April is before June in the

1 B. Rose

2 calendar; right?

3 A. Well, April 2003 is before June 2003.

4 Q. Correct.

5 And would you agree with me, then, if
6 there are no e-mails that you were able to
7 recover, your team, from Mr. Zuckerberg's Harvard
8 account from April to June of 2003, that
9 Mr. Zuckerberg must have deleted them?

10 MR. SOUTHWELL: Objection.

11 Q. I am asking if that's your conclusion
12 based on that hypothetical, if there's no e-mails
13 from April of '03 when the contract was signed
14 between the parties and June of '03, which was
15 the first e-mail that we were provided, they must
16 have been deleted?

17 A. That would not be my conclusion.

18 Q. Very well.

19 But it is your conclusion that my
20 client had the getzuck e-mail account in use and
21 because there's no e-mails in it, it's been
22 deleted?

23 A. Excuse me --

24 Q. Just let me finish the question.

25 A. Excuse me, you keep misrepresenting

1 B. Rose

2 what I said.

3 What I said was --

4 Q. Sir, I'm asking the questions. I
5 didn't finish my question.

6 A. And I'm answering the question.

7 What I said was that this e-mail
8 account was in use prior to January 28, 2012,
9 there was data in there.

10 MR. BOLAND: I am going to object to
11 this entire answer. There's no question
12 pending. I'm going to object to everything
13 he is saying and ask that it all be stricken
14 from the record.

15 A. I absolutely was clear with you that I
16 can't say who deleted --

17 MR. BOLAND: You know, if we need to
18 dial up the judge, Mr. Southwell, and ask
19 him to instruct the witness to answer
20 questions, I'll be happy to take a break and
21 do that.

22 MR. SOUTHWELL: He answered your
23 question. I'm looking at the transcript
24 right here, he answered your question.

25 Why don't you let him finish.

1 B. Rose

2 MR. BOLAND: I didn't finish my
3 question before he started speaking.

4 MR. SOUTHWELL: There was a question, a
5 question mark and then he proceeded.

6 Q. It's your position that Mr. Ceglia
7 deleted e-mails from the getzuck account?

8 A. It is my position that e-mail was
9 deleted from the getzuck account.

10 Q. So your answer is yes?

11 A. My answer is not yes.

12 Your question was my position is
13 Mr. Ceglia deleted the e-mail. I am being very
14 clear with you that my position is there was
15 e-mail in that account prior to January 28, 2012
16 that is no longer there, meaning that it was
17 deleted.

18 I'm offering no opinion whatsoever
19 -- let's be clear about this -- as to how that
20 e-mail was deleted or as to who deleted it, so
21 the answer to your question is no.

22 Q. How many e-mails were deleted?

23 A. I do not know what was deleted, I do
24 not know what content was in that account.

25 Again, what I know is that that account

1 B. Rose

2 was in use prior to January 28, 2012, we know it
3 received at least one e-mail. There is no data
4 in that account, so something has been deleted; I
5 can't tell you who deleted it, I can't tell you
6 what has been deleted because that e-mail is
7 gone.

8 Q. When were the e-mails deleted from that
9 account?

10 A. I cannot tell you that except to say
11 that it was prior to January 28th of 2012.

12 Q. Can a person set up an e-mail account
13 and not ever send an e-mail using that account?

14 A. Yes.

15 Q. What evidence do you have that
16 Mr. Ceglia set up this account and actually sent
17 e-mails out to someone?

18 A. Again, the only evidence we would have
19 is if the post-January 28, 2012 e-mail includes
20 sent e-mail.

21 I don't have that information in front
22 of me, I don't know whether that's the case or
23 not. I don't have evidence right now that I can
24 rely on to tell you that Mr. Ceglia set up that
25 account and sent e-mail from it.

1 B. Rose

2 Q. In your report you talk about a Hex
3 editor.

4 Do you recall that?

5 A. I do.

6 Q. And it's true that your analysis did
7 not find -- well, let me back up.

8 A Hex editor is a computer program?

9 A. Yes.

10 Q. You did not find any evidence of a
11 computer program in the category of Hex editor
12 installed on any of the media that you analyzed?

13 A. No. We found evidence of the use of a
14 Hex editor, but you're correct, we did not find
15 the actual Hex editor installed on the computer,
16 which, frankly, is not surprising given that
17 people who use Hex editors generally delete them.

18 Q. And the anomalies that you found that
19 you attributed to a Hex editor, is a Hex editor
20 the only program that can create those anomalies,
21 if you know?

22 A. Can I go to the page where we discussed
23 the --

24 Q. Very well.

25 A. So, I mean, so I think it depends on

1 B. Rose

2 what anomalies you're talking about. I mean, I
3 think what we discuss is the fact that there are
4 six documents which I think, you know, including
5 ones named test document, including ones which
6 have the content that says I'm going to
7 essentially test how the Hex editor worked, and
8 it's not a direct quote, and I would give you the
9 direct language, but it's been redacted from this
10 report, that leads to our conclusion that in
11 fact, you know, this is consistent with someone
12 using a Hex editor to try to forge a document.

13 As to the second anomaly, which is is
14 in this sfwebworkforhiremz.doc which is an
15 anomaly in the metadata, depending on whether it
16 was viewed through, you know, Metadata Assistant,
17 which is a common tool we use, or a forensic
18 program like EnCase.

19 I think, based on the evidence, the
20 only reasonable conclusion is that this was the
21 result of a Hex editor; whether that is the only
22 possible explanation for that I don't know.

23 Q. And what other explanations are
24 possible?

25 A. I don't know.

1 B. Rose

2 Q. The Hex editor in this case you claim
3 was used to manipulate metadata on a file;
4 correct?

5 A. In one instance.

6 Q. Well, what was it used for in the other
7 instance?

8 A. It was actually used to create a
9 fraudulent document, it was used to test how the
10 Hex editor worked, it was used to essentially, I
11 think, merge documents together to try to create
12 a fraudulent document that appeared as if it was
13 one document.

14 I would say, frankly, that based on all
15 the evidence that it was your client's attempt to
16 manipulate the Work For Hire document and create
17 a fraudulent document.

18 Q. So the Hex editor was used to alter
19 metadata is one of your conclusions; right?

20 A. Yes.

21 Q. What other ways can metadata be altered
22 other than a Hex editor, or is that the only way,
23 if that's what your testimony is going to be?

24 A. Again, I think the anomaly we see here,
25 which is it being -- it's not just manipulated

1 B. Rose

2 metadata, it's what we see, which is that when
3 you view it in metadata assistant you essentially
4 get no metadata.

5 When you view it in a forensic tool,
6 what you see is the metadata, although it is
7 interspersed with machine code. I think that
8 particular circumstance -- I don't know that
9 there is any explanation for that other than the
10 use of a Hex editor, but, again, if you are
11 asking me whether anything else is possible, I
12 don't know whether there are any other
13 explanations, I don't think there are any likely
14 explanations given those circumstance.

15 Q. That's not my question.

16 What other ways can metadata be altered
17 is my question, generally.

18 A. I mean, there are programs which allow
19 you to manipulate metadata.

20 Q. For example, can you list some of those?

21 A. I don't know the names of the programs.
22 I mean, there are some open source tools that do
23 it, I know there are some software versions you
24 can buy that allow you to do it, I don't know the
25 names.

1 B. Rose

2 Q. How about if I copy files from my
3 computer on a CD and give them to you and you
4 copy them out of your computer at your office,
5 can metadata change during that process associated
6 with those files?

7 A. Metadata can change, yes.

8 Q. And that's not intentional change, it
9 just happened in that process, the hypothetical
10 that I gave you?

11 A. Are you talking about like an update of
12 a creation date or an access date?

13 Q. Yes.

14 A. That can happen through ordinary usage.
15 This particular circumstance cannot
16 happen through ordinary usage.

17 Q. How did you rule out ordinary usage as
18 not a possible cause of that, how did you rule
19 that out?

20 A. The ordinary update of a file -- I
21 mean, you're right, if I have last 10 authors
22 metadata and I go on and I change the document, I
23 am going to now be the first last 10 author and
24 one of the names is going to drop off, that is a
25 common alteration if I am going to write the

1 B. Rose

2 document.

3 To have this, last 10 authors metadata
4 with all of these question marks that essentially
5 metadata assistant is returning me the idea that
6 there's no metadata here, that's an anomaly,
7 that's not caused by ordinary usage of a file,
8 and the fact that I can now view it in EnCase
9 Forensic and see what some of the metadata is,
10 including the file path, that indicates to me a
11 Hex editor was been used. That is not -- this
12 pattern where metadata assistant cannot give me
13 any metadata does not happen merely because we
14 exchanged a file and somebody modified it.

15 Q. So the only cause for that is a Hex
16 editor is your opinion?

17 A. I think the only reasonable explanation
18 for these facts is that a Hex editor was used.

19 Q. That's not my question.

20 Is that the only way that that happened?

21 A. Again, I think I've answered this
22 before. I don't know whether anything else is
23 theoretically possible. I'm drawing a conclusion
24 based upon the evidence I see. In this case I
25 don't think there's a reasonable explanation for

1 B. Rose

2 this other than the fact that a Hex editor was
3 used.

4 Theoretically possible?

5 I don't know one way or the other.

6 Q. Those 15 to 20 computers of
7 Mr. Zuckerberg's that someone on your team
8 evaluated, was there evidence of Mr. Zuckerberg
9 using those computers to electronically
10 communicate with anyone?

11 MR. SOUTHWELL: Objection, calls for
12 speculation. He already said he was not
13 involved with that.

14 Q. If you know.

15 A. I am not aware one way or the other.

16 MR. BOLAND: Can we take it about a
17 10-minute break?

18 MR. SOUTHWELL: Are you close to being
19 done?

20 MR. BOLAND: I don't know. I'm going
21 to take a break and sort of assess where I'm
22 at.

23 MR. SOUTHWELL: We can go off the
24 record.

25 (Recess taken.)

1 B. Rose

2 THE VIDEOGRAPHER: The tape is rolling.

3 BY MR. BOLAND:

4 Q. Mr. Rose, we are back on the record.

5 I want to go back over a couple of
6 things that, just a couple of questions on a
7 topic or two that we already discussed.

8 Did your team -- your team evaluated 15
9 or 20 computers that Mr. Zuckerberg used
10 historically; right?

11 A. I don't know that I would it call my
12 team; Stroz Friedberg personnel did, yes,
13 correct.

14 Q. I'll be clear, Stroz Friedberg
15 personnel, right.

16 I am not going to ask you again, but we
17 already determined you don't know who actually
18 did the analysis or who supervised; true?

19 A. Correct.

20 Q. Did Stroz Friedberg rely on the
21 analysis of those computers in coming to the
22 conclusions in your report that you filed in this
23 case?

24 A. Well, we -- I mean, we didn't find
25 anything relevant on those devices so no, the

1 B. Rose

2 answer is no.

3 Q. If you had found something relevant on
4 those devices would you have inserted it into
5 this report?

6 A. I don't know. I mean, you know, we
7 were -- we were asked to look at the authenticity
8 or inauthenticity of the document and to examine
9 Ceglia media, so we had to consider how that fit
10 into what the Court had asked us to do, but in
11 general, if we had found something in there that
12 I think, you know, was, it was relevant, I think
13 we would have considered including it, certainly.

14 Q. The Kole e-mail that we had some
15 discussion about, is it possible that someone
16 other than Paul Ceglia, physically possible that
17 someone else other than Paul Ceglia could have
18 sent that e-mail?

19 A. Is it physically possible?

20 I suppose anything's possible.

21 Q. So the answer is yes, it's possible?

22 A. Yes.

23 Q. I know you've concluded otherwise;
24 true?

25 A. I think it's implausible, but it's

1 B. Rose

2 certainly theoretically possible.

3 Q. Have you ever in either your personal
4 or professional work used the copy-and-paste
5 function on some content on the Internet and then
6 pasted into a document?

7 A. Yes.

8 Q. And are you familiar with one of the
9 common programming file formats for the Internet
10 is HTML?

11 A. Yes.

12 Q. And when you've copied and pasted
13 stuff from the Internet to a document has that
14 process ever resulted in that content's
15 formatting being different in the document from
16 what it looked like on the Internet?

17 A. Yes.

18 Q. In the conversation we had about the
19 Hex editor, I need to be a little more precise in
20 my question about one of the areas there.

21 Can you detail for me, list for me the
22 computer forensics evidence that supports your
23 conclusion that the person who used the Hex
24 editor was Paul Ceglia?

25 A. Can you repeat that question? I'm

1 B. Rose

2 sorry.

3 Q. Yes. Let me clarify.

4 A. Sure.

5 Q. I am aware from your report that you
6 believe, at the very least, a Hex editor was used
7 to manipulate some metadata.

8 Is that a fair statement?

9 A. Yes.

10 Q. It was used?

11 A. Yes.

12 Q. And you detailed the forensic evidence
13 that you believe supports that opinion.

14 Now what I'm asking you is not the
15 forensic evidence that supports that it was used,
16 but what, if any, computer forensics evidence
17 supports the conclusion that Paul Ceglia used the
18 Hex editor?

19 And I'm saying forensic evidence.

20 A. Sure.

21 So the six documents that were created,
22 their names, for instance, document created to
23 copy out of test doc, that I think is very
24 clearly a pattern to try to create a merged
25 forged document. Whether that was done by -- I

1 B. Rose

2 think that was clearly done by someone with
3 motivation to create a fake document. In this
4 case the person with the motivation to create a
5 fake document, the person with the greatest
6 motivation is obviously Mr. Ceglia, who is
7 attempting to rely on it to support a claim worth
8 a tremendous amount of money, and whether it was
9 actually Mr. Ceglia did that or somebody working
10 in concert with Mr. Ceglia, I don't know, but I
11 think it's somebody clearly with motivations to
12 create a false document and in this case I think
13 the person with the greatest motivation is
14 Mr. Ceglia.

15 Q. And how do you know what his motivation
16 is?

17 A. How do I know what his motivation is?

18 Q. How did you determine what his
19 motivation is?

20 You just talked about his motivation.

21 How did you determine that?

22 A. My understanding is he claims to, based
23 on a contract, own half of Facebook. That seems
24 like clear motivation to me, but --

25 Q. Clear motivation to do what?

1 B. Rose

2 A. He's made a claim for half of Facebook,
3 and clearly your motivation there is money,
4 right? Facebook's a tremendously valuable
5 organization. I think the motivation is money.

6 The motivation, then how do you get a
7 claim?

8 Well, he can't base it on the real
9 document, the StreetFax contract, because that
10 doesn't mention Facebook, so I think the
11 motivation to create a false document is to try
12 to create something which is not real and didn't
13 exist in 2003 and is not a contract between Mark
14 Zuckerberg, but which appears to be a contract on
15 which you can support a claim.

16 I mean, your motivation, your ultimate
17 motivation is money. The actions taken are, you
18 know, all of this, it's not just the Hex editor,
19 but all of this evidence of manipulation of
20 documents and fraud in an attempt to support that
21 claim.

22 Q. But you don't have any opinion --
23 you're not challenging any of the plaintiff's
24 experts' opinions that the paper, two-page paper
25 document is real?

1 B. Rose

2 A. I'm limiting to digital forensics, I
3 haven't considered the paper at all, I have no
4 opinion about that.

5 Q. You are not challenging any of their
6 claims?

7 A. I have no opinion about it whatsoever.

8 Q. Are you challenging any of their claims?

9 A. I have no opinion about it.

10 Q. The question is not whether you have an
11 opinion.

12 Do you have any evidence to challenge
13 their claims?

14 A. I'm not challenging or not challenging
15 their claims, I have no opinion about their
16 claims.

17 Q. Now, you talk about my client's
18 motivation sort of is outside the realm of
19 computer forensics, it seems to me, wouldn't you
20 agree?

21 His motivation doesn't come out of
22 metadata or applications or whatever, that
23 doesn't communicate someone's motivation?

24 A. I think that's correct, yes.

25 Q. And you are speculating about his

1 B. Rose

2 motive?

3 A. Well, I'm not sure I understand that
4 question.

5 I mean, I think -- I think it is a
6 clear motive. Whether that's actually what's
7 motivating him, I mean, I think it's a fairly
8 clear motive, but I'm not inside his head, if
9 that's your question.

10 Q. If his paper contract, which you have
11 no opinion about -- let's have a hypothetical --
12 if the paper contract's authentic, then you'd
13 agree with me he doesn't have a motive to fake
14 electronic documents because he's got a real
15 contract.

16 Again, it's a hypothetical. If the
17 paper contract is authentic, he has no motive to
18 create electronic documents?

19 A. So hypothetically, if his paper
20 contract is authentic, I would say that's
21 correct, given the forensic evidence that in fact
22 all of this fraud was attempted, I would say, you
23 know, that the corollary to that is it seems
24 clear that the paper contract is not the genuine
25 contract.

1 B. Rose

2 Q. But my question is if you assume it is,
3 so we're not going to talk about it not being
4 authentic, we are assuming it is authentic, then
5 he has no motivation to manipulate electronic
6 files; right?

7 A. I would say that no one has the
8 motivation to manipulate the files and we
9 wouldn't see it on here, but we do, so, I mean,
10 that tells me the contract's not real.

11 Q. Let's talk about motivation.

12 If the paper contract is real you then
13 would agree with me Mark Zuckerberg has a
14 motivation to do something to call into question
15 the authenticity of that paper document. Don't
16 you think he -- he would lose a lot of money too
17 if the paper contract is authentic, wouldn't he?

18 MR. SOUTHWELL: Object to the form.

19 A. I certainly -- I mean, I guess I don't
20 know personally what he would lose versus, you
21 know, Facebook, who owns what in terms of
22 their -- but I assume it would have a very
23 detrimental financial impact on him where he
24 would have to give up half of Facebook.

25 Q. So my point is about the motivation

1 B. Rose

2 comment. If the paper contract's authentic then
3 Mr. Zuckerberg, just like Mr. Ceglia in the
4 opposite conclusion, has a motivation to try and
5 fake evidence to prevent that contract from being
6 enforced; correct?

7 A. True. And I do think if we had seen
8 fraud going the other way, right, that the
9 motivation might play in. If we'd seen, you
10 know, that evidence that the StreetFax contract
11 was in fact apparently a fraudulent document, I
12 would agree with you that, you know, maybe we
13 would factor in the motivation and that my
14 conclusion would be that if the StreetFax
15 contract that we found, if the forensics
16 indicated it was a fake document, I think a
17 logical conclusion would be Mr. Zuckerberg faked
18 it.

19 That's not what the forensics shows.
20 The forensics clearly shows that the StreetFax
21 contract is authentic, there is overwhelming
22 evidence that there's been fraud perpetrated here
23 both in the creation of purported e-mails and the
24 Work For Hire contract relied on by your client.

25 The same holds true there. Our

1 B. Rose

2 conclusion is that the likely person who would
3 engage in that kind of fraud is Mr. Ceglia.

4 Now, whether any specific action was
5 actually taken by Mr. Ceglia or was done by
6 someone, you know, sharing the same motivation or
7 working in concert with him such as use of the
8 Hex editor, again, I can't pinpoint an individual
9 for you, but I can say that, you know, I think,
10 again, Mr. Ceglia is a likely candidate just as
11 if the forensics had cut the other way,
12 Mr. Zuckerberg would be a logical candidate, but,
13 you know, it didn't.

14 Q. Are you aware that Mr. Zuckerberg was
15 provided a signed copy of the agreement he
16 entered into with Mr. Ceglia at the time it was
17 signed?

18 A. I am not.

19 Q. Okay.

20 Are you aware that there are e-mails
21 missing from Mr. Zuckerberg's Harvard e-mail
22 account from periods of time where he was in
23 communication with Mr. Ceglia?

24 A. I am not.

25 Q. And the two TIFF images that make up

1 B. Rose

2 the StreetFax contract are digital images.

3 We've already talked about that; right?

4 A. Yes.

5 Q. And you don't know where they -- what
6 device they originated from for sure; correct?

7 A. Again, not beyond saying they appear to
8 be scanned documents which were then created on
9 the hard drive, you know, on the morning of March
10 3rd, yes.

11 Q. And so they could have been scanned at
12 any point prior to March 3rd?

13 A. They could have been.

14 Q. And what computer forensics evidence,
15 specifically computer forensics evidence about
16 those TIFF images tells you they are the
17 authentic contract between the parties?

18 Not all the other stuff, because I know
19 you've gone into that multiple times, just those
20 two TIFF images, what is all the computer
21 forensics data about those images which tells you
22 that's the authentic contract?

23 A. So, I mean, as an initial matter, let
24 me just say that I think in terms of analysis of
25 the authenticity of the StreetFax contract it is

1 B. Rose

2 impossible from our standpoint to divorce that
3 from the other evidence that's on the computer,
4 including evidence that the purported e-mails
5 were fake, that there was manipulation of
6 documents, there's backdating of the system clock
7 on multiple occasions.

8 Having said that, if you just analyze
9 that alone, and it's not what we do, right, we do
10 everything in context, but if you just look at
11 the TIFF images alone I think you have the fact
12 that it was found on a computer belonging to
13 Mr. Ceglia, it was e-mailed to his attorney, it
14 was e-mailed on March 3rd of 2004, it was
15 e-mailed through intermediary servers at Adelphia
16 and Sidley & Austin before residing at Sidley &
17 Austin.

18 The fact that Sidley & Austin
19 maintained a copy of the e-mail, so you have both
20 the sending side and the receiving side of a
21 contract, the fact that it was sent via e-mail
22 that says -- again, typed, but says Paul to his
23 attorney saying this is the contract with Mark,
24 the fact that you have the March 4th and 5th
25 e-mail chain where, again consistent with the

1 B. Rose

2 small images you've talked about, Mr. Kole says,
3 I can't read this, there's a handwritten note,
4 all of that evidence shows me that this is a
5 genuine contract.

6 I mean, frankly, to me, having the
7 plaintiff produce a piece of media that contains
8 a contract that does not support his claim and
9 having the same e-mail that based on a forensic
10 analysis was purportedly sent to Sidley & Austin,
11 to have that be produced by Sidley & Austin, I
12 mean, even if you put all the other evidence
13 aside, that ends this case, I mean, that is clear
14 smoking-gun evidence that the StreetFax contract
15 is the authentic contract e-mailed from your
16 client to his lawyer at Sidley & Austin and
17 you've got both sides of the conversation
18 producing the same identical e-mail chain.

19 Q. Let me try this way, because you are
20 not answering my question.

21 MR. SOUTHWELL: Objection.

22 Q. Here's a hypothetical, trying to make
23 this more precise.

24 If you found an e-mail between Paul
25 Ceglia and Jim Kole that had a photograph

1 B. Rose

2 attached to it that showed Paul Ceglia's mother
3 walking on a wire between two buildings in
4 downtown New York, okay, like a wire walker,
5 would it be -- and you found all of the server
6 information that you just detailed that went from
7 here to here to here, all the servers, and Sidley
8 Austin had a copy of that e-mail on their server,
9 everything you've just said about that, would it
10 be your position that that image of his mother
11 walking on a wire 400 feet in the air is an
12 authentic picture of an event that actually
13 happened? Would that be your position?

14 A. Forgive me if I pause for a minute,
15 this is an awfully strange hypothetical.

16 So let's assume -- I mean, if I have an
17 e-mail and the e-mail says, Hey, Jim, this is my
18 mom tightrope walking, Paul --

19 Q. There you go.

20 A. -- I mean, I guess the question in my
21 mind would be is there any evidence she is
22 actually a tightrope walker; right?

23 I mean, it's sort of an odd
24 hypothetical because you have posited a photograph
25 of a woman doing something that very few people

1 B. Rose

2 in the world could actually do, so the fact that
3 the image itself is fairly unrealistic, again,
4 you know, these are all fairly contextual
5 analyses, then I think it would lead me to
6 question whether -- I mean, it wouldn't lead --
7 it would clearly be an e-mail sent from, you
8 know, from, I think -- it wouldn't lead me to
9 question it was sent from Paul to Jim Kole, it
10 would lead me to question whether it was actually
11 a true image, but just because of the
12 strangeness, in this case, you know, it's a
13 hypothetical which is completely off point to the
14 actual case, which is you have a standard
15 contract being e-mailed from, you know, Paul to
16 his lawyer at Sidley & Austin and a subsequent
17 conversation about it.

18 Q. Well, to be clear, the e-mail was
19 actually e-mailed from an account owned by Vera
20 and Carmine Ceglia; true?

21 A. Well, let's be careful.

22 It is an account that is registered to
23 Carmine Ceglia. The user name resolves to Vera
24 Ceglia and the e-mail is signed -- again, as you
25 pointed out, not a signature, but typed, is Paul.

1 B. Rose

2 Q. So do you feel you're qualified to
3 testify about the authenticity of images
4 generally when you see them attached to e-mails,
5 you can declare which images are authentic and
6 which images are not?

7 MR. SOUTHWELL: Objection to form.

8 Q. Just yes or no, are you qualified to
9 testify about it?

10 A. It is not a yes-or-no question, it
11 would depend on the circumstances.

12 I mean, in a case like this where I
13 think you have obvious evidence of authenticity
14 and obvious evidence of fraud, it's a fairly
15 straightforward case.

16 In other cases I could see, you know,
17 you depending again on what the image was and
18 what the question was, in some cases I would say
19 yes and in some cases no, but it would depend on
20 what analysis was needed.

21 Q. If I sent an e-mail to Mr. Southwell
22 and typed the message, Hey, check out this
23 contract, Alex, signed, and then typed in Bryan
24 Rose, is it your position that you sent that
25 e-mail?

1 B. Rose

2 I would assume not.

3 A. So you're -- if you sent an e-mail to
4 Alex and typed Bryan Rose, is it my position that
5 I sent that?

6 No.

7 Q. No. I sent a message saying, Alex,
8 this is Bryan Rose sending you a contract, and I
9 typed Bryan Rose, that's not from Bryan Rose is
10 it?

11 A. Not if you sent it, no.

12 Q. Correct.

13 Just because your name is typed at the
14 bottom doesn't mean it's sent from you; true?

15 A. That's true.

16 Again, if you isolate -- if you isolate
17 any individual piece, it's possible to say there
18 are other possibilities, but, again, that's not
19 what we do. We analyze the forensic evidence in
20 the entire context of the case, and so that is
21 one piece of evidence, the fact that it went to
22 Jim Kole is another piece of evidence, the fact
23 that Jim Kole had a handwritten note where he
24 responds is another piece of evidence, the
25 evidence of backdating is another piece of

B. Rose

evidence.

This is all part of building a picture of what happened, and so, I mean, if you pull out any piece of evidence and say what's possible, that's one thing.

That's not what we do. We consider it in the context of the entire case and we say what are the reasonable explanations for this, and given the forensic evidence in this case, the only reasonable explanation is that the StreetFax contract is authentic and that your client was engaged in a massive fraud to attempt to generate a fraudulent contract, that's the only reasonable explanation for the digital forensics taken as a whole.

Q. You've made that clear.

Can we go to page 21 of your report, which is Exhibit 11 --

A. You mean the top level?

Q. Yes.

You just mentioned a response from Jim Kole.

This is the document you were referring to; right?

1 B. Rose

2 A. Correct.

3 Q. And can you -- I'm going to be real
4 specific.

5 Can you read the date and time of that
6 e-mail being sent allegedly from Jim Kole?

7 A. Friday, March 5th, 2004, 11:44 a.m.

8 Q. So that's a day later than the alleged
9 Kole e-mail was sent to him; true?

10 A. I believe it's two days later, correct.
11 The Kole e-mails were sent by Mr. Ceglia on March
12 3rd, 2004. This response appears to be on March
13 5th, 2004, so that's two days.

14 Q. Even better.

15 Whose handwriting is on the document?

16 What computer forensics evidence tells
17 you who wrote that handwritten note?

18 A. Based on the context the fact that it's
19 on an e-mail printed out by Jim Kole and the fact
20 that it is giving legal advice about a contract
21 that was put in front of him by Mr. Ceglia, the
22 context indicates to me that it's Mr. Kole's
23 handwriting, but we haven't -- we are not
24 forensic -- we are not handwriting experts and,
25 you know, I couldn't tell you ultimately who

1 B. Rose

2 wrote that.

3 Q. And this is a reply to Paul's -- I'm
4 sorry, this is an e-mail from paulceglia@msn.com
5 at the top; right?

6 MR. SOUTHWELL: Objection.

7 Can you just be specific? You're
8 referring to the top from Ceglia to Kole on
9 March 5th or the ones below?

10 Q. The very top of the e-mail where it
11 says from paulceglia@msn; isn't that correct?

12 A. Which one, again, the top level e-mail?

13 Q. The most top level --

14 A. Yes, that is from paulceglia@msn.com.

15 Q. Right.

16 Then let's go down into the body of the
17 e-mail, there's another e-mail referenced there
18 and there's the next word "from" and a colon and
19 "to" and a colon.

20 Do you see that?

21 A. Are we talking about the e-mail
22 immediately below towards the top level, the
23 reply to, yes.

24 Q. Yes.

25 And that's paulceglia@msn as well?

1 B. Rose

2 A. Correct.

3 Q. Let's go a little farther down
4 underneath a little portion that says "original
5 message" and under there it says "from," and you
6 see that says paulceglia@msn again?

7 MR. SOUTHWELL: The one on March 4th?

8 A. March 4th, 2004 at 9:49 a.m., yes,
9 that's correct.

10 Q. So this, you would agree with me,
11 appears to be an exchange between, if it's
12 authentic, Mr. Kole and Mr. Ceglia who is
13 communicating using his msn account?

14 A. Correct.

15 Q. Okay.

16 And as you pointed out, the
17 communication that is the Kole e-mail came from
18 an account registered to Carmine Ceglia with the
19 user name Vera Ceglia?

20 A. Correct.

21 Q. And it's your position that this
22 represents a reply by Mr. Kole two days later to
23 the e-mail that came from the Adelpia account?

24 MR. SOUTHWELL: Objection,
25 mischaracterizes.

1 B. Rose

2 A. That's not my position.

3 That is clearly a separate e-mail
4 chain, so the Kole e-mails -- the Kole e-mails
5 that were sent on March 3rd are not part of this
6 chain, so, you know, what it looks like,
7 Mr. Ceglia sends the March 3rd e-mails to
8 Mr. Kole, then opens up a new e-mail chain using
9 his msn account and they go back and forth based
10 on that, and so this is -- so it's not a direct
11 reply.

12 What I'm saying is based on the
13 content, right, it appears to be discussing the
14 contract that was provided on March 3rd, 2004,
15 including a reference to the fact that it can't
16 be read.

17 Q. Do you know if it was actually
18 discussing that blurry TIFF image or another
19 blurry TIFF image? Do you know?

20 Did your forensics analysis tell you
21 what blurry image they're talking about?

22 A. We only have evidence of one blurry
23 TIFF image, so we have one blurry TIFF image or
24 two blurry TIFF images sent on March 3rd, 2004,
25 and a response here indicating that he's received

1 B. Rose

2 blurry TIFF images, which we know he received,
3 right, because we know, A, Sidley & Austin still
4 has them and we know he forwarded them on, so,
5 yes, I'm basing that on the context here that
6 when he's referring to blurry TIFF images he's
7 referring to the blurry TIFF images we know he
8 received two days before.

9 Q. And he is referring to the blurry TIFF
10 images he received from the Adelphia account is
11 your position about when you read this e-mail
12 here?

13 A. That seems to me to be a reasonable
14 inference based on what we know, yes.

15 Q. And how did you rule out someone
16 scanning --

17 A. Again, I'm talking about what --

18 Q. Let me finish the question, sir.

19 A. Yes.

20 Q. How did you rule out additional e-mails
21 with blurry TIFF images sent from Paul Ceglia's
22 msn account to Jim Kole and he's replying
23 regarding that, how did you rule that out?

24 A. I haven't ruled that out. What I'm
25 saying is what is the likely and reasonable

1 B. Rose

2 explanation.

3 Q. How likely is it that an e-mail was
4 sent by Paul Ceglia from his msn account with
5 blurry attachments that he's responding to here,
6 how likely is that?

7 A. Well, I think given the fact that we
8 know he sent blurry TIFF images two days before,
9 it's unlikely.

10 I don't know how to --

11 Q. Why is it unlikely? What do you know
12 about Mr. Ceglia's personal habits that make it
13 unlikely in that two-day period he did not send
14 blurry TIFF images to his lawyer by his msn
15 account?

16 A. I think it's probably unlikely he's
17 sending multiple copies of blurry TIFF images,
18 but --

19 Q. Why is it unlikely? How did you
20 determine that?

21 A. It seems to me people don't generally
22 do that, but, you're right, he could have sent a
23 thousand blurry TIFF images, it seems exceedingly
24 unlikely to me, but I have not ruled it out.

25 Q. Why is it unlikely?

1 B. Rose

2 A. Again, I think I've answered that
3 question. It seems to me that if you have a
4 reference to an attorney having been sent blurry
5 TIFF images and we know that two days before he
6 was sent blurry TIFF images that we know he
7 received, the likely explanation is that he's
8 referring to those TIFF images. I have not ruled
9 out the fact that he's referring to other TIFF
10 images.

11 Q. And there's an intervening two-day
12 period between the Kole e-mail and this one;
13 right?

14 A. Correct.

15 Q. And the Kole e-mail and this one were
16 sent with two different e-mail accounts?

17 I'm sorry, the Kole e-mail is sent with
18 an Adelphia account; true?

19 A. The Kole e-mail was sent from -- yes.

20 Q. And these exchanges with Mr. Kole are
21 sent by Mr. -- are with Mr. Ceglia at his msn
22 account; correct?

23 A. Correct.

24 Q. Okay.

25 So for two days some number of

1 B. Rose

2 e-mails we will never know, right, went back and
3 forth between Mr. Kole and Paul Ceglia from his
4 msn account.

5 You don't know how many they sent back
6 and forth during those two days, do you?

7 A. Well, I know -- I mean, based on the
8 evidence we have, it would appear to be as if the
9 e-mail chain here is four e-mails.

10 Whether, you know, how many more than
11 that, that puts a lower limit on it. I can't
12 tell you how many e-mails would be in the entire
13 chain.

14 Q. And they could have simultaneous
15 different threads going back and forth that
16 aren't even included here; right?

17 A. They could.

18 Q. So you don't know?

19 A. I don't.

20 Q. Now, your report also challenges
21 generally the authenticity -- let me back up.

22 Are you aware that there have been two
23 documents -- two categories of documents
24 submitted to the Court thus far as attachments to
25 pleadings that Mr. Ceglia is claiming are

1 B. Rose

2 authentic, one of which is the two-page paper
3 contract -- you're aware he's claiming that's
4 authentic; right?

5 A. Yes. You are referring to the Work For
6 Hire, what we call the Work For Hire document?

7 Q. Yes.

8 A. Yes.

9 Q. And he's also attached to an amended
10 complaint copies of e-mails that he exchanged
11 with Mr. Zuckerberg which he's claiming are
12 authentic e-mails exchanged with Mr. Zuckerberg.

13 MR. SOUTHWELL: Objection. That's not
14 in evidence, he didn't attach any e-mails.

15 Q. He attached documents to an amended
16 complaint purporting to be copied and pasted
17 e-mails between him and Mr. Zuckerberg.

18 MR. SOUTHWELL: Take a look at the
19 complaint, there's nothing attached.

20 Q. It's attached -- well, let's just
21 assume you've evaluated e-mails that he claims to
22 have exchanged with Mr. Zuckerberg; true? You
23 took a look at them?

24 A. We have evaluated Word documents
25 containing what appear to be cut and paste --

1 B. Rose

2 Q. Well, my client admits they are copied
3 and pasted into the Word document, does he not?

4 A. Well, I should say that are claimed to
5 be cut and pasted.

6 I mean, I am aware that Mr. Ceglia
7 claims to have Word documents containing e-mails
8 that purportedly support his claim. We
9 identified in our forensic analysis three Word
10 documents that we believe to be those e-mails.

11 Q. And you analyzed them?

12 A. Correct.

13 Q. And there's at least two areas of that
14 analysis which support -- and maybe there's more,
15 you can correct me -- your claim and your report
16 that those e-mails are fakes, so let's go over
17 them.

18 One of the areas is the Coordinated
19 Universal Time as it appears in those e-mails is
20 incorrect based on the fact that it was Daylight
21 Savings Time at the time they were sent; right?

22 A. So, yes --

23 Q. Is that the e-mails --

24 A. There is a group of e-mails, I believe
25 it is sent between October 2003 and April 2004 at

1 B. Rose

2 which point Eastern Standard Time would have been
3 in effect and the offset that's in the e-mails
4 appear to be Eastern Daylight Time which is an
5 anomaly which shouldn't occur.

6 Q. Right, that's one area.

7 And the second area you indicate in
8 your report is formatting and differences between
9 these e-mails, for example -- and I think you
10 might remember this one, in one of the e-mails
11 the word "Tuesday" is spelled out and in the
12 other one it's abbreviated, things like this is
13 one of the other areas that you indicate supporting
14 your belief that those are fraudulent; true?

15 A. Yes, and that's inconsistencies that
16 they both between the way those should appear,
17 for instance, the way, you know, Microsoft
18 Hotmail would abbreviate Tuesday and the way it's
19 actually abbreviated in the e-mails themselves,
20 so Microsoft, you know, abbreviates it T-u-e, if
21 you cut and paste it out it should not say
22 T-u-e-s, and I know you asked questions earlier
23 about whether formatting differences can be
24 introduced during cut and paste; that's true,
25 but, for instance, the addition of an "s" is not

1 B. Rose

2 a formatting difference that would occur, so I
3 think that's clear evidence of fraud.

4 There's also inconsistencies among the
5 documents themselves, so after the "from," colon,
6 sometimes there's one space, sometimes there's
7 two, after the "to" there are an inconsistent
8 number of spaces, there are various formatting
9 inconsistencies like that and, again, going back
10 to your point about copy and paste, to the extent
11 I copy and paste out Hotmail documents and the
12 formatting change, I would expect it to change in
13 a consistent way, I wouldn't expect the copy-and-
14 paste operation to, for instance, insert two
15 spaces after "to" sometimes and three in another
16 and one in another.

17 Q. Why would you expect it to do it in a
18 uniform way?

19 A. Generally -- because, again, when you
20 are cutting and pasting, if you are cutting from
21 the same source to the same source, what you
22 would expect to see is a consistent change.

23 Q. Did Mr. Ceglia cut from the same source
24 to the same source?

25 A. My understanding is he's cutting from

1 B. Rose

2 his Hotmail account, yes.

3 Q. On what computer was he copying that
4 from?

5 A. He is copying it from his account, it
6 wouldn't matter what computer he's copying it
7 from, you're copying from an Internet Webmail
8 account, the data is residing on Hotmail servers,
9 it wouldn't matter what computer he's using.

10 Q. Would it matter what browser he's
11 using?

12 All browsers format Web mail the same;
13 is that your position?

14 A. Well, so for the T-u-e-s, right, that
15 difference and --

16 Q. No. I'm asking you do all browsers --

17 A. You asked me a question, I'm trying to
18 answer the question.

19 MR. BOLAND: He is rephrasing the
20 question.

21 MR. SOUTHWELL: He is answering your
22 question.

23 Q. Do all browsers format Webmail accounts
24 the same?

25 A. No.

1 B. Rose

2 Q. What browser was Mr. Ceglia using when
3 he copied and pasted each one of these e-mails?

4 A. I don't know.

5 Q. How did Hotmail function when it came
6 to abbreviations of things like Tuesday in 2004?

7 A. It abbreviated it T-u-e.

8 Q. How do you know that?

9 A. I think we've tested, we've seen the
10 way it format, Hotmail formulates Tuesday and it
11 is T-u-e.

12 Q. In 2004 you ran tests to confirm that?

13 A. My understanding is that we confirmed
14 that in fact that's the way Hotmail abbreviates
15 T-u-e.

16 Q. Where do you get that understanding?

17 A. So that understanding was passed --
18 that information comes from, I believe, directly
19 from Mike McGowan.

20 Q. So it's your testimony that Mike
21 McGowan in 2004 tested the Hotmail server?

22 A. No, that's not my testimony.

23 Q. Okay.

24 How did he determine in 2004 that's how
25 Hotmail worked?

1 B. Rose

2 A. I don't know how he determined that.

3 Q. To the best of your recollection he's
4 the person who told you that that's how it worked
5 in 2004?

6 A. Yes.

7 Q. Okay.

8 Did anyone else from Stroz Friedberg
9 conduct any testing on how Hotmail might have
10 worked in 2004?

11 A. I don't know the answer to that, I
12 don't know if the information came directly from
13 him.

14 I would also just note that how that
15 works in 2004 is one question.

16 I would also note that you would expect
17 it to work the same way in 2004 each time; in
18 other words, you wouldn't expect Hotmail in 2004
19 to sometimes abbreviate T-u-e, sometimes
20 abbreviate T-u-e-s.

21 Q. Why would you not expect that?

22 Do you know how Hotmail operates?

23 A. Because they don't configure themselves
24 back and forth like that, right, there's a
25 uniform configuration that they don't just run

1 B. Rose

2 and change willy-nilly.

3 Q. How do you know there's a uniform
4 configuration, what's your basis for that
5 statement?

6 A. The Webmail account displays dates in a
7 consistent format.

8 Q. What's your basis for that in 2004
9 Hotmail consistently displayed Webmail account
10 information?

11 A. I think it is unquestionable that that
12 would be the way it would operate, but if you
13 feel -- I mean, and the idea somehow that
14 Hotmail, the way they set themselves up, right --
15 and these are all behind-the-scenes configurations
16 -- that they somehow had a configuration which
17 allowed T-u-e sometimes and T-u-e-s other times
18 as the display is completely implausible to me.

19 Q. What's your basis for it being
20 implausible?

21 A. I'm saying it's implausible.

22 These are behind-the-scenes
23 configurations that display uniformly over time.
24 Now, that's not -- I just -- it's implausible to
25 me that when you're talking about a series of

1 B. Rose

2 documents from the same time frame, sometimes
3 very close together, that they're going to
4 display inconsistently is just implausible.

5 Q. Based on what?

6 A. It's my experience and my understanding
7 of the way they operate.

8 Q. And do you have any experience with
9 Hotmail back in 2004?

10 A. I mean, I don't know. I think I may
11 have been a Hotmail user back in 2004, but --

12 Q. Were you or were you not?

13 A. I don't recall.

14 Q. And the version of Microsoft Word
15 used -- that contains these documents that this
16 data was pasted into, how was Microsoft Word
17 configured back at that time to handle the
18 pasting-in of data from a browser like a Webmail
19 account?

20 A. I'm not sure I understand that
21 question.

22 Q. What kind of changes could Microsoft
23 Word's program cause to data that's copied and
24 pasted from a Web mail account back in 2004?

25 A. I don't know.

1 B. Rose

2 Q. Did anyone from Stroz Friedberg try and
3 test the versions of Microsoft Word that these
4 documents were created in to see what changes
5 might occur, if you know?

6 A. Not that I'm aware of.

7 Q. Did you ask Microsoft for any advice on
8 how formatting changes might have occurred through
9 that process?

10 A. We did not have any conversation with
11 Microsoft about that.

12 Q. Did you contact Hotmail?

13 A. No.

14 Q. Did you attempt to configure a Hotmail
15 server the way it would have been configured back
16 in 2004, e-mail server?

17 A. No.

18 Q. And did you test even in the current
19 time, 2011, how data copied from different Web
20 browsers in Webmail accounts and then pasted into
21 Microsoft Word might result in different
22 formatting? Did you run that test?

23 A. I did not. I don't know whether it was
24 done.

25 Q. Now, the Coordinated Universal Time

1 B. Rose

2 that appears in an e-mail if -- let's just say
3 2011 as a hypothetical, assume this is the case,
4 but I'll just ask you to assume it as a
5 hypothetical, that Daylight Savings Time, we went
6 from Standard Time to Daylight Savings Time
7 somewhere in March of 2011, the date's not
8 relevant to the question, is it the case that if
9 an e-mail is sent before that change of time, but
10 the person doesn't open it until after we've
11 changed into Daylight Savings Time, what
12 Coordinated Universal Time would appear in that
13 e-mail if it's opened at that time? Is
14 Coordinated Universal Time reflective of when the
15 person actually opens the e-mail or when the
16 e-mail was sent?

17 A. So it would in general, I think,
18 display based on the time zone of the computer
19 clock being used to view it, but I don't know
20 with Hotmail how that would operate in that
21 hypothetical.

22 Q. And if that computer clock is set
23 correctly, hypothetically, then the Coordinated
24 Universal Time in that e-mail should be correct,
25 should be accurate?

1 B. Rose

2 A. Again, I don't know how Hotmail
3 specifically operated there.

4 Q. Are there any -- you conclude about
5 these e-mails that the Coordinated Universal Time
6 is not consistent with the time of year in which
7 they were allegedly received, I believe -- I'm
8 summarizing and if I'm doing it incorrectly,
9 please put the words in you think make it
10 correct.

11 A. Okay.

12 Q. Is it only fraud which could be the
13 cause of that Coordinated Universal Time being
14 apparently in error in these e-mails? Just the
15 e-mail itself, not considering everything else
16 that you clearly think my client's committing a
17 fraud, just looking at that e-mail and
18 Coordinated Universal Time is off, is the only
19 conclusion for that fraud got to be fraud?

20 A. So forgetting -- I guess I'm forgetting
21 everything else I know, I just got an e-mail --

22 Q. If I just give you an e-mail and I say
23 I just got this e-mail today or it was sent today
24 and received today and you look at it and say,
25 Well, Dean, the Coordinated Universal Time is

1 B. Rose

2 off, would you then say, in my opinion that
3 e-mail is a fraud because of that one fact?

4 A. I'd say that standing alone, no, not
5 necessarily.

6 Q. And the formatting differences we
7 talked about before, standing alone, not
8 indications of fraud necessarily either, they can
9 just occur sometimes?

10 A. I think the formatting differences we
11 see here are clear indications that the document
12 has been manipulated, so I would disagree with
13 that. I don't think there's any plausible
14 explanation that these could be the result of
15 formatting differences introduced as a cut-and-
16 paste operation, so I would disagree with that.

17 You're asking me the mere appending of
18 the wrong time zone to an e-mail standing alone
19 without any other fact surrounding it, there
20 could be other explanations for that.

21 Q. And are you aware of any e-mails or
22 references to e-mails in this case from a source
23 other than Mr. Ceglia which have the wrong
24 Coordinated Universal Time attached to them?

25 A. I am aware -- I'm trying to think in

1 B. Rose

2 terms of the time zones -- there is in, I think,
3 one of the, again, the intermediary servers in
4 the Sidley & Austin e-mails had the wrong time
5 zone setting; those are the only examples I can
6 think of.

7 Q. Let me try and jog your memory a little
8 bit.

9 You and I have exchanged e-mails in the
10 past couple of weeks about this Kasowitz letter
11 issue; are you generally familiar with that?

12 A. Yes.

13 Q. You sent me a TrueCrypt container on a
14 couple of occasions, and there's an item 379,
15 does that ring a bell, as one of the items we've
16 been corresponding with and --

17 A. It does.

18 Q. And you had to evaluate that item to
19 see if it was relevant to put it on a relevant
20 items log in the past; do you recall that?

21 A. Yes.

22 Q. I'm not asking you to memorize it, but
23 you did read through it to see if it was
24 relevant, obviously?

25 A. Yes. I mean, it is an extremely long

1 B. Rose

2 document --

3 Q. It is.

4 A. -- so I may not have read it word for
5 word, but I've reviewed enough of it to know that
6 the contents are relevant.

7 Q. Right.

8 And let me just state, and this is the
9 record in this case, that that item 379 is a
10 single e-mail with some attachments and then in
11 the body of that e-mail are referenced many more
12 e-mails, it's quite a long document, as you
13 indicated.

14 A. It's a long chain.

15 Q. Right.

16 So that's generally what it is.

17 And many of those e-mails referenced in
18 the body of 379 are e-mails that appear to be
19 between lawyers that were working with Mr. Ceglia
20 at that time.

21 Do you recall that?

22 A. I know there are some, some of those
23 e-mail exchanges are between lawyers working for
24 Mr. Ceglia at the time.

25 Q. And now here's the hypothetical, and

1 B. Rose

2 because I don't have 379 in front of me, I won't
3 ask you to trust me on this, so I will convert it
4 to a hypothetical.

5 Let's say some of those e-mails
6 referenced in the body of 379, if some of them
7 were sent at a time where the Coordinated
8 Universal Time should have been, let's say, minus
9 500, but it says minus 400, it's wrong, you
10 wouldn't conclude, based on that, that some of
11 those prior lawyers for Paul Ceglia were
12 committing fraud?

13 A. So this is a hypothetical specifically
14 about 379?

15 Q. Right.

16 If some of those e-mails have the wrong
17 Coordinated Universal Time that's not an
18 indication of fraud by those lawyers, in your
19 opinion?

20 A. So given the context, no, I would not
21 conclude that.

22 Q. And that Kasowitz e-mail you just
23 recently sent it to me in a TrueCrypt container
24 as a native format e-mail.

25 Do you recall sending that to me?

1 B. Rose

2 A. Yes.

3 Q. Okay.

4 That native format e-mail itself has
5 one attachment. I don't know if you recall that.

6 Do you recall it?

7 A. I thought it had more attachments than
8 that, but I don't recall.

9 Q. And that actual individual e-mail was
10 never included by you on a privilege log in this
11 case by itself, if you recall?

12 MR. SOUTHWELL: What specifically are
13 you referring to?

14 MR. BOLAND: The native format
15 individual e-mail dated August -- April 13,
16 2011, which you recently sent to me itself
17 was never included on a privilege log in
18 this case.

19 MR. SOUTHWELL: I'm just going to
20 object, this doesn't seem to have anything
21 to do with Coordinated Universal Time or the
22 report, so it's an objectionable line, but
23 if you're going to connect it, I'd like to
24 hear that.

25 MR. BOLAND: I would like to hear the

1 B. Rose

2 answer of the witness, but I hear your
3 objection.

4 A. I mean, I sent you, as I recall, what I
5 recently sent you included several -- it was
6 one -- it was item 379 -- I mean, there were
7 various items in that, right, there were various
8 attachments, I don't think it was limited to one
9 attachment, so I guess I'm not sure exactly which
10 document you're talking about.

11 I mean, it's possible to me -- and, you
12 know, we include, when we include an e-mail, we
13 also include their attachment, so just merely
14 saying dated April 13th I'm not sure I can with
15 precision identify the document which you're
16 talking about.

17 Q. Fair enough.

18 Let's talk about use of computers
19 generally.

20 Would you agree with me that -- and
21 maybe you've seen this in your work -- that
22 people can lie about how they actually use their
23 computers?

24 A. Yes, I would agree that people can lie
25 about the way they use their computers.

1 B. Rose

2 Q. And as a forensics expert you wouldn't
3 rely on a witness' statement about how they used
4 their computer without confirming it through
5 forensic analysis?

6 A. That's correct.

7 Q. And would you agree that people who
8 commit fraud often make self-interested
9 statements to try and avoid detection for that
10 fraud?

11 A. As a hypothetical, yes, I think I would
12 agree with that.

13 Q. And I think I asked you this before.
14 You never spoke with Mark Zuckerberg
15 about how he used his Harvard e-mail account?

16 A. I've never spoken with Mark Zuckerberg
17 about anything.

18 Q. Did you ask his lawyers to get
19 information from him telling you how he used his
20 Harvard e-mail account?

21 A. So let me be clear: Our role in the
22 Harvard e-mail account was to work with Harvard
23 to make sure we'd gotten all of the historical
24 copies, to perform whatever collections were
25 necessary and then to perform electronic

1 B. Rose

2 discovery processing to create an aggregate data
3 set, to then subject that to certain search terms
4 and provide those to Gibson, Dunn for review as
5 well as to conduct our own review of those, of
6 certain specified documents to determine whether
7 the purported e-mails were found there and to
8 identify communications between Mr. Zuckerberg
9 and various people involved with StreetFax.com,
10 that was our charge with the Harvard e-mail, and
11 so I did not ask Gibson, Dunn to do that, I don't
12 think, given our role, that would have been a
13 relevant consideration for us or appropriate for
14 me to tell Gibson, Dunn to go ask a question
15 that's irrelevant to the work I'm tasked to do.

16 Q. And did you somehow confirm with anyone
17 that this was all of Mark Zuckerberg's available
18 e-mail that was relevant to expedited discovery?

19 A. I find that to be a confusing question
20 because my reading of the order in the protocol
21 is that the expedited discovery phase is focused
22 on an analysis of Mr. Ceglia's media and
23 Mr. Ceglia's e-mail, so --

24 Q. I'm just asking the question, sir.

25 Did you ask someone to have Mark

1 B. Rose

2 Zuckerberg confirm that you had access to all of
3 his e-mail? Did you ask someone that question?

4 MR. SOUTHWELL: Objection. You are
5 asking -- well, you are asking a different
6 question, but --

7 MR. BOLAND: That's my question.

8 A. I did not ask anyone to make sure that
9 we had access to all of Mark Zuckerberg's e-mail.
10 There was, you know, we were involved in
11 conversations with Harvard IT to make sure that
12 we had gotten everything that was available. We
13 were, as I said, involved early on in analysis of
14 various other assets of Mr. Ceglia that I
15 understood to be comprehensive, but as to that
16 specific question, no, I don't recall asking that
17 specific question.

18 Q. It's possible, then, that there is
19 additional sources of e-mail relevant to this
20 case which you have not had access to?

21 A. Is it possible?

22 I mean, again, anything's possible, so
23 I would say yes.

24 Q. Don't you think it's a prudent thing to
25 do to ask the person who's the custodian of their

1 B. Rose

2 e-mail account if that's everything?

3 A. Is that a prudent thing to do in
4 general?

5 Q. In this case don't you think it would
6 have been a prudent thing to do to ask the
7 defendants, Hey, ask Mr. Zuckerberg is this is
8 everything or if he's got e-mails somewhere else?

9 A. To me, you're asking me a question that
10 is appropriately a strategy question for
11 attorneys that goes outside what I was charged to
12 do in the case, which involves expedited
13 discovery and to describe the work with
14 Mr. Zuckerberg's e-mails, so as to whether that
15 would be prudent in this case, you know, I
16 haven't really considered that and I don't think
17 I want to offer an opinion on it.

18 Q. What do you think the likelihood is
19 that there's other e-mail or electronic
20 communications relevant to this case that you
21 have not had access to?

22 A. I would think, given the thoroughness
23 I've seen of the investigations that I've been
24 party to, I think it unlikely, but it's possible.

25 Q. You talked about one of the retrievals

1 B. Rose

2 from the Harvard server was from November 2003,
3 you got e-mail from that time period?

4 A. That's correct.

5 Q. Not in that time period, but from that
6 time period?

7 A. From that time period.

8 In other words, just to be clear, a
9 historical snapshot of what existed in the
10 mailbox at some point in November 2003.

11 Q. And did you find any e-mails in that
12 retrieval that were not included in the
13 subsequent productions that you got, either
14 collected or received from Harvard?

15 MR. SOUTHWELL: Are you asking about
16 Ceglia-Zuckerberg e-mails?

17 MR. BOLAND: Yes.

18 A. I believe so. You're talking about
19 between the November 2003 and the subsequent
20 productions, the first of which would have been
21 in October 2010?

22 Q. Right.

23 A. Yes, I believe there were e-mails that
24 were included in that production that were not
25 included, not unsurprisingly, in a production

1 B. Rose

2 that occurred seven years later.

3 Q. And what happened to those e-mails that
4 were not in that production seven years later?

5 A. I don't know.

6 Q. Did you ask the defendants to ask
7 Mr. Zuckerberg what happened to those e-mails?

8 A. I did not.

9 Q. Did anyone else from Stroz Friedberg
10 ask that question of the defendants, if you know?

11 A. Again, given our task with the e-mail,
12 I don't think that would be an appropriate
13 question for us to direct to Gibson, Dunn.

14 Q. Did you see Paul Ceglia's -- a recent
15 declaration of Paul Ceglia stating that he sent
16 e-mails to Mr. Zuckerberg between the time period
17 of March 2003 and June of 2003?

18 A. I may have, I don't recall that.

19 Q. And are you aware that your -- that
20 Stroz Friedberg did not recover any e-mails
21 between Mr. Ceglia and Mr. Zuckerberg during that
22 time period?

23 A. I am not.

24 Q. Did you see the production that Stroz
25 Friedberg provided to the plaintiff pursuant to

1 B. Rose

2 the expedited discovery order of the Harvard
3 e-mails?

4 A. Did I see the production itself?

5 Q. Before it was produced to us did you
6 look at it?

7 A. No.

8 Q. Do you think it's -- what's your
9 opinion of the likelihood that this contract
10 signed on April 28, 2003, that the terms of this
11 contract were discussed between Mr. Ceglia and
12 Mr. Zuckerberg using e-mails before the date it
13 was signed?

14 A. I wouldn't even want to offer an
15 opinion on that.

16 Q. Assuming, because it is the case, but
17 we will just assume it for this, that there are
18 no e-mails between the parties Ceglia and
19 Zuckerberg from around March of '03 till June of
20 '03, don't you think that's a little odd that
21 they have no e-mail communication before the
22 signing of this contract in April of 2003 and
23 then for another six weeks, 5-1/2 weeks later,
24 still no e-mail communication in Mr. Zuckerberg's
25 Harvard e-mail account? Don't you find that odd?

1 B. Rose

2 A. No.

3 Q. Now, you found -- the report details
4 several different documents that are similar to
5 the paper contract in this case with the Facebook
6 language in it, true, in your report, you talk
7 about those?

8 A. So we talk about multiple unsigned
9 versions of what we refer to as the Work For Hire
10 contract, yes.

11 Q. Yes.

12 And did your forensic analysis provide
13 you with which one, if any, of those unsigned
14 versions was the one that was printed and became
15 the paper contract that my client is now offering
16 as the authentic contract between the parties?

17 A. I think none of them were printed
18 directly because they all vary somewhat in
19 substance from the actual original contract; in
20 other words, they are all similar documents, but
21 there are seven different variations, so the
22 printed copy is ultimately different.

23 We did not identify any exact duplicate
24 copies of the Work For Hire contract save for one
25 that was included in an e-mail from Mr. Argentieri

1 B. Rose

2 that was post litigation.

3 Q. And you are aware that Mr. Ceglia has
4 not offered or attached to any pleadings any of
5 those similar versions of the Work For Hire
6 contract? You are aware of that?

7 A. I don't believe he has.

8 Q. And he didn't attach the e-mail from
9 Jim Kole or the TIFF images to any pleadings or
10 anything that he's filed in this case, you are
11 aware of that?

12 A. I am aware of that, yes.

13 Q. Now, your forensic report and your
14 analysis is not arguing that the paper contract
15 itself is backdated somehow?

16 A. I am not offering any opinions on the
17 paper contract at all.

18 Q. And there's no computer evidence that
19 you found suggesting that Mr. Zuckerberg did not
20 sign page 2 of the paper contract?

21 That's a double negative, I can ask it
22 a little more clearly.

23 A. Sure, that would help.

24 Q. Did you find any computer forensics
25 evidence suggesting that Mr. Zuckerberg was not

1 B. Rose

2 the person who signed the second page of the
3 paper contract?

4 MR. SOUTHWELL: You're talking about
5 the original paper Work For Hire document
6 that was presented for production?

7 MR. BOLAND: Correct.

8 A. The forensic evidence that we found
9 overwhelmingly indicates that the StreetFax
10 contract is authentic; therefore -- and the
11 evidence also indicates with all the manipulation
12 that the Work For Hire contract is a fake, so I
13 would say that that evidence would lead me to
14 conclude, without even having to analyze the
15 paper, which I have no opinion on and I am not an
16 expert on, that any paper document presented that
17 purports to be the Work For Hire document signed
18 by Mark Zuckerberg is a fake.

19 Q. What I'm asking you is, is the computer
20 forensic evidence, is there any that tells you
21 that the person who put a signature on page 2 of
22 the paper contract was not Mark Zuckerberg? Do
23 you have forensic evidence that points you to
24 that not happening, for example, an e-mail that
25 Mark Zuckerberg says, I never signed page 2 of

1 B. Rose

2 the contract, did you find anything like that?

3 A. We did not find anything like an e-mail
4 from Mr. Zuckerberg disclaiming that he'd signed
5 page 2 of that contract.

6 Q. Okay.

7 Did you find any Web history that
8 supports an argument that Mr. Zuckerberg didn't
9 sign page 2 of the paper contract?

10 A. I mean, again, beyond, you know, some
11 of the Internet history providing some evidence
12 that, you know, the StreetFax contract is
13 authentic, the other contract is fake, no.

14 Q. Did you visually compare a copy of page
15 2 of the paper contract with page 2 of the
16 StreetFax contract, looking at them side by side?

17 A. I probably have looked at them side by
18 side before. I don't recall.

19 Q. Do you recall what your reaction was to
20 that comparison? Did they look the same to you
21 or different?

22 A. I don't recall.

23 Q. Now --

24 MR. SOUTHWELL: If you are going to a
25 different topic, we are approaching 3-1/2

1 B. Rose

2 hours.

3 Do you know how much more you think
4 you've got planned?

5 MR. BOLAND: I don't really know. I
6 will probably go over 3-1/2 a little bit.

7 MR. SOUTHWELL: When would you like to
8 take a lunch break? I would like to take a
9 little lunch break.

10 MR. BOLAND: We can do that now.

11 Do you want to?

12 MR. SOUTHWELL: How much more do you
13 think you have?

14 MR. BOLAND: Probably an hour, I'm
15 guessing.

16 MR. SOUTHWELL: Do you want to go off
17 the record, then, at this point?

18 MR. BOLAND: Let's go off the record,
19 we can do that.

20 (Lunch recess: 2:09 p.m.)

21

22

23

24

25

1 B. Rose

2 A F T E R N O O N S E S S I O N

3 (Time noted: 3:05 p.m.)

4 MR. BOLAND: We can start the tape.

5 THE VIDEOGRAPHER: And we are rolling.

6 MR. DUPREE: Timewise, I know you
7 requested, I think, three and a half hours,
8 which I think we are probably at about that
9 limit now. I am not going to shut things
10 down, but I wanted to call that to your
11 attention.

12 MR. BOLAND: Yes, we are a little bit
13 over. Probably another hour or so and that
14 will wrap it up, presumably.

15 MR. DUPREE: Hopefully we can do that
16 quickly.

17 MR. BOLAND: Yes, I will.

18 B R Y A N J. R O S E, resumed and
19 testified as follows:

20 EXAMINATION BY (Cont'd)

21 MR. BOLAND:

22 Q. Mr. Rose, in addition to the two TIFF
23 images which were named Scan0001 and 0002, you
24 didn't find any other -- you found those on the
25 computer in one location and that was it,

1 B. Rose

2 according to your report, if I'm recalling it
3 correctly, you didn't find them anywhere else?

4 I'm saying the Ceglia media, not the
5 Sidley & Austin servers now.

6 A. So we found -- so we found the TIFF
7 images in the Outlook Express mailbox, we also
8 found what appeared to be deleted versions that
9 had been created on the hard drive immediately
10 before being sent, which is why we determined
11 they appeared to be copied from the hard drive
12 and then sent from the hard drive, but we
13 believed those copies represented those files
14 because the file size and file name, but in terms
15 of an actual copy with content, although one of
16 the deleted files was partially recoverable in
17 terms of content, that was the only location was
18 the Outlook Express file.

19 Q. And the comment you just made about
20 believing that those files were the same, let's
21 talk about that for a moment.

22 The deleted versions had the same file
23 name as the versions you actually found and they
24 had the same file size?

25 A. The same file size, in addition to one

1 B. Rose

2 of them was partially recoverable and the content
3 was the same.

4 Q. And what's the likelihood that those
5 files that had the same file name and the same
6 file size were in fact versions of the two files
7 that you did find, what would be your opinion on
8 that?

9 A. I think it's very likely. Certainly
10 for the one -- I would say for the one -- very
11 likely, particularly given the fact we were able
12 to recover some content, compare that.

13 Q. Even without the content, is it fairly
14 likely they are same?

15 A. Yeah.

16 Q. Is that a common way that forensic
17 experts will reach that conclusion in general is
18 if they have two files with the same name and the
19 same file size, but one of them the content is
20 missing, they will conclude it's likely that
21 that's a copy?

22 A. I think it depends on the context, but
23 in general, yes. I mean, you know, the file
24 name, depending on what you're comparing, can be
25 more or less persuasive, depending on the

1 B. Rose

2 circumstances. Comparing the file size, you
3 know, it's one way to reach a conclusion the two
4 files are the same.

5 Q. Can you, on this similar topic, on page
6 54 of Exhibit 1, which is the version of your
7 report that we provided you today that has the
8 file stamp across the top, do you see on page 54
9 you are talking about a missing USB device and
10 links, link files on a Toshiba laptop that
11 reference two files that your report indicates
12 you believe were on that missing USB device?

13 Do you see where I'm referring to
14 there?

15 A. So the -- at the top of the page it's a
16 list of USB devices which were attached to
17 various PC media but were not produced.

18 Q. Right.

19 A. And then the discussion does include
20 two files which were link files were found on a
21 Toshiba laptop, two files on a USB device, yes.

22 Q. Right.

23 And those are the files -- those are
24 two files that I believe -- correct me if I'm
25 wrong -- you're saying they were named -- well,

1 B. Rose

2 yeah, what's a link file, if you can just
3 describe that for the Court?

4 A. It's essentially like a shortcut, I
5 mean, it's a file, your computer puts down a link
6 file so that it can recall a document quicker, it
7 is a shortcut file, it's a pointer, essentially.

8 Q. In about the third full paragraph you
9 start talking about on the Toshiba satellite
10 laptop.

11 Do you see that?

12 A. Mm-hm.

13 Q. And then you name the two link files?

14 A. Yes.

15 Q. And the embedded metadata, these link
16 files show that they point, what does that mean,
17 the embedded metadata, what are you referring to
18 there, these link files show that they point to a
19 removable device? Can you explain that?

20 A. So if you analyze the link file itself
21 you can see essentially to what it's pointing,
22 generally whether it's an Internet location,
23 whether it is a removable device location, so
24 that would just indicate that the metadata
25 associated with the files, which is just, you

1 B. Rose

2 know, information about the -- data about data,
3 right, so it is data about the files, we were
4 able to determine from that that it pointed to a
5 USB removable device rather than to the Internet
6 or some other location.

7 Q. And the link is not an actual file,
8 it's just a pointer?

9 A. Well, it's an actual file, I mean, it's
10 a link file, but it's not -- it is a pointer to
11 another file, yes.

12 Q. It isn't the file that it is pointing
13 to, it's just a pointer to it?

14 A. So a link file to the Zuckerberg
15 contract page 1 TIFF is not the actual TIFF
16 document, it's a pointer to that document.

17 Q. And it's not a copy of the actual
18 document, it's just a pointer?

19 A. No, yes.

20 Q. So that file, as you put in your report,
21 is one of the evidence, pieces of evidence under
22 a claim the defendants -- you know the defendants
23 have made a claim of spoliation of evidence
24 against Mr. Ceglia; right? Are you aware of
25 that?

1 B. Rose

2 A. I don't -- I mean, a formal claim, I
3 know that there have been allegations of
4 spoliation, yes.

5 Q. And this is in your report two TIFF
6 files which your report indicates existed at one
7 time on removable media; true?

8 A. Mm-hm.

9 Q. But yet weren't produced in discovery;
10 true?

11 A. Correct.

12 Q. And --

13 A. I should point out existed on removable
14 media subsequent to the filing of the complaint.

15 Q. I'm going to show you -- I don't know
16 if I have two copies or not, so your lawyers may
17 have to look over your shoulder. I thought I
18 did.

19 MR. BOLAND: Could you mark this as
20 Exhibit -- I think we're on 3.

21 (Rose Exhibit 3, supplemental
22 declaration of Paul D. Ceglia, marked for
23 identification, as of this date.)

24 Q. And this is document number -- this is
25 Exhibit 3, document number 139-2 filed in this

1 B. Rose

2 case, it's entitled "Supplemental Declaration of
3 Paul Ceglia."

4 Do you see that, Mr. Rose?

5 A. I do.

6 Q. Can you look at paragraph 6 of that
7 document, and it should indicate there that he
8 produced by way of Mr. Argentieri two files with
9 the same file name that we were just talking
10 about from your report.

11 Go ahead and confirm that that's what
12 those files names say.

13 A. It actually appears to be a different
14 file name in that the file name cited in
15 Mr. Ceglia's affidavit includes underscores and
16 not spaces.

17 Q. And does the file name that there's a
18 link file to --

19 A. And just to be clear, in a file-naming
20 convention that's not a small difference; to me
21 they're different file names.

22 Q. And the file name in your report does
23 not include an underscore?

24 A. It does not.

25 Q. And is that the accurate file name for

1 B. Rose

2 that file?

3 A. I believe so.

4 Q. Can you check out paragraph 49, please.

5 A. Okay.

6 Q. Does that file name seem to be the same
7 two files names as we were just talking about in
8 your report?

9 A. So now we are in paragraph 49 and 50?

10 Q. Yes.

11 A. It does appear to be the same file
12 names.

13 Q. And this is a declaration by Mr. Ceglia
14 of items he has produced; true?

15 A. I'm just looking at the entire document.

16 So it's not clear to me what he's
17 stating here. I mean, it appears to be a list
18 of -- initially a list of documents that are in
19 the possession of various groups, as I understand
20 at some point who had been employed or retained
21 by Mr. Ceglia, so he lists documents which are in
22 their possession and then there's a certification
23 in 173 that indicates that all of the above are
24 being produced to defendants on August 29, 2011.

25 To the extent -- I mean, I guess this

1 B. Rose

2 is a little ambiguous, but to the extent 173
3 refers to everything listed in the proceeding,
4 172 paragraphs, that would be the case.

5 Q. And do you know the file size of
6 Zuckerberg, the two files we were just talking
7 about from your report that were on the USB
8 drive?

9 A. I do not.

10 Q. Do you know the file size for the two
11 files that were in paragraph 49 of the
12 declaration that you just read?

13 A. I do not.

14 Q. Would it surprise you to learn that
15 they are the identical file size?

16 A. I don't know that it would surprise me
17 or not surprise me.

18 Q. What's the likelihood that the file in
19 paragraph 49 of his declaration is an exact copy
20 of the files you reference in your report from
21 the USB drive if the file names are the same and
22 the file sizes are the same, what's the
23 likelihood those are the same files?

24 MR. DUPREE: Just for clarification,
25 you are talking about file size.

1 B. Rose

2 Are you talking about the linked files
3 or the actual files?

4 MR. BOLAND: Actual files.

5 A. So if the actual files have the same
6 name and the same file size, although -- I mean,
7 you couldn't determine file size from the link
8 files themselves, so you'd have to have the files
9 as they existed on the removable media and the
10 files that exist -- is it -- I'm sorry, which
11 expert was this? Mr. Stewart?

12 If you had the name in the files --
13 well, if you had the files, you could compare the
14 content. If you just the name and the file sizes
15 and it had the same name and the same file size I
16 guess I would conclude, depending on if there
17 were any other circumstances surrounding that,
18 that it's likely they're the same.

19 Q. So you're saying a link file cannot
20 tell you the file size of the file it is pointing
21 to?

22 A. I think generally link files don't show
23 you the size, but --

24 Q. But can they?

25 A. I don't know.

1 B. Rose

2 MR. BOLAND: Can you mark this as
3 Exhibit 4, please.

4 (Rose Exhibit 4, five-page document
5 headed "Shortcut file," marked for
6 identification, as of this date.)

7 MR. DUPREE: Is this a document that
8 was filed in the case?

9 MR. BOLAND: No.

10 Q. Mr. Rose, this is Exhibit 4, this is a
11 document prepared by our expert.

12 A. Yes.

13 Q. The first three pages are -- the first
14 two pages are the link file metadata for
15 Zuckerberg contract page 1 TIFF and Zuckerberg
16 contract page 2 TIFF from, as you see there, the
17 removable media, the same link files you refer to
18 in your report.

19 Do you see the file size that's listed
20 on that contract page1.tif that ends in 036?

21 A. I do.

22 Q. And on page 2 the file size ends in 172
23 for the second one?

24 A. Correct.

25 Q. Can you flip to the second to last page

1 B. Rose

2 of Exhibit 4.

3 A. Second to last page, that's the
4 properties screenshot for Zuckerberg contract,
5 page 1, yes.

6 Q. Exactly, properties screenshot.

7 And do you see the file size for
8 Zuckerberg contract page 1 the actual TIFF file
9 that was produced is referenced in the
10 declaration and it ends in 036 as well, it's the
11 same file size; true?

12 A. Yes, it appears to be.

13 Q. And then the last page is a screenshot
14 of the properties of Zuckerberg contract page 2
15 that was produced to defendants and it also ends
16 in 172, but it's the identical file size to the
17 one from the link file; right?

18 MR. DUPREE: And I'm just going to
19 object to the use of the document because we
20 don't know what it is, it hasn't been
21 verified.

22 MR. BOLAND: Very well.

23 Q. You would agree that those file sizes
24 are the same?

25 A. Yes, in comparing link files to the

1 B. Rose

2 screenshot you showed me.

3 Q. So assuming -- we'll go with a
4 hypothetical -- that those, that data on that
5 exhibit you just reviewed is all accurate
6 regarding the link files and the actual files
7 that were produced to the defendants, what is the
8 likelihood that the files that you identified in
9 your report as missing from -- along with a USB
10 device were in fact produced to the defendants?

11 MR. DUPREE: Object to form, calls for
12 speculation.

13 Q. Just what's the likelihood,
14 probability, whichever word you choose?

15 MR. DUPREE: Same objection.

16 A. I would say it's likely, but, you know,
17 without having the two files to compare, I
18 couldn't say conclusively.

19 Q. You used the phrase fraud or evidence
20 of fraud several times during your testimony
21 today; is that correct?

22 A. I believe so, yes.

23 Q. Are you aware that there is actually a
24 certification for people to obtain if they want
25 to be a fraud examiner or a fraud expert? Are

1 B. Rose

2 you aware of that?

3 A. I am.

4 Q. Do you have such a certification?

5 A. Well, I do not. To my knowledge, the
6 CFE you're talking about is not a digital
7 forensic certification.

8 Q. Fair enough.

9 I was just asking, you don't have that
10 certification?

11 A. No, I do not.

12 Q. Are you aware that plaintiff's expert
13 Mr. Broom does have that certification?

14 A. I am not aware of that.

15 Q. Did you review his report and his CV?

16 A. I don't know that I -- I did review his
17 report, I don't know that I reviewed his CV.

18 Q. I think I marked his report --

19 A. I have it.

20 Q. -- as Exhibit -- could you tell me what
21 exhibit number is on there?

22 A. Exhibit 2.

23 Q. Can you look at page 29 of Exhibit 2,
24 again using the numbers in the upper right-hand
25 corner.

1 B. Rose

2 A. 29, yes.

3 Q. And the third full paragraph, if you
4 could read there where it starts with the U.S.
5 Department of Justice.

6 A. Mm-hm.

7 Q. Mr. Broom provides -- by the way, are
8 you familiar with that document that he refers to
9 in that paragraph?

10 A. I'm not.

11 Q. You've never read it?

12 A. Not to my knowledge.

13 Q. Is the Department of Justice a reliable
14 source for computer forensics guidelines and
15 information, generally speaking?

16 A. I don't know that I would offer an
17 opinion on that one way or the other.

18 Q. Are there experts of a different
19 standard than experts outside of the government?
20 Are they not quite as good? Are they relatively
21 the same?

22 A. I think it depends on the expert.

23 Q. Do you see the quote in the next
24 paragraph, if you could read that and tell me if
25 you agree with that quote from that document.

1 B. Rose

2 A. I think I would generally agree with
3 that statement.

4 Q. And on the top of page 30 the quote
5 there which says "Caution. If the date and time
6 associated with the e-mail are important to the
7 investigation, consider that this received time
8 recorded in the e-mail header comes from the
9 e-mail server and may not be accurate."

10 Do you agree with that caution there?

11 A. I would hesitate to agree or disagree
12 with that because it appears this received time
13 appears to be referring to something that
14 preceded this statement, and I don't know what
15 that is. I mean, you've got -- you've got a
16 selected quotation here referring to some prior
17 paragraph that is not included.

18 Q. Let me ask you, when an e-mail is going
19 through an e-mail server, does the received time
20 of that e-mail come from the server or from the
21 person's computer who receives the e-mail?

22 A. So if you're looking at the copy -- I
23 mean, it depends on what copy you are looking at,
24 right, so if you're looking at the copy as it
25 flowed, for instance, through the Internet

1 B. Rose

2 headers as we discussed, it would be appended by
3 the server. If you're looking at it on the
4 actual machine itself, the received time would
5 appear based on the system clock of the computer
6 used to do it.

7 Q. And in the e-mails that you evaluated
8 the content of the Word documents which you
9 evaluated where my client copied and pasted
10 e-mails, which is his statement, do you know
11 whether that data you just referred to came from
12 an e-mail server or from my client's computer?

13 A. Well, I mean, they appear to -- I mean,
14 they purport to be Hotmail e-mails, so they would
15 have been accessed through the Internet and
16 generally would reside on Hotmail servers.

17 Does that -- if I understand your
18 question --

19 Q. So is the date and time that that
20 e-mail was received as it's reflected in that,
21 those Word documents, is it your opinion that
22 that information, that data came from the Hotmail
23 server or came from my client's computer clock on
24 which -- the computer he was using to copy and
25 paste those e-mails?

1 B. Rose

2 MR. DUPREE: Object to form.

3 A. Specifically with the e-mails that are
4 part of the copy and paste?

5 Q. Yes.

6 A. I mean, I don't think those are
7 legitimate e-mails, so I think they've been
8 edited and manipulated and altered, so, I mean, I
9 think the forensic evidence shows that these are
10 Word documents that were generated and altered.

11 Q. Is it your opinion that no part of
12 those Word documents came from any e-mail between
13 Mr. Ceglia and Mr. Zuckerberg?

14 A. I think it likely that some e-mail,
15 some underlying Hotmail was used as a template,
16 which is why we see the time zone anomaly.

17 Q. I'm asking about the content of the
18 e-mail itself.

19 Are you saying that all that content
20 was manually typed into that document by my
21 client or just some of it?

22 A. I don't know the answer to that
23 question.

24 What I am saying is that the e-mails
25 themselves show clear signs of manipulation, so

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

B. Rose

whether he's taking e-mails and editing them or generating them out of whole cloth from a template drawn from an msn e-mail he has, I don't know.

Q. And the evidence of manipulation, just to be clear, is the time zone anomaly is one of the elements of the manipulation evidence; true?

A. True.

Q. The formatting issues we discussed, Tuesday being one of the references, that's the other evidence?

A. True.

Q. What else?

A. I mean, you also have the issue that the documents themselves all have been backdated, which is further evidence that they are not genuine documents.

Q. We have backdating.

Anything else other than those three items?

A. Not that I can think of right now.

Q. The next quote that's on page 30 --

A. Oh, I -- let me amend myself.

I actually think not only do you have

1 B. Rose

2 backdated documents, but you have multiple
3 versions of various documents, which is generally
4 something you would not expect to see and in our
5 experience it is consistent with people trying
6 to -- in forgery cases trying to draft fraudulent
7 documents as they sort of experiment and go
8 through various drafts and versions.

9 Q. Does Stroz Friedberg have more than one
10 client that you are being paid by currently, just
11 as a general rule?

12 A. As a general rule, yes.

13 Q. Do you use fee agreements that are
14 written with those clients?

15 A. Yes.

16 Q. Are you here to tell this court that
17 Stroz Friedberg types from a blank page every
18 time they rewrite a fee agreement, they just
19 start out with a blank page and start writing or
20 do you use a previous version and update it for
21 each new client?

22 A. I wouldn't want to speak for what
23 everybody does. I think generally you would work
24 off either a template or off a pre-existing
25 agreement and substitute a different client in.

1 B. Rose

2 Q. So on your computer and the computer of
3 other employees of Stroz Friedberg there are
4 multiple versions of your fee agreement sitting
5 there today; true?

6 A. True, but there are -- I mean, let's
7 look at the example.

8 There are multiple fee agreements, so,
9 yes, there are multiple versions. My fee
10 agreement with Gibson, Dunn in one case might be
11 very different with a different law firm in
12 another case, so I would have two copies of those.

13 What you generally would not expect to
14 see is, if this was a true cut-and-paste
15 operation and I was just saving documents, I
16 would cut and paste and I would save the
17 document, I wouldn't have three different
18 versions of it.

19 The reason you have different versions
20 of documents on our system in terms of a fee
21 agreement is because to produce new fee
22 agreements we have to edit it, and so to the
23 extent that there are multiple versions of that
24 contract, yeah, I think that this cut-and-paste
25 operation, I think those multiple versions are

1 B. Rose

2 indications that he's edited this document over
3 time, which frankly shouldn't happen if this was
4 just a true cut-and-paste of those e-mails, he
5 shouldn't be editing them.

6 Q. Maybe we're talking about different
7 things. I thought you were discussing the Work
8 For Hire document different versions now.

9 A. I'm talking about different versions of
10 the three Word documents contained in the
11 purported e-mails.

12 Q. Did you have a written -- well, let's
13 stay on this topic since I accidentally waded
14 into it.

15 When you negotiate with someone who's
16 hiring your firm do copies of your agreement go
17 back and forth by e-mail until you arrive at a
18 final one that both sides agree to?

19 A. Occasionally.

20 Q. And that would result in different
21 versions potentially of that same document being
22 on your computer?

23 A. Yes.

24 Q. And that's not an indication of fraud
25 by you guys?

1 B. Rose

2 A. No.

3 Q. Or by the recipient?

4 A. No.

5 Q. It's just how you do business?

6 A. Contract negotiations, no, I would not
7 view them as evidence of fraud.

8 Q. But you did find different versions of
9 a contract in this case in electronic form on
10 Mr. -- on media that you analyzed?

11 A. Of the Work For Hire contract?

12 Q. Yes.

13 A. Yes.

14 Q. And that in and of itself is not
15 evidence of fraud?

16 A. If you ignore the margin manipulations
17 and the backdating and the other problems
18 associated with those documents, yes, that
19 standing alone, if you put the other evidence
20 aside, is not, the mere existence of versions is
21 not evidence of fraud.

22 I do think, and just to be clear, I do
23 think when you have something like the Word
24 documents containing the purported e-mails, when
25 you have multiple versions, I think in that case

1 B. Rose

2 that is, given the circumstances, evidence of
3 fraud.

4 Q. What's your opinion about the
5 reliability of metadata in Microsoft's Windows
6 operating system?

7 A. I think that is too general a question
8 for me to answer.

9 Q. Does the Windows -- okay.
10 Metadata associated with files gets
11 placed into those files somehow in relation to
12 the operating system and the computer clock.

13 Am I right?

14 A. So, yes, I mean, certainly the time and
15 date stamps, for instance, would be dependent on
16 the system clock, yes.

17 Q. And are you aware that Microsoft
18 generally discredits the reliability of the last
19 accessed time stamp since it's easily altered by
20 system operations that are not sort of user
21 initiated?

22 MR. DUPREE: Objection, vague.

23 Q. If you are aware.

24 A. I am not aware as to Microsoft's
25 opinion on the last access date.

1 B. Rose

2 Q. Are you aware of other individuals in
3 the field who have talked about Microsoft's
4 opinion in this way?

5 A. I am not aware of anyone who has talked
6 about Microsoft's opinion regarding last access
7 dates.

8 Q. And do you know a computer security
9 expert named Rebecca Mercuri?

10 A. I do not.

11 Q. Now, you brought up the concept of
12 backdating that you put into your report and your
13 conclusion is that -- I want to be clear -- that
14 a computer was backdated or that files were
15 backdated or is it both?

16 A. Well, I think, in the circumstances
17 we're talking about it's taking an action with
18 the system clock to backdate it and then taking
19 an action with the document so that it picks up a
20 date which is not the true date.

21 In other words, if I have a Word document
22 and I want to backdate the creation date, before
23 I saved it on the computer I would backdate the
24 system clock of the computer, save the document
25 onto the file system, it's going to pick up that,

1 B. Rose

2 the creation date, as, you know, as pursuant to
3 the system clock.

4 Q. And the way you determine backdating
5 here is by comparing different dates in metadata
6 associated with files; is that a fair statement?

7 A. Well, I think that's one way in some
8 circumstances you could do it. You know, there's
9 other ways to do it, looking at system restore
10 points, looking at information regarding the
11 relationship between the system setting on the
12 computer and Microsoft's network time, I mean, so
13 there are other evidence of backdating, but one
14 way is to look at the relationship between
15 different dates.

16 Q. Well, that's the way you used here, in
17 your report here?

18 A. We also discuss, of course, the
19 examples of system restore points that are out of
20 order, should be sequential, and we talk about
21 one instance where the system clock was well off
22 of the time recorded by Microsoft, the system
23 generates an error log because it's so far off,
24 so I would say we discussed all three methods of
25 identifying backdating.

1 B. Rose

2 Q. And all this backdating evidence that's
3 in your report comes exclusively from the Seagate
4 hard drive; true?

5 A. I think that is not true.

6 Q. Where else did you find backdating
7 evidence other than the Seagate hard drive, what
8 other computer did you find that on?

9 A. I know there's evidence of backdated
10 documents on one of the -- I believe it was a
11 floppy disk.

12 Q. Do you know where in your report you
13 talk about that floppy disk having evidence of
14 backdating?

15 A. I will try to find it.

16 So on page -- there's a discussion of
17 backdating related to one of the versions of the
18 Work For Hire document that begins -- and I'm
19 using the upper, the page number on page 37.

20 Q. Where was that file found? On a CD?

21 A. It was found on a floppy disk.

22 Q. It's true that a floppy disk, for
23 evidence of backdating, you have to find out what
24 computer it was actually inserted into, because
25 floppy disks don't have clocks; right?

1 B. Rose

2 A. Let's be clear.

3 So the time itself of the files would
4 be appended by the computer that was used to
5 essentially save the document onto the floppy
6 disk; right? That doesn't mean the floppy disk
7 itself is not going to contain evidence of
8 backdating.

9 For instance, in this case you have two
10 documents, you have documents which are last
11 accessed February 18, 2011 that are deleted
12 documents and you have another document that was
13 created on May 2nd, 2003 that sits on top of
14 those documents, or if that makes no sense, it's
15 inherently inconsistent and could only resolve
16 some system clock anomalies.

17 Q. The deleted files had no content which
18 you could recover; true?

19 A. That's correct.

20 Q. And so there's no way to say whether
21 they connect there the same as the file that sits
22 over top of them? I mean, you can't say it's the
23 same file as the one you have content from
24 because you don't have the content to compare it?

25 A. Well, they are different names, so I

1 B. Rose

2 think that would be unusual, but it can't do a
3 content-by-content comparison, that's correct.

4 Q. We were talking about the hourly rate
5 you charged and the hourly rates for everyone
6 else.

7 Do you know what your total billable
8 hours were that went into the work that produced
9 this report?

10 A. I don't.

11 Q. Is that something you could get from
12 your office? How difficult would that be to get
13 from whoever does accounting at your office?

14 A. The total billable hours from myself
15 preparing this report?

16 Q. And everyone else.

17 A. I mean, you'd have to aggregate it from
18 the invoices, so it's not -- it's not right at
19 hand, but it would be a task that could be
20 completed fairly easily.

21 Q. I would ask you if you could have
22 someone from your office compile that together.

23 The rules regarding experts, I think,
24 entitle us to a statement of the compensation
25 that you guys were paid for all of your study and

1 B. Rose

2 your testimony in the case, so --

3 MR. DUPREE: We'll see what we can do
4 on that.

5 Q. What were your instructions when you
6 first started doing this gathering of evidence to
7 prepare this report?

8 You said several times in your
9 testimony we were charged with this, we were
10 charged with that, sort of -- instructed meaning
11 charged.

12 What were you instructed to do generally,
13 as far as your analysis?

14 MR. DUPREE: I just, for the record, I
15 want to make sure we don't get into
16 privileged areas.

17 I think it's acceptable for him to give
18 a high-level response, but I'm assuming
19 we're not going to get into the specific
20 contents of any communications he's had with
21 Gibson, Dunn lawyers?

22 MR. BOLAND: You're correct, yes, just
23 the high level.

24 Q. What was your general approach? After
25 you had your conversations with the defense

1 B. Rose

2 lawyers, what did you understand you were
3 supposed to do?

4 A. It has nothing to do with my
5 conversations with the defense attorneys. I
6 mean, the work to produce this report was done
7 pursuant to Electronic Asset Inspection Protocol,
8 which I'm sure you've read, it was issued by the
9 Court and sets forth what we are to do in terms
10 of an analysis, and the charge based on that was
11 to collect, preserve and analyze the Ceglia media
12 for evidence of the authenticity or
13 inauthenticity of the Work For Hire contract and
14 the purported e-mails and then it sets forth, of
15 course, various other procedural ways to identify
16 presumptively relevant material, produce it to
17 you first for privilege review and then produce
18 it to Gibson, Dunn, so when I talk about what we
19 were charged with doing, I'm talking about that
20 document that was issued by the Court, and my
21 understanding was agreed on between the parties.

22 Q. In the Word documents that contain the
23 e-mail exchanges between my client and
24 Mr. Zuckerberg, how did you determine which one
25 of the dates in the metadata were the authentic

1 B. Rose

2 ones and which ones weren't the authentic ones?

3 A. I'm not sure what you mean.

4 Q. Well, if a creation date and an access
5 date somehow conflicted, how did you determine
6 which one was the one to rely on and which was
7 the one to say, well, that's obviously the wrong
8 date?

9 A. I'm not sure I can answer that question
10 in the abstract, I'd have to -- I mean, these are
11 all fact-specific inquiries and depend on
12 circumstances.

13 Do you have a specific example?

14 I mean, for the purported e-mails, in
15 other words, documents, I mean, I think the
16 inaccuracy such as the time zone stamp is
17 something which is fairly clear, right? I mean,
18 things e-mailed in October should have a time
19 zone consistent with Eastern Standard Time.

20 In terms of the rest of it, you know,
21 these documents, based on our analysis of them,
22 are clearly edited, manipulated documents, so I
23 don't believe they are real e-mails and so making
24 a choice as to which one is the accurate date,
25 right, we don't have to do that and we are not

1 B. Rose

2 faced with that because frankly, you have a sent
3 and received time on the face of the e-mail and
4 it's a Word document. I don't have access dates,
5 I don't have modified dates that are sort of the
6 embedded data you would have if it were an e-mail
7 file.

8 Q. Did you review the report by Jerry
9 Grant, plaintiff's expert?

10 A. Yes.

11 Q. And he evaluated exclusively the data
12 on the floppy disks in this case; true?

13 A. That is what I recall him discussing;
14 whether that's exclusively, I'd have to look back
15 at the reports, but I do remember him focused on
16 that issue.

17 Q. After reading the report did you have
18 any dispute with the accuracy of the forensic
19 data that he found?

20 A. I don't recall specific disputes. I do
21 remember some questions about his analysis, but
22 it's been some time since I looked at that.

23 Q. Do you recall today any specific
24 forensic data he recovered that you think is
25 somehow not the correct forensic information, not

1 B. Rose

2 his interpretation of it, but that he pulled the
3 wrong dates or he pulled the wrong information
4 somehow?

5 A. Not that I recall as I sit here today.

6 (Rose Exhibit 5, article entitled "Real
7 Evidence, Virtual Crimes The Role of
8 Computer Forensic Experts" by Paul H. Luehr,
9 marked for identification, as of this date.)

10 Q. I'm giving you Exhibit 5, Mr. Rose, it
11 is an article by someone named Paul, I don't know
12 how to pronounce his last name, L-u-e-h-r.

13 A. Luehr.

14 Q. Do you know who that is?

15 A. I do.

16 Q. Who is that person?

17 A. He is the managing director of Stroz
18 Friedberg in our Minneapolis office.

19 Q. Can you look at the -- I guess it's the
20 third page from the end of all of this.

21 A. Third page from the end?

22 Q. Yes.

23 In the right-hand column near the
24 bottom, the last full paragraph, the second to
25 last full paragraph starts with the word "While."

1 B. Rose

2 Do you see that?

3 A. Mm-hm.

4 Q. It says here "While some computer dates
5 and time stamps will be conclusive, others may be
6 open to interpretation by competing experts.
7 Created, modified and accessed dates may be
8 viewed differently depending on whether a file
9 remained in one place or whether it was copied
10 and saved to several locations. In addition, log
11 files may vary by time zone, and metadata are
12 generally only as accurate as the underlying
13 computer clock time."

14 Would you agree with that statement
15 from his article?

16 MR. DUPREE: And just, for the record,
17 this appears to be about a 10-page
18 single-spaced article you have shown the
19 witness and he has not had an opportunity to
20 review the full article, obviously.

21 MR. BOLAND: True.

22 A. Let me just read it again, so I can --

23 Q. Very well.

24 A. I think I would generally agree with
25 those statements.

1 B. Rose

2 Q. Have you ever read that article before?

3 A. I don't recall if I read it before.

4 Q. But it's essentially a co-worker of
5 yours in Stroz Friedberg who wrote it; true?

6 A. It's the managing director in our
7 Minneapolis office.

8 Q. Do you know that person?

9 A. I do.

10 Q. Okay.

11 You mentioned you -- we had talked
12 about a residence in different locations and that
13 you'd go to Indiana occasionally and you'd use
14 your parents computer there; do you remember
15 talking about that?

16 A. Yes.

17 Q. Have you ever used your parents'
18 computer to e-mail documents to lawyers in cases
19 that you're working on using their account?

20 A. I don't recall one way or the other.

21 Q. So it's possible you've used your
22 parents' e-mail account to send documents to
23 lawyers in cases on which you are working?

24 A. Is it possible?

25 It's possible.

1 B. Rose

2 Q. How many times do you think that might
3 have happened?

4 A. I don't have any recollection of it one
5 way or the other.

6 Q. Did you find any forensic evidence in
7 your analysis before or after producing this
8 report to dispute Mr. Ceglia's declaration that
9 he sent as an attachment a copy of the Facebook
10 contract to Mark Zuckerberg before April of 2003?

11 MR. DUPREE: Object to form.

12 A. Could you repeat it?

13 Q. Did you find any evidence before or
14 after you produced your report there to dispute
15 my client's declaration under oath that he sent
16 at least one e-mail to Mark Zuckerberg before
17 April 2003, when they signed the contract, that
18 included as an attachment the Facebook contract
19 in electronic form?

20 MR. DUPREE: Same objection.

21 A. And what's the Facebook contract?

22 Q. The two-page document that my client
23 has presented as an authentic contract between
24 him and Mr. Zuckerberg which mentions Facebook.

25 A. So during our analysis we did not find

1 B. Rose

2 any evidence of that, I don't think we found any
3 evidence regarding that whatsoever.

4 Q. So no evidence to dispute his claim
5 that he sent that e-mail?

6 A. I mean, we didn't find any evidence
7 regarding that issue at all.

8 Q. And regarding the TIFF images and
9 physical size, et cetera, do you know how to use
10 the metadata associated with those TIFF images
11 and calculate the physical size of that file, the
12 mathematical formula that's used by digital
13 imaging experts to sort of tell you the physical
14 size of the file by using the pixels that are
15 listed in the metadata?

16 A. No.

17 Q. And you mentioned a November 2003
18 e-mail production from Harvard; do you recall
19 testifying about that?

20 A. Yes.

21 Q. And that there were some e-mails from
22 that production that were not in later productions;
23 true?

24 I think that's what you testified.

25 A. My recollection is that there were some

1 B. Rose

2 unique e-mails contained in the November 2003
3 collection that were not contained in the October
4 2010 collection and subsequent, obviously
5 subsequent collections.

6 Q. And were any of those e-mails that
7 weren't in the later collections relevant to this
8 case based upon your evaluation of them?

9 A. I don't recall.

10 And let me just be clear about that.

11 In identifying unique e-mails, what we
12 were doing is essentially deciding what to add to
13 an aggregate review set, so what I'm working off
14 is essentially an aggregate set, so I don't
15 recall whether, you know, what particular source
16 each e-mail came from.

17 Q. And the floppy disk which contained
18 these Word documents that my client has said are
19 the copy-and-pasted e-mails, plaintiff's expert
20 Jerry Grant determined that the versions of
21 Microsoft Word that those documents were created
22 in were all contemporaneous with the dates that
23 my client says he created them, 2003 and 2004.

24 Did you find anything to dispute that
25 conclusion of Mr. Grant?

1 B. Rose

2 A. I don't have any information about the
3 versioning of those Word documents at this point,
4 so --

5 Q. Who would have that amongst the people
6 who did work for you on this report?

7 A. I don't know. It's certainly possible
8 that either Mr. McGowan or Mr. Novak would have
9 that information.

10 Q. Would Mr. Friedberg have that
11 information?

12 A. I doubt it.

13 MR. BOLAND: I just want to take about
14 a five-minute break and then I think we will
15 wrap it up.

16 MR. DUPREE: Okay.

17 We're off the record.

18 (Recess taken.)

19 THE VIDEOGRAPHER: The camera is on.

20 MR. BOLAND: All right. Back on the
21 record.

22 BY MR. ROSE:

23 Q. Mr. Rose, just a few last questions.

24 Other than the four people associated
25 with the report there, can you give me the names

1 B. Rose

2 of anyone else who did any work on this case in
3 some way contributing to the report?

4 A. I don't know that I can give you a full
5 and accurate list from memory. There are -- the
6 vast majority of the work, including the vast
7 majority of the forensics was done by Mr. McGowan
8 and Mr. Novak and together with them I primarily
9 supervised the matter and the three of us were
10 the primary drafters of the report, so most of
11 the work, the vast majority of the work was done
12 by us.

13 Now, to the extent small projects were
14 done by various people, there were certainly
15 other people who were involved at various stages
16 in other projects and I'm not sure -- I could
17 certainly reconstruct that for you, but I'm not
18 sure I could give you an accurate and
19 comprehensive list today.

20 Q. Very well.

21 If you could reconstruct that, that
22 would be good.

23 Can give a ballpark on the number of
24 hours you spent? I know you don't know exactly.

25 I'm assuming it's not a thousand, but

1 B. Rose

2 maybe it is.

3 A. I don't think it would be a thousand.

4 On the report, the case itself, I
5 mean --

6 Q. On everything leading up to the
7 production of the report.

8 A. So not just -- I mean, I just want to
9 be clear, because there's sort of an expedited
10 discovery phase and there's a pre-expedited
11 discovery phase, so the work, you know, I would
12 say that we were involved in the case prior to
13 the expedited discovery, I think, order which
14 came down on July 1st, I believe, of 2010, and
15 then there's been a significant amount of work
16 since then, so we're talking about everything.

17 Q. Yes.

18 A. Okay.

19 I don't. It would be more than a
20 hundred, it's less than a thousand, but --

21 Q. Somewhere in there?

22 A. Yeah, somewhere in there.

23 Q. Now, is the term "fraud" that's
24 throughout your report, is that defined anywhere
25 in the computer forensics field? Is there is an

1 B. Rose

2 agreed definition of that amongst computer
3 forensics experts?

4 A. I don't know if there's an agreed
5 definition of that among computer forensics
6 experts, I'm not aware of one.

7 Q. So would it be fair to say that the
8 determination of fraud which you repeat in the
9 report is really your personal opinion, not an
10 expert opinion, since you're not a fraud expert?

11 A. I would say it's an expert opinion, I
12 mean, it is an opinion based on our analysis of
13 the digital forensics evidence that we as digital
14 forensic experts uncovered, I would regard that
15 as an expert opinion.

16 Q. And you feel it's appropriate to opine
17 about fraud when you are not a certified fraud
18 expert or fraud examiner?

19 MR. DUPREE: Object to form.

20 Q. You feel that's appropriate?

21 A. Yes.

22 MR. BOLAND: Can you mark this one last
23 thing, please, I think we are on 6.

24 (Rose Exhibit 6, article entitled
25 "Criminal Defense Challenges in Computer

1 B. Rose

2 Forensics" by Rebecca Mercuri, marked for
3 identification, as of this date.)

4 Q. Exhibit 6, Mr. Rose, is an article by
5 Dr. Rebecca Mercuri, it's actually an excerpt
6 from a book.

7 A. Okay.

8 Q. I would like to draw your attention to
9 the paragraph on page 134 of that document, it is
10 actually the third physical page of the document.

11 A. Okay.

12 Q. And in the section 2.3, "Confusing Time
13 Stamps," do you see there's a third full
14 paragraph that reads "Although Microsoft
15 generally discredits the reliability of the last
16 access time stamp, since it is easily altered by
17 system operations that are not directly user
18 initiated, either or both prosecution and defense
19 may choose to use this metadata if it is helpful
20 to their construction. Best practice should
21 always be to disallow it for any use."

22 What's your opinion -- do you agree or
23 disagree with Ms. Mercuri's statement about --

24 A. I disagree with that.

25 Q. Have you had any training from

1 B. Rose

2 Microsoft on that topic?

3 A. I have not, but let me give you a clear
4 example where I think that paragraph is clearly
5 incorrect.

6 There are examples, for instance, in
7 the report where a last-access date predates a
8 last-written-to date. That would be a
9 circumstance where, in fact -- it should not be
10 possible, right, you cannot open up a document
11 and modify it without accessing it, and so the
12 inconsistency itself is evidence of an anomaly.
13 In that case I think you could clearly rely on
14 the last-access date.

15 As I understand this, if you're talking
16 about looking at a particular last-access date
17 and saying I can conclusively determine when
18 somebody last accessed that file, I do agree that
19 it is a very fragile time stamp that can be
20 updated by a variety of things including user
21 action and system action, and so to the extent
22 you're talking about using it for that particular
23 purpose I think last-access dates are fragile and
24 should be -- they should be interpreted
25 accordingly.

1 B. Rose

2 I do think there are clear examples
3 where inconsistencies between last-access dates
4 and last-written dates, for example, there are
5 times when it should be used, so I would disagree
6 with that paragraph.

7 Q. Has Microsoft ever issued, to your
8 knowledge, as a computer forensics expert, any
9 formal statements about relying on the access
10 date that the operating system stamps on the
11 files?

12 A. I don't know about that one way or the
13 other.

14 Q. Did you call Microsoft or contact them
15 in preparation of this report to find out if
16 those dates are reliable?

17 A. No.

18 Q. You're just assuming that they are?

19 A. Again, you're going to have to give me
20 a specific example.

21 I don't think we in the report relied
22 on it in the way I just said, that we said we can
23 conclusively tell you that somebody accessed this
24 document on this date because of the last-access
25 date.

1 B. Rose

2 There are examples of times where we
3 use a last-access date as -- to inform our
4 opinion. I am giving you one example. If the
5 last-access date predates the last written-to
6 date, that's an anomaly which indicates to me
7 some kind of system clock problem or manipulation,
8 so, again, depending on the way we used it, I
9 think you'd have to give me a specific example
10 and I could address that.

11 I don't think we had just gone through
12 and necessarily assumed in all cases that last-
13 access dates are in fact reliable and in fact I
14 think, if you've read the report, we do note on
15 occasion that that is in fact a fragile time
16 stamp and can be updated by system activity.

17 Q. Is fraud the only way these anomalies
18 that you've attributed to backdating could have
19 occurred?

20 A. Well, again, I have to deal with
21 specific examples. I think there are examples,
22 for instance, of flip flopping time stamps, so
23 you're not just dealing with trying to determine
24 when something happened, but you're looking at,
25 you know, time stamps should not go -- should

1 B. Rose

2 not, you know, toggle back and forth, but when
3 you see that what you're seeing is, I think, an
4 example of some kind of system clock manipulation.

5 Again, you'd have to consider within
6 the circumstances and I think the various
7 motivations and what the documents are being used
8 for and how the particular manipulation affected
9 the interpretation of that document to determine
10 whether I would conclude it was fraud.

11 I mean, fraud is a conclusion that's
12 drawn from a complete analysis of the facts with
13 everything considered, right, so -- and again,
14 this is an overwhelming case of it, so if you
15 look at this case and you look at all of the
16 manipulations of data and you look at the
17 existence of the StreetFax contract and you look
18 at the manipulation of the Work For Hire document
19 and the backdating and the margin manipulation
20 and all of that example, that, I think, is a
21 relatively clear conclusion of fraud.

22 Having said that, if you are looking at
23 a particular metadata anomaly, whether I would
24 conclude that in the context is fraud would
25 depend on each individual example.

1 B. Rose

2 Q. My question is, let's put aside the
3 constellation of things that you have brought up
4 many times. I'm talking about just a document
5 which has the anomaly you've identified, this
6 difference of dates.

7 That alone is not enough to say fraud,
8 just the single document with some anomaly in
9 dates; isn't that true?

10 A. A single document with -- I mean, this
11 is a very general question. I don't know what
12 kind of anomaly in dates you're talking about.

13 I think there are examples of documents
14 where you have date anomalies, but if you just
15 had that standing alone you couldn't draw a
16 conclusion of fraud.

17 Q. And why couldn't you draw fraud from
18 just that alone, a date anomaly?

19 A. I think there are examples where you
20 couldn't, I think there are probably examples
21 where you could. It's all fact specific, so --

22 Q. Tell me about one where you couldn't.

23 You had just a date anomaly on a Word
24 document, but you would not be comfortable saying
25 it's the result of fraud.

1 B. Rose

2 Why not?

3 Isn't every date anomaly fraud?

4 A. No.

5 Q. Well, how else could a date anomaly
6 happen if it's not fraud?

7 A. Well, let me give you a clear example
8 because -- in this case.

9 You have the Sidley & Austin
10 intermediary server which had the time zone
11 setting that's incorrect. I would not conclude
12 from that that somebody at Sidley & Austin is
13 engaged in fraud because I see no -- it's a
14 misconfiguration which could easily occur, it
15 doesn't affect the actual dating of the document
16 itself because the time's correct, it's an
17 intermediary server, so you have the real time
18 appended by the server after it, it's something
19 which could easily escape notice at a place like
20 Sidley & Austin and I cannot think of any reason
21 that anybody would want to manipulate that time
22 zone stamp and the time zone stamp alone for any
23 purpose, for any fraudulent purpose.

24 So that's an example of one where, I
25 think, if you look at that and the circumstances

1 B. Rose

2 it would be very difficult to draw the conclusion
3 of fraud from that, I think it's clearly not, but
4 again, you're looking at all the circumstances.

5 Q. But in reality there could have been
6 someone who was a rogue employee from Sidley &
7 Austin for some other purpose not related to this
8 case who manipulated their clock and was
9 committing a fraud internal to the company or
10 internal to the law firm, that's hypothetically
11 possible; right?

12 A. I cannot think of a single fraud that
13 you could perpetrate merely by misconfiguring the
14 time zone setting and not the time itself and
15 only doing it on the intermediary server, so I
16 think that is a farfetched hypothetical.

17 Q. So your opinion in this case that
18 there's -- the reason you think there's
19 backdating and fraud with the backdating isn't
20 because of one specific document that you can
21 conclude fraud from; true? It's a collection of
22 everything together, it's in context, as you say?

23 A. No, no. I think you have to take it
24 case by case.

25 So there are examples, for instance,

1 B. Rose

2 you know, you look at some of these, you look at
3 some of these documents and I think you look at
4 them alone, they are clearly backdated, the
5 documents themselves are backdated. Now -- and
6 that happens multiple times throughout the thing.

7 If I see a system clock which generates
8 an error because it's 94 days off of the
9 Microsoft time, I know the system clock is off;
10 right?

11 If I see restore points that go --
12 which should be sequential and go from December
13 2010 to September 2010, I know that there's been
14 manipulation of the system clock.

15 So in all these examples we're not
16 saying, Hey, there's been manipulation of the
17 system clock because we're considering this piece
18 of evidence in the context of the entire case.

19 What we're doing is saying, Okay, let's
20 look at this document. This document is clearly
21 backdated.

22 Let's look at this document. This
23 document is clearly backdated and has been
24 manipulated.

25 Let's look at this document. This

1 B. Rose

2 document has clearly been backdated.

3 Let's look an example of the error
4 report, that is a clear example of where the
5 system clock is off.

6 So you take each individual evaluation
7 separately, so you look at a document -- I'm not
8 necessarily -- I'm looking at the metadata of
9 that, I'm not evaluating in the context of the
10 case, I'm evaluating that particular document.

11 When I see that's backdated and when I
12 see backdating in multiple versions and I see
13 manipulation of documents, you put all of that
14 together and you draw your ultimate conclusion
15 which in our case is, I think, clear evidence the
16 StreetFax contract is authentic and the Work For
17 Hire contract is not, so that ultimate conclusion
18 is built upon what I think is overwhelming
19 evidence from a variety of different sources that
20 show fraud, but each individual instance is
21 evaluated on its own and then you determine how
22 to interpret that in the broader context of the
23 case.

24 Q. Whenever you use the word "backdating"
25 is that synonymous with a fraudulent motive?

1 B. Rose

2 A. I think it -- in my experience you
3 generally see backdating in a case of document
4 manipulation, document fraud, it's certainly not
5 synonymous with it.

6 Q. And the 94-day system clock difference
7 you just talked about, that's on the Seagate hard
8 drive, that's what you're referring to in the
9 report?

10 A. I believe so.

11 Can I refresh my recollection?

12 Q. Sure.

13 MR. DUPREE: Are we about to wrap
14 things up, I hope?

15 MR. BOLAND: Yes.

16 MR. DUPREE: Okay. Thank you.

17 A. Yes.

18 Q. And the copy of the StreetFax contract
19 that's in Exhibit 1 there, you would agree with
20 me in large part is not legible, either one of
21 those pages, the way it is in that document?

22 MR. DUPREE: This is the version you
23 handed him today?

24 MR. BOLAND: Yes.

25 A. So we're back to -- so we're back to

1 B. Rose

2 Exhibit F, second page --

3 Q. Exhibit H was the first page.

4 A. So Exhibit F is the second page and
5 Exhibit H is the first page of the StreetFax
6 contract.

7 Q. And in the size that they are in that
8 report -- I'm sorry, in that exhibit I gave you,
9 in large part they are not legible?

10 A. I would say these exhibits, based on
11 size and, you know, the lightness of the ink and
12 other, you know, the way they appear in this
13 report, I mean, there are certain parts of that
14 that are legible, but most of it I would say
15 would be illegible.

16 Q. And Mr. Southwell had a version where
17 the document was significantly magnified.

18 Have you ever seen that version of the
19 StreetFax images?

20 A. I saw --

21 MR. DUPREE: Object to form.

22 I'm not sure what we are talking about,
23 that's all.

24 Q. Have you ever seen a larger -- a
25 version of that image that you just talked about

1 B. Rose

2 in those two exhibits that was magnified to be
3 close to an 8-1/2-by-11 piece of paper? Have you
4 ever seen that?

5 MR. DUPREE: Object to form.

6 Go ahead.

7 A. I have seen larger versions of this.

8 Q. Are they legible in all respects? Can
9 you read all the words of those larger versions,
10 if you know?

11 A. I don't recall having any difficulty
12 reading it.

13 Q. Do you know which one was given to the
14 Court, the smaller version of that exhibit or the
15 larger magnified version that you might have
16 seen?

17 A. I do not.

18 Q. And finally, in Mr. Broom's report he
19 talked about the BIOS battery.

20 What is that on a computer, a BIOS
21 battery?

22 A. A BIOS battery? I am not sure I've
23 ever hear it called a BIOS battery. It tracks
24 certain information about the computer itself
25 such as the system clock settings and other

1 B. Rose

2 information.

3 Q. Well, there's a battery on board the
4 mother board of most desktop computers at least;
5 right?

6 A. I don't know.

7 Q. How does a computer know what time it
8 is if you unplug it from the wall, for example?
9 Doesn't it have a battery that helps keep track
10 of the time for a while?

11 A. I don't know.

12 Q. Have you ever heard of a CMOS battery?

13 A. No.

14 Q. What happens to the time zone setting
15 of a computer if you unplug it from the wall for
16 a year, what will happen to it's ability to know
17 what time it is when you plug it back in?

18 A. I don't know whether it retains that
19 the entire time or whether when you plug it back
20 in it resyncs with the system clock, network
21 clock, I should say.

22 Q. This computer that the Seagate hard
23 drive came from, do you know if that computer was
24 ever unplugged for any period of time like a
25 year?

1 B. Rose

2 A. I don't.

3 Q. So at this point you're not qualified
4 to give an opinion about a CMOS battery or a BIOS
5 battery?

6 A. I would not give an opinion about a
7 CMOS or BIOS battery.

8 MR. BOLAND: I have no further
9 questions, Mr. Dupree.

10 MR. DUPREE: We don't have any
11 redirect.

12 We are off the record.

13 (Time noted: 4:23 p.m.)

14

15

16 _____
BRYAN J. ROSE

17

18 Subscribed and sworn to before me

19 this _____ day of _____, 2012.

20

21

22 _____
Notary Public

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

C E R T I F I C A T E

STATE OF NEW YORK)
 : ss.
COUNTY OF NEW YORK)

I, CARY N. BIGELOW, Court Reporter,
a Notary Public within and for the State of
New York, do hereby certify:

That BRYAN J. ROSE, the witness whose
testimony is hereinbefore set forth, was
duly sworn by me and that such testimony
given by the witness was taken down
stenographically by me and then transcribed.

I further certify that I am not
related to any of the parties to this
action by blood or marriage, and that I am
in no way interested in the outcome of this
matter.

IN WITNESS WHEREOF, I have hereunto
set my hand this 23rd day of July, 2012.

CARY N. BIGELOW

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

----- I N D E X -----

WITNESS	EXAMINATION BY	PAGE
BRYAN J. ROSE	MR. BOLAND	6

----- EXHIBITS -----

Rose Exhibit 1, Stroz Friedberg report	6
dated March 26, 2012	
Rose Exhibit 2, declaration of Neil Broom	82
Rose Exhibit 3, supplemental declaration of Paul D. Ceglia	200
Rose Exhibit 4, five-page document headed "Shortcut File"	205
Rose Exhibit 5, article entitled "Real Evidence, Virtual Crimes The Role of Computer Forensic Experts" by Paul H. Luehr	228
Rose Exhibit 6, article entitled "Criminal Defense Challenges in Computer Forensics" by Rebecca Mercuri	237

&	11:44 156:7	200 1:19 2:13	212-279-9424 255:4
& 1:19 2:11 35:20 58:15 59:7 62:24 98:4 99:3,4 149:16 149:16,18 150:10 150:11,16 152:16 160:3 177:4 195:5 244:9,12,20 245:6	12 42:20 123 90:7 1250 255:3 13 54:23 180:15 134 238:9 139-2 200:25 13th 181:14 144 59:22 1475 2:6	254:11 2003 42:19 44:9,15 45:2,13 46:10,13 72:14,23 74:25 124:20 125:8,17 126:3,3,8 142:13 165:25 186:2,10,19 187:17,17 188:10 188:22 222:13 231:10,17 232:17 233:2,23	228 254:15 23 60:12,16 237 254:19 23rd 253:21 24 58:6 60:11 61:3 61:11,13 79:8 26 6:3 8:8 254:8 28 122:22 123:21,25 125:17 127:8 128:15 129:2,19 188:10
0	15 33:2 34:3,9,13 35:11,14 37:3,9 38:6,9 39:25 45:11 45:19 76:3 83:8 84:8 107:6,6 108:15 136:6 137:8	2003-2004 44:4 2004 44:9,15 45:2 72:20 73:21 74:2,5 74:7,18 104:21,24 105:4 149:14 156:7 156:12,13 158:8 159:14,24 165:25 169:6,12,21,24 170:5,10,15,17,18 171:8 172:9,11,24 173:16 233:23	28th 123:17 129:11 29 202:24 208:23 209:2 2:09 193:20 2nd 222:13
0002 194:23 002 93:13 00569 1:4 02 59:8 03 126:13,14 188:19 188:20 036 205:20 206:10	15th 42:14 46:21 16 76:9 163 55:7 17 55:10 172 203:4 205:22 206:16 173 202:23 203:2 18 1:14 121:18 222:11 255:5 19 91:21 1:10 1:4 1st 236:14	231:10,17 232:17 233:2,23 2003-2004 44:4 2004 44:9,15 45:2 72:20 73:21 74:2,5 74:7,18 104:21,24 105:4 149:14 156:7 156:12,13 158:8 159:14,24 165:25 169:6,12,21,24 170:5,10,15,17,18 171:8 172:9,11,24 173:16 233:23 2010 42:16,21 45:12 45:25 47:7 113:2 186:21 233:4 236:14 246:13,13 2011 15:15,20 42:14 45:11,19 47:8 54:23 74:9,12 120:3 121:19 123:15,16 173:19 174:3,7 180:16 202:24 222:11 2012 1:14 6:3 8:8 42:20 45:12 74:23 122:22 123:17,21 123:25 127:8 128:15 129:2,11,19 252:19 253:21 254:8 255:5 205 254:13 21 84:18 85:7 107:6 120:23 121:9 155:18	3
1	1 3:10 5:6 6:2 8:5 9:3,16 10:20 14:18 17:10,23 19:12 20:13 30:8 40:6,18 58:6 60:16 87:6,7 87:14,17,20,23 88:12,13,16,20 90:23,25 91:3 92:3 92:9,12,16,16 121:7 121:10 197:6 199:15 205:15 206:5,8 248:19 254:7 10 22:12 82:12,24 134:21,23 135:3 136:17 229:17 10001 255:3 10166-0193 2:14 102 27:17,23 29:6 76:9 91:21 10:09 1:15 10:37 60:17,23 97:16,18 10:39 61:11 11 87:8 88:17,21 90:2 155:19 250:3	2	3 200:20,21,25 254:11 3-1/2 192:25 193:6 3.2 85:21 86:6 90:5 30 89:11,23 90:4 210:4 213:23 37 221:19 379 177:14 178:9,18 179:2,6,14 181:6 3:05 194:3 3rd 148:10,12 149:14 156:12 159:5,7,14,24
			4
			4 89:8 205:3,4,10 206:2 254:13 400 10:7 151:11 179:9 419 109:2,17,25 44107 2:8 49 202:4,9 203:11 203:19 4:23 252:13 4th 149:24 158:7,8

5	106:8 251:16	79:4,10,16 80:5,13	actual 12:22 13:4,6
5 228:6,10 254:15	able 26:16 78:19	81:4 116:2,3,8,9,15	14:13 16:9 45:20
5-1/2 188:23	79:21,25 126:6	116:21 117:15,19	46:6 61:24 65:19
50 202:9	196:11 199:4	118:3,5,17,19,24	84:7 88:4 120:20
500 10:7 179:9	absent 100:3	119:5,10,14,18,23	130:15 152:14
51 61:9	absolutely 48:20	119:25 120:3,4,8,8	180:9 189:19
52 120:22,24 121:12	50:2,16 114:23	120:13,21 121:4,24	195:15 199:7,9,15
121:14	115:5,18,23 127:15	122:7,13,17,19	199:17 204:3,4,5
54 197:6,8	abstract 226:10	123:2 124:6,10,16	206:8 207:6 211:4
5th 149:24 156:7,13	accept 109:18	124:18,25 126:8,20	244:15
157:9	acceptable 224:17	127:8 128:7,9,15,24	adapt 75:19
6	access 65:3,5,6,15	128:25 129:4,9,12	add 233:12
6 201:6 237:23,24	65:17,20 67:16,21	129:13,16,25	addition 48:12
238:4 254:4,7,19	68:10,18,25 69:2,5	147:22 152:19,22	166:25 194:22
650 9:24	69:14,21 71:18,23	158:13,18,23 159:9	195:25 229:10
7	72:16,24 73:5,14	160:10,22 161:4,15	additional 8:22,23
770724 2:7	103:25 109:9,23	162:18,22 163:4	42:21,22 51:8
8	110:6,13 111:5,10	168:2,5,8 171:6,9	160:20 184:19
8-1/2 87:8 88:17,21	111:11,17,20,21,23	172:19,24 182:15	additions 8:21
90:2 250:3	112:5,6,8,11,13,16	182:20,22 185:2	address 113:3
82 254:9	113:12 114:18,20	188:25 230:19,22	122:16 241:10
9	115:20 119:4	accounting 223:13	adelphia 97:21
9 58:18 59:2	134:12 184:2,9,20	accounts 118:2	98:18,25 99:7
90 27:17,23 29:6	185:21 218:25	122:2 162:16	112:10 116:15
94 246:8 248:6	219:6 226:4 227:4	168:23 173:20	149:15 158:23
945 90:6	238:16 239:7,14,16	accuracy 101:22	160:10 162:18
950 10:2	239:23 240:3,9,24	227:18	admissibility 3:15
9:38 61:4	241:3,5,13	accurate 92:15	4:5
9:41 61:14	accessed 68:11	96:23 97:3,6,7	admits 165:2
9:49 158:8	106:22 119:10	98:17 99:17 174:25	advice 156:20 173:7
a	211:15 218:19	201:25 207:5 210:9	affect 19:8 244:15
a.m. 1:15 60:17,23	222:11 229:7	226:24 229:12	affidavit 201:15
97:18 156:7 158:8	239:18 240:23	235:5,18	aggregate 51:3
abbreviate 166:18	accessibility 41:14	accusation 50:6	183:2 223:17
170:19,20	accessible 41:20	accuse 50:11	233:13,14
abbreviated 166:12	45:3	accused 106:5	ago 25:5 26:22
166:19 169:7	accessing 113:18	action 79:24 147:4	53:20 74:24
abbreviates 166:20	239:11	219:17,19 239:21	agree 11:2 14:20
169:14	accidental 55:25	239:21 253:17	17:6,11,20 18:2,18
abbreviations 169:6	56:5,5	actions 106:5	20:24 24:5 27:7
ability 69:13 73:3	accidentally 216:13	142:17	36:12,20 41:7,11
103:22 105:8,21,23	account 42:2,5 43:2	activation 121:23	50:10 51:17 54:15
	44:8,12,18 59:15	activity 121:16	54:18 55:5,19,23
	76:17,20,22 77:2,3	123:19 241:16	56:3 62:9 66:14
	77:5,10,14,21 78:25		68:14 74:13 76:7

91:2 94:4 96:3 103:17,19 113:9 118:18 126:5 143:20 144:13 145:13 146:12 158:10 181:20,24 182:7,12 206:23 209:25 210:2,10,11 216:18 229:14,24 238:22 239:18 248:19 agreed 225:21 237:2 237:4 agreeing 103:2 agreement 147:15 214:18,25 215:4,10 215:21 216:16 agreements 214:13 215:8,22 ahead 83:6 201:11 250:6 air 151:11 alert 6:23 alex 87:25 153:23 154:4,7 alexander 2:15 3:2 allegations 200:3 alleged 156:8 allegedly 156:6 175:7 allow 23:24 68:25 69:20 71:17 72:2 104:2 117:14 133:18,24 allowed 171:17 allowing 68:10 allows 68:9 alter 24:21 26:9 132:18 alteration 134:25 altered 20:4,9 24:7 24:14 26:14 57:24 132:21 133:16 212:8,10 218:19 238:16	amanda 2:18 3:4 ambiguous 86:20 203:2 amend 62:13 104:23 213:24 amended 16:3 164:9 164:15 amount 141:8 236:15 analyses 152:5 analysis 12:22,25 13:2,4,6,18,25 14:17 15:21 16:22 17:2,8,12 18:9 19:8 19:19,22 20:18 34:8 34:13,22 35:14 36:19 37:9,18,24 38:18 39:25 40:8 59:9,13 63:17 72:7 72:8,12 77:6,8,10 78:7,14 80:14,19,21 80:23 81:3,5,17,22 82:3 92:25 93:4 96:6 105:19,22 106:2 107:24 111:2 112:20 123:13 124:2,22 130:6 137:18,21 148:24 150:10 153:20 159:20 165:9,14 182:5 183:22 184:13 189:12 190:14 224:13 225:10 226:21 227:21 231:7,25 237:12 242:12 analyst 35:6 analyze 19:20 32:4 38:2 43:17 149:8 154:19 191:14 198:20 225:11 analyzed 31:19,21 33:6 39:16 43:15 83:10 105:11 107:12,13,17	130:12 165:11 217:10 analyzing 35:8 84:8 95:20 anomalies 130:18 130:20 131:2 222:16 241:17 243:14 anomaly 131:13,15 132:24 135:6 166:5 212:16 213:7 239:12 241:6 242:23 243:5,8,12 243:18,23 244:3,5 answer 7:20 10:14 10:16 26:6 32:24 33:4 37:22 51:13,16 62:14 71:20 105:2,3 109:17 127:11,19 128:10,11,21 138:2 138:21 168:18 170:11 181:2 212:22 218:8 226:9 answered 39:9 51:23,23 127:22,24 135:21 162:2 answering 11:19 127:6 150:20 168:21 answers 104:23 anybody 244:21 anything's 138:20 184:22 apparent 47:22 48:25 apparently 146:11 175:14 appear 3:18 21:19 25:21 28:4 50:13 86:23 87:5 148:7 163:8 164:25 166:4 166:16 174:12 178:18 202:11 211:5,13 249:12	appeared 28:18 47:13 51:20 91:5 132:12 195:8,11 appears 28:7 30:2 91:3 92:20 96:3 97:3 102:7 142:14 156:12 158:11 159:13 165:19 174:2 201:13 202:17 206:12 210:12,13 229:17 appended 58:17 97:20 98:3,15 101:12,21 211:2 222:4 244:18 appending 176:17 applications 143:22 apply 78:24 79:3 105:4 approach 7:23,24 35:2 224:24 approaching 192:25 appropriate 183:13 187:12 237:16,20 appropriately 185:10 approximately 22:12 37:8 97:16 april 42:14 45:11,19 46:21 47:8 121:18 123:15 125:17,25 126:3,8,13 165:25 180:15 181:14 188:10,22 231:10 231:17 area 90:5 113:4 166:6,7 areas 39:21 139:20 165:13,18 224:16 ares 166:13 argentieri 189:25 201:8 arguing 190:14 argument 54:24 55:17 192:8
--	---	--	---

arose 47:7 48:13 arrive 19:16 216:17 article 228:6,11 229:15,18,20 230:2 237:24 238:4 254:15,19 articles 40:24 41:3 aside 150:13 217:20 243:2 asked 3:18 39:8 44:13 45:4 51:22 53:6 66:18 67:6 80:18 83:20 100:18 100:25 104:24 111:20 138:7,10 166:22 168:17 182:13 asking 7:7,21 24:11 26:13 31:18 36:20 39:19,23 44:20 50:10 55:13 75:5 86:15 87:25 112:5 117:12,17 126:11 127:4 133:11 140:14 168:16 176:17 177:22 183:24 184:5,5,16 185:9 186:15 191:19 208:9 212:17 asks 101:6 asserts 110:6 assess 136:21 assessment 115:17 asset 225:7 assets 32:15 33:12 33:17 35:23 52:6,7 52:25 53:3,5,7 54:3 54:5 184:14 assistant 131:16 133:3 135:5,12 assisted 12:22 associated 76:21,22 96:18,22 134:5 198:25 210:6	217:18 218:10 220:6 232:10 234:24 associations 4:2 assume 7:19 17:13 17:14,19 46:14 101:14 109:6,10,15 117:2 145:2,22 151:16 154:2 164:21 174:3,4 188:17 assumed 241:12 assuming 62:22 69:23 101:10 109:12 145:4 188:16 207:3 224:18 235:25 240:18 assumption 109:18 attach 164:14 190:8 attached 12:10,20 16:3 85:15 90:9 91:12 92:10 93:9 102:18 151:2 153:4 164:9,15,19,20 176:24 190:4 197:16 attachment 180:5 181:9,13 231:9,18 attachments 116:23 118:10,21 161:5 163:24 178:10 180:7 181:8 attempt 114:25 115:2 132:15 142:20 155:13 173:14 attempted 144:22 attempting 141:7 attention 194:11 238:8 attorney 62:24 149:13,23 162:4 attorneys 2:5,12 53:10,11 82:6	185:11 225:5 attributed 130:19 241:18 august 180:15 202:24 austin 35:20 58:11 58:15 59:5,7,10,20 60:4 61:4,14 62:24 98:4 99:3,4,8 149:16,17,18 150:10,11,16 151:8 152:16 160:3 177:4 195:5 244:9,12,20 245:7 authentic 15:8,10 16:5 17:18,21 18:17 18:24 19:2,6,6,13 19:21 20:4 102:20 103:3,10 115:7 144:12,17,20 145:4 145:4,17 146:2,21 148:17,22 150:15 151:12 153:5 155:12 158:12 164:2,4,12 189:16 191:10 192:13 225:25 226:2 231:23 247:16 authenticity 22:20 34:6 36:10,14,17,22 138:7 145:15 148:25 153:3,13 163:21 225:12 author 134:23 authorization 69:15 authors 134:21 135:3 automated 49:16 automatically 49:23 available 4:25 25:24 41:9,16,18 183:17 184:12 avenue 1:19 2:13 average 77:20	avoid 182:9 aware 7:16 15:7,13 15:21 16:19 23:23 42:23 53:18 57:22 70:23 71:2,3 75:2 102:17,24 103:4,7 105:25 106:4,9,13 106:15 124:17,20 125:4,9,10,15,18 136:15 140:5 147:14,20 163:22 164:3 165:6 173:6 176:21,25 187:19 190:3,6,11,12 199:24 207:23 208:2,12,14 218:17 218:23,24 219:2,5 237:6 awfully 151:15 aycock 2:18 3:5
b			
b 6:5 7:1 8:1 9:1 10:1 11:1 12:1 13:1 14:1 15:1 16:1 17:1 18:1 19:1 20:1 21:1 22:1 23:1 24:1 25:1 26:1 27:1 28:1 29:1 30:1 31:1 32:1 33:1 34:1 35:1 36:1 37:1 38:1 39:1 40:1 41:1 42:1 43:1 44:1 45:1 46:1 47:1 48:1 49:1 50:1 51:1 52:1 53:1 54:1 55:1 56:1 57:1 58:1 59:1 60:1 61:1 62:1 63:1 64:1 65:1 66:1 67:1 68:1 69:1 70:1 71:1 72:1,14 73:1 74:1 75:1 76:1 77:1 78:1 79:1 80:1 81:1 82:1 83:1 84:1 85:1 86:1 87:1 88:1 89:1 90:1 91:1 92:1 93:1 94:1 95:1 96:1			

97:1 98:1 99:1 100:1 101:1 102:1 103:1 104:1 105:1 106:1 107:1 108:1 109:1 110:1 111:1 112:1 113:1 114:1 115:1 116:1 117:1 118:1 119:1 120:1 121:1 122:1 123:1 124:1 125:1 126:1 127:1 128:1 129:1 130:1 131:1 132:1 133:1 134:1 135:1 136:1 137:1 138:1 139:1 140:1 141:1 142:1 143:1 144:1 145:1 146:1 147:1 148:1 149:1 150:1 151:1 152:1 153:1 154:1 155:1 156:1 157:1 158:1 159:1 160:1 161:1 162:1 163:1 164:1 165:1 166:1 167:1 168:1 169:1 170:1 171:1 172:1 173:1 174:1 175:1 176:1 177:1 178:1 179:1 180:1 181:1 182:1 183:1 184:1 185:1 186:1 187:1 188:1 189:1 190:1 191:1 192:1 193:1 194:1,18 195:1 196:1 197:1 198:1 199:1 200:1 201:1 202:1 203:1 204:1 205:1 206:1 207:1 208:1 209:1 210:1 211:1 212:1 213:1 214:1 215:1 216:1 217:1 218:1 219:1 220:1 221:1 222:1 223:1 224:1 225:1 226:1 227:1 228:1 229:1 230:1	231:1 232:1 233:1 234:1 235:1 236:1 237:1 238:1 239:1 240:1 241:1 242:1 243:1 244:1 245:1 246:1 247:1 248:1 249:1 250:1 251:1 252:1 back 19:16 30:23 60:15 82:20,22 83:5 85:6 87:4 104:21 118:14 130:7 137:4 137:5 159:9 163:2,5 163:15,21 167:9 170:24 172:9,11,17 172:24 173:15 216:17 227:14 234:20 242:2 248:25,25 251:17 251:19 backdate 219:18,22 219:23 backdated 102:15 190:15 213:16 214:2 219:14,15 221:9 246:4,5,21,23 247:2,11 backdating 149:6 154:25 213:19 217:17 219:12 220:4,13,25 221:2,6 221:14,17,23 222:8 241:18 242:19 245:19,19 247:12 247:24 248:3 backup 43:15,18,21 43:23 44:5,8,11,14 44:20 45:2,6,8,22 46:2,8,14,15 backups 44:22 backward 94:6 backwards 95:3,5 95:16,17 ballpark 235:23	base 142:8 based 11:20 18:4 28:13,18 30:11 33:10 35:16 36:18 56:23 78:14 79:7 93:19 96:25 98:9 110:19,25 116:3,9 117:19 118:4,8,17 118:19 124:11 126:12 131:19 132:14 135:24 141:22 150:9 156:18 159:9,12 160:14 163:7 165:20 172:5 174:18 179:10 211:5 225:10 226:21 233:8 237:12 249:10 basing 160:5 basis 9:18 33:18 171:4,8,19 bathroom 82:13 battery 250:19,21 250:22,23 251:3,9 251:12 252:4,5,7 begins 221:18 behalf 104:13 belief 166:14 believe 5:18 8:24 9:25 12:6 22:2 25:21 32:13 38:15 42:10,17 44:6,16,17 49:6 52:7 66:9 76:25 77:3 84:2 85:11 94:12 96:24 111:14 116:16 122:14 140:6,13 156:10 165:10,24 169:18 175:7 186:18,23 190:7 197:12,24 202:3 207:22 221:10 226:23 236:14 248:10	believed 195:13 believing 195:20 bell 53:16 177:15 belonged 32:18 belonging 32:15 62:21 149:12 benjamin 2:17 3:4 best 3:25 170:3 238:20 better 32:22 156:14 beyond 18:8 19:3 53:22 80:17 148:7 192:10 bigelow 1:21 253:7 253:24 billable 9:24 223:7 223:14 bin 117:4 bios 250:19,20,22,23 252:4,7 bit 59:22 62:14 103:12 177:8 193:6 194:12 blacked 77:16 blank 214:17,19 blood 253:17 blue 91:23 blurry 159:18,19,21 159:22,23,24 160:2 160:6,7,9,21 161:5 161:8,14,17,23 162:4,6 board 251:3,4 body 157:16 178:11 178:18 179:6 boland 2:4,9 3:6,6 3:12 4:11,16,18,22 5:2,5,11,18,24 6:9 15:6,18 16:12 18:3 21:13,16 29:3,20 31:25 32:3 33:15,20 50:5 54:22 55:14 58:4,21 70:22 82:9 82:19,22,23 83:20 85:2,5 86:11 87:19
---	---	---	--

87:24 88:6,10 93:8 93:15 109:24 110:2 110:10 121:8,10,14 127:10,17 128:2 136:16,20 137:3 168:19 180:14,25 184:7 186:17 191:7 193:5,10,14,18 194:4,12,17,21 200:19 204:4 205:2 205:9 206:22 224:22 229:21 234:13,20 237:22 248:15,24 252:8 254:4 boland's 87:22 bolster 99:8 book 238:6 bother 36:3 bottom 58:22 61:13 63:22 154:14 228:24 box 46:12 break 31:9 79:5 82:12,25 83:3 127:20 136:17,21 193:8,9 234:14 breaks 7:11 brief 6:19 briefly 83:5 broader 82:3 247:22 broadway 255:3 broom 9:10 70:22 75:6 82:17 85:13 89:9 208:13 209:7 254:10 broom's 26:20 72:12,19 74:10 84:15 85:8 89:4 90:16 250:18 brought 219:11 243:3 browser 168:10 169:2 172:18	browsers 168:12,16 168:23 173:20 bryan 1:17 3:8 153:23 154:4,8,9,9 252:16 253:10 254:4 255:6,21 buffalo 113:3 114:13 115:15 building 155:3 buildings 151:3 built 247:18 bunch 15:14 105:11 business 217:5 butt 62:11 button 23:11 buy 133:24 c c 2:2 253:2,2 c.p.l.r. 3:22 calculate 232:11 calculated 85:20 86:13 calculates 89:9 calculation 59:21 86:3,5,9,16,18 89:4 89:7,21 calendar 126:2 california 84:3 call 74:23 137:11 145:14 164:6 194:10 240:14 called 6:5 21:3 52:14 71:5 74:25 106:6 250:23 calling 15:25 23:10 24:3 120:10,11,12 calls 136:11 207:11 camera 23:6,10,12 234:19 candidate 147:10,12 capabilities 72:10 72:23 112:10 capability 116:16 117:18	capable 104:19 capacity 116:3 capture 23:9 captured 23:12,16 24:4 card 23:12 82:7,11 careful 152:21 carmine 77:4,11 110:12 152:20,23 158:18 carmine's 77:7 carve 35:6 cary 1:20 253:7,24 case 6:24 7:4,14 9:7 10:21 13:18 14:11 15:22 16:25 17:17 18:6,14 31:25 32:3 32:5 37:6,12 40:19 41:19 47:3 52:13,23 52:25 53:3,13,24,25 62:20 64:20 70:7,18 70:24 77:13,13 82:3 99:24 101:16 102:25 103:8 105:6 105:7,12,21,23 108:25 110:23 114:24 115:4,23 122:21 125:16 129:22 132:2 135:24 137:23 141:4,12 150:13 152:12,14 153:12 153:15 154:20 155:8,10 174:3,8 176:22 178:9 180:11,18 184:20 185:5,12,15,20 188:16 189:5 190:10 201:2 203:4 205:8 215:10,12 217:9,25 222:9 224:2 227:12 233:8 235:2 236:4,12 239:13 242:14,15 244:8 245:8,17,24	245:24 246:18 247:10,15,23 248:3 255:5 cases 4:10 13:25 52:4 54:3 100:11,13 153:16,18,19 214:6 230:18,23 241:12 cataloged 72:6 categories 163:23 category 130:11 cause 47:22 105:6 134:18 135:15 172:23 175:13 caused 48:18,21 56:12,14,20 135:7 caution 210:5,10 cd 25:7 66:19 134:3 221:20 cds 57:6 ceglia 1:5 3:7 12:23 16:2 17:19 28:8 35:18 36:19 61:22 62:2 63:4,4,9,18 64:13 65:16 67:15 68:12,15 76:24 77:4 77:11,12,14 80:19 92:9 93:4 95:20 105:15 108:10,19 108:20,22 109:8,21 109:23 110:7,11,13 110:13,18,20,22 111:2 112:18,20,21 113:11 114:20 115:7,8,17 119:17 121:17 122:5 123:13 124:19 128:6,13 129:16,24 138:9,16,17 139:24 140:17 141:6,9,10 141:14 146:3 147:3 147:5,10,16,23 149:13 150:25 152:20,23,24 156:11,21 157:8 158:12,18,19 159:7
---	---	---	--

161:4 162:21 163:3 163:25 165:6 167:23 169:2 176:23 178:19,24 179:11 184:14 186:16 187:15,21 188:11,18 190:3 195:4 199:24 200:22 201:3 202:13,21 212:13 225:11 254:12 255:5 ceglia's 59:18 60:3 73:19 76:16,20 77:2 106:18 108:24 109:7 112:23 151:2 160:21 161:12 183:22,23 187:14 201:15 231:8 ceglias 62:21 central 37:7 61:4 certain 30:9 32:14 120:9 183:3,6 249:13 250:24 certainly 10:17 12:17 14:4 33:11 41:13,17,19 63:16 69:3 73:15 75:15 77:25 95:11,15 116:25 117:6 119:11 138:13 139:2 145:19 196:9 218:14 234:7 235:14,17 248:4 certification 202:22 207:24 208:4,7,10 208:13 certified 3:17 14:7 19:19 237:17 certify 253:9,15 cetera 116:23 232:9 cfe 208:6 chain 149:25 150:18 159:4,6,8 163:9,13 178:14	challenge 143:12 challenges 163:20 237:25 254:20 challenging 142:23 143:5,8,14,14 chance 70:17 change 82:8,10 109:20 110:16,24 115:16,20 134:5,7,8 134:22 167:12,12 167:22 171:2 174:9 255:7 changed 24:8,9,10 174:11 changes 172:22 173:4,8 characterize 63:15 69:20 charge 183:10 225:10 charged 9:20 80:17 81:24 185:11 223:5 224:9,10,11 225:19 chat 83:2 check 153:22 202:4 chicago 108:19 choice 4:3 226:24 choose 207:14 238:19 circumstance 38:6 133:8,14 134:15 239:9 circumstances 38:3 50:23 51:4,11,25 63:2 103:24 112:9 112:13 153:11 197:2 204:17 218:2 219:16 220:8 226:12 242:6 244:25 245:4 cited 201:14 civil 3:20 claim 16:4 119:17 132:2 141:7 142:2,7 142:15,21 150:8	165:8,15 199:22,23 200:2 232:4 claimed 165:4 claiming 163:25 164:3,11 claims 141:22 143:6 143:8,13,15,16 164:21 165:7 clarification 7:7 8:2 203:24 clarify 21:11 45:16 60:7 66:13 70:20 107:10 110:10 140:3 clarifying 107:15 classes 20:7 cleanup 73:14,16 clear 5:16 16:8,11 36:17 42:12 44:11 54:20 67:7 88:9,11 93:12 95:25 107:8 107:16,19 108:6 110:20 114:23 115:5 127:15 128:14,19 137:14 141:24,25 144:6,8 144:24 150:13 152:18 155:17 167:3 176:11 182:21 186:8 201:19 202:16 212:25 213:7 217:22 219:13 222:2 226:17 233:10 236:9 239:3 240:2 242:21 244:7 247:4,15 clearly 3:24 18:4 51:25 99:22 140:24 141:2,11 142:3 146:20 152:7 159:3 175:16 190:22 226:22 239:4,13 245:3 246:4,20,23 247:2	client 15:8 18:7 124:6 126:20 146:24 150:16 155:12 165:2 189:15 211:9 212:21 214:10,21 214:25 225:23 231:22 233:18,23 client's 125:6 132:15 143:17 175:16 211:12,23 231:15 clients 67:21 68:24 69:7 214:14 clock 98:16,21,23 99:23,25 101:20,25 102:7,10,15 149:6 174:19,22 211:5,23 218:12,16 219:18 219:24 220:3,21 222:16 229:13 241:7 242:4 245:8 246:7,9,14,17 247:5 248:6 250:25 251:20,21 clocks 221:25 close 136:18 172:3 250:3 cloth 213:3 cmos 251:12 252:4,7 coach 88:7 code 133:7 collaborative 11:13 collect 81:18 225:11 collected 42:4,13 45:10 186:14 collecting 50:25 56:22 collection 45:18 46:21 47:8 48:22 50:8 56:21 84:4 233:3,4 245:21 collections 182:24 233:5,7
--	--	---	---

colon 157:18,19 167:5 column 228:23 come 25:4 143:21 210:20 comes 169:18 210:8 221:3 comfortable 243:24 coming 137:21 comment 146:2 195:19 comments 12:18 commission 255:25 commit 182:8 committing 50:12 50:21 175:16 179:12 245:9 common 131:17 134:25 139:9 196:16 communicate 136:10 143:23 communicating 158:13 communication 40:6 147:23 158:17 188:21,24 communications 183:8 185:20 224:20 company 35:7 106:9 245:9 255:2 compare 49:3 192:14 196:12 204:13 207:17 222:24 comparing 196:24 197:2 206:25 220:5 comparison 192:20 223:3 compensated 9:17 compensation 223:24 competing 229:6	compile 223:22 complaint 16:3 164:10,16,19 200:14 complete 78:16 99:18 242:12 completed 223:20 completely 70:6 113:21 152:13 171:18 comprehensive 184:15 235:19 comprise 23:3 comprised 20:13 computer 12:25 23:17,19 24:21 32:18 34:25 40:25 41:4,8 57:15 59:9 59:19 60:3 61:20,25 62:5,9,12,20 63:5,9 64:9,14,17 65:4,7 65:11,15 67:17 68:11,13,16,18 69:2 69:10,11,22,25 71:18 72:9,15 73:5 73:19,21 74:2,7,9 74:12,15 75:6 80:22 84:16,22 86:23 96:19 97:3,24 98:11 101:12 102:15 103:21 104:12,16 104:17 105:8 106:3 106:18,22 108:23 109:9,23 110:7,15 111:4,5,10 112:24 113:5,13,18 114:3 115:4,21 118:5,15 130:8,11,15 134:3,4 139:22 140:16 143:19 148:14,15 148:20 149:3,12 156:16 168:3,6,9 174:18,22 182:4 190:18,24 191:19 194:25 198:5	209:14 210:21 211:5,12,23,24 215:2,2 216:22 218:12 219:8,14,23 219:24 220:12 221:8,24 222:4 228:8 229:4,13 230:14,18 236:25 237:2,5,25 240:8 250:20,24 251:7,15 251:22,23 254:17 254:21 computers 32:17,19 32:23 33:5,25 34:4 34:9,13 35:11,15 37:4,10 38:6,10 40:2 57:3 69:14 83:8 84:8 105:11,20 136:6,9 137:9,21 181:18,23,25 251:4 concedes 18:14 concept 219:11 concert 141:10 147:7 conclude 78:2,16 98:10 114:4 175:4 179:10,21 191:14 196:20 204:16 242:10,24 244:11 245:21 concluded 138:23 conclusion 19:11 65:21 74:9 97:9 110:17 113:7,10,11 115:20 119:22,24 120:6 124:5,11 126:11,17,19 131:10,20 135:23 139:23 140:17 146:4,14,17 147:2 175:19 196:17 197:3 219:13 233:25 242:11,21 243:16 245:2 247:14,17	conclusions 11:3 14:17 90:20 132:19 137:22 conclusive 229:5 conclusively 207:18 239:17 240:23 conduct 51:12 170:9 183:5 conducted 18:5 32:14 confidence 99:9 100:5 101:4 confident 99:16 101:15,18,22 102:8 configuration 117:22,23 170:25 171:4,16 configurations 171:15,23 configure 170:23 173:14 configured 117:11 118:16 119:3,7 172:17 173:15 confirm 169:12 183:16 184:2 201:11 confirmed 44:13 169:13 confirming 182:4 confirms 98:19 conflicted 226:5 confuse 92:5 confused 7:5 confusing 27:21 183:19 238:12 conjunction 116:14 connect 180:23 222:21 connected 84:22 connection 120:17 connectu 52:15,22 52:25 53:3 consider 75:13 138:9 155:7 210:7
--	---	--	--

242:5 consideration 183:13 considered 138:13 143:3 185:16 242:13 considering 50:24 175:15 246:17 consistent 92:23 97:22,25 98:8,14 100:8 101:16 112:4 131:11 149:25 167:13,22 171:7 175:6 214:5 226:19 consistently 171:9 constellation 243:3 construction 238:20 consultation 53:9 cont'd 194:20 contact 173:12 240:14 contain 115:7 222:7 225:22 contained 35:19 216:10 233:2,3,17 container 177:13 179:23 containing 164:25 165:7 217:24 contains 97:17 150:7 172:15 contemporaneous 233:22 content 123:16 125:10 128:24 131:6 139:5 159:13 195:15,17 196:2,12 196:13,19 204:14 211:8 212:17,19 222:17,23,24 223:3 223:3 content's 139:14 contents 78:15 117:14 178:6 224:20	contest 106:10 context 22:24 99:20 102:3 149:10 154:20 155:8 156:18,22 160:5 179:20 196:22 242:24 245:22 246:18 247:9,22 contextual 62:18 102:5 152:4 continue 93:16 94:6 contract 14:10,11 14:21,23 15:4,10,25 16:5 17:7,9,16,18 17:21,23 18:6,6,7 18:15,16,19,24,24 18:25 19:2,6,7,8,12 19:13 20:12 21:19 23:3 24:12 28:8,12 28:17 34:7 36:11,15 36:18,23 91:14 92:3 92:10,13,17,18 96:4 97:17 102:20,22 103:3,9,10 107:3,11 107:17 115:7 125:15,16,20 126:13 141:23 142:9,13,14 144:10 144:15,17,20,24,25 145:12,17 146:5,10 146:15,21,24 148:2 148:17,22,25 149:21,23 150:5,8 150:14,15 152:15 153:23 154:8 155:12,14 156:20 159:14 164:3 188:9 188:11,22 189:5,10 189:15,16,19,24 190:6,14,17,20 191:3,10,12,22 192:2,5,9,12,13,15 192:16 199:15 205:15,16,20 206:4 206:8,14 215:24	217:6,9,11 225:13 231:10,17,18,21,23 242:17 247:16,17 248:18 249:6 contract's 144:12 145:10 146:2 contrary 110:8 contributed 9:25 10:4 11:16 12:18 14:6 31:12 contributing 235:3 control 69:22 72:15 104:2 convention 92:19 93:7 201:20 conversation 6:13 6:17,20,22 139:18 150:17 152:17 173:10 conversations 7:13 184:11 224:25 225:5 conversion 55:2 56:23 convert 179:3 coordinated 165:18 173:25 174:12,14 174:23 175:5,13,18 175:25 176:24 179:7,17 180:21 copied 25:7,9,11,22 25:25 26:5 65:18 66:19 90:3 95:6,9 96:14,19 111:8 139:12 164:16 165:2 169:3 172:23 173:19 195:11 211:9 229:9 copier 90:3 copies 5:15 14:14,22 16:15 23:4 32:11 37:20 38:16 41:25 42:4 43:15,18,21,24 44:5,8,11,14,20 45:2,5,7,10,14	46:25 55:4 125:21 125:22 161:17 164:10 182:24 189:24 195:13 200:16 215:12 216:16 copy 5:6,9 8:7 16:3 20:4 30:11 37:25 38:4 42:15,19,20,21 42:22 45:22,24 46:9 46:12,16,17,23 48:2 48:3 88:19 92:12 107:12,21,23 108:5 108:8,9,11,14,17 109:13 134:2,4 139:4 140:23 147:15 149:19 151:8 167:10,11,13 189:22 192:14 195:15 196:21 199:17 203:19 210:22,23,24 211:24 212:4 231:9 233:19 248:18 copying 29:2 112:2 168:3,5,6,7 corner 58:8 84:19 91:22 208:25 corollary 144:23 correct 5:24 8:13 12:11 13:13,16 19:14,15,19 20:14 20:17,19,21,25 21:5 23:24 25:5,10,13,16 26:11,12 31:12,13 31:17 37:4 38:4 43:2 44:15 45:21,23 47:4,11 56:7 58:13 59:5 61:5,12,15,17 61:19 63:8,23,25 64:4,15 65:13 66:17 67:15 68:2 71:16 77:18 80:2 83:12 85:21 88:14,21 90:25 93:25 94:11
--	---	--	--

94:16,17 97:24 98:24 99:6,11,22 100:4 105:15,16,18 107:5,7,9 121:17 125:3 126:4 130:14 132:4 137:13,19 143:24 144:21 146:6 148:6 154:12 156:2,10 157:11 158:2,9,14,20 162:14,22,23 165:12,15 174:24 175:10 182:6 186:4 191:7 197:24 200:11 205:24 207:21 222:19 223:3 224:22 227:25 244:16 correction 121:11 correctly 66:12 174:23 195:3 correspondence 81:21 corresponding 177:16 counsel 6:14,23 9:10 9:13,20 38:18 39:11 83:2 count 94:6 counting 95:2,5,17 county 253:5 couple 83:6 95:5 118:9 137:5,6 177:10,14 course 49:8 220:18 225:15 court 1:2,21 9:15 11:5 17:17 20:2 28:5 30:6 33:23 35:17 36:13,21,21 84:15,24 91:6 107:8 138:10 163:24 198:3 214:16 225:9 225:20 250:14 253:7	courts 22:19 covered 32:13 35:17 create 49:24 55:3 75:13,19 85:14 87:2 115:2 130:20 132:8 132:11,16 140:24 141:3,4,12 142:11 142:12 144:18 183:2 created 24:18,20,25 25:2,17,20 57:25 66:2,8,11,16 93:22 93:23 94:14 96:6,8 96:9,11 102:14 140:21,22 148:8 173:4 195:9 222:13 229:7 233:21,23 creation 96:18,20,22 97:6,11,14,15 98:10 99:9,17 101:4,22 102:12 134:12 146:23 219:22 220:2 226:4 credible 110:22 crimes 228:7 254:16 criminal 237:25 254:20 crutcher 1:19 2:11 current 4:22 8:20,21 8:24 9:23 10:6 74:23 78:15 173:18 currently 75:6 214:10 custodian 184:25 cut 147:11 164:25 165:5 166:21,24 167:23 176:15 215:14,16,24 216:4 cutting 167:20,20,25 cv 1:4 8:19 9:2 12:20 208:15,17 cvs 12:5,6,10	d d 1:5 121:2 200:22 254:2,12 data 35:6 41:13,21 42:20,20,21 45:11 51:3 101:3 116:12 121:3 123:6,11,12 123:20 124:3 127:9 129:3 148:21 168:8 172:16,18,23 173:19 183:2 199:2 199:2,3 207:4 211:11,22 227:6,11 227:19,24 242:16 date 6:4 37:9 82:18 97:11,15 99:9,17 101:4,21,23 102:12 114:11 120:9 124:22 125:17,23 125:23 134:12,12 156:5 188:12 200:23 205:6 210:5 211:19 218:15,25 219:20,20,22 220:2 226:4,5,8,24 228:9 238:3 239:7,8,14,16 240:10,24,25 241:3 241:5,6 243:14,18 243:23 244:3,5 255:5 date's 174:7 dated 6:3 8:8 180:15 181:14 254:8 dates 96:18,20,22 97:6,6,7,14 171:6 219:7 220:5,15 225:25 227:4,5 228:3 229:4,7 233:22 239:23 240:3,4,16 241:13 243:6,9,12 dating 244:15 day 17:15 54:24 156:8 161:13	162:11 248:6 252:19 253:21 255:23 daylight 165:20 166:4 174:5,6,11 days 66:22 118:14 156:10,13 158:22 160:8 161:8 162:5 162:25 163:6 246:8 dbx 75:22 76:4 77:21 deal 241:20 dealing 20:20 41:14 97:24 241:23 dean 2:9 3:6 175:25 december 54:23 246:12 deciding 233:12 decision 13:20 declaration 47:6,9 47:13,21 48:2,14 82:16 102:25 108:25 110:12,16 187:15 200:22 201:2 202:13 203:12,19 206:10 231:8,15 254:9,12 declarations 47:2 103:6 110:8 declare 153:5 declared 109:8,22 dedupe 49:8 50:8 51:6 deduping 51:2 default 92:20 93:2,5 93:6 94:2,5 defect 24:6 defendant 52:5 defendants 1:10 2:12 3:3 10:9 39:16 39:25 40:8 42:23 43:7 185:7 187:6,10 199:22,22 202:24 206:15 207:7,10
---	--	---	---

defense 6:13,22 9:10 9:13,20 38:18 39:11 83:2 224:25 225:5 237:25 238:18 254:20 define 111:15,18 defined 22:5 236:24 definition 23:13 56:9 237:2,5 definitive 113:7 delete 130:17 deleted 47:22,23 78:6,8,18,20 79:21 79:22,23 80:4,13 116:22 117:2,3 119:18,22,25 120:6 123:18,18 124:7,9 126:9,16,22 127:16 128:7,9,13,17,20,20 128:22,23 129:4,5,6 129:8 195:8,16,22 222:11,17 deletion 121:3 123:20 delineated 45:9 deliveries 42:11 43:12 delivery 42:17,18 46:5 demonstrate 98:16 99:22 denominated 92:8 department 209:5 209:13 depend 67:24 101:24 119:2 153:11,19 226:11 242:25 dependent 218:15 depending 9:22 57:13 69:19 95:14 119:7 131:15 153:17 196:24,25 204:16 229:8 241:8	depends 102:5 103:23 116:24 117:10 130:25 196:22 209:22 210:23 deponent 255:6 deposed 7:5,13 18:14 deposing 87:24 deposit 104:16 deposition 1:17 3:16 3:24 4:5,8 6:25 7:12 7:15 9:6 18:23 54:13 83:3 100:15 100:16 255:5 depositions 9:7 100:19 derived 90:17 describe 11:5 12:12 28:5 30:5 32:16 185:13 198:3 description 32:22 85:16,17 desktop 67:22 251:4 despite 123:15 detail 139:21 detailed 60:13 140:12 151:6 details 189:3 detected 73:10 detection 182:9 determination 115:22 237:8 determine 19:21 20:9 25:23 72:20,22 77:6 141:18,21 161:20 169:24 183:6 199:4 204:7 220:4 225:24 226:5 239:17 241:23 242:9 247:21 determined 13:21 17:17,21 107:24 108:3 137:17 170:2 195:10 233:20	determining 36:14 36:22 detrimental 145:23 device 25:9 148:6 197:9,12,21 198:19 198:23 199:5 207:10 devices 137:25 138:4 197:16 dial 127:18 differ 59:21 60:5 difference 49:5 56:2 61:6,9 167:2 168:15 201:20 243:6 248:6 differences 47:7,24 48:9,12,19,21 49:11 49:18,20,25 50:3,13 50:22 51:20 54:17 55:2,21 56:12,17,18 56:24 57:4,8,13 166:8,23 176:6,10 176:15 different 47:3 49:7 85:23 91:4 92:25 94:4 95:7 104:25 107:4,18 117:11 139:15 162:16 163:15 173:19,21 184:5 189:4,21,22 192:21,25 201:13 201:21 209:18 214:25 215:11,11 215:17,19 216:6,8,9 216:20 217:8 220:5 220:15 222:25 230:12 247:19 differently 229:8 difficult 62:16 223:12 245:2 difficulty 250:11 digital 10:3 18:3,4 19:9,18,20,22,25 20:8,23 21:4,7 22:4 22:15,17,18 23:6,10 23:16 24:17 25:24	26:4 41:12 108:3,4 108:13,18 143:2 148:2 155:15 208:6 232:12 237:13,13 dimension 85:20 dimensions 85:13 85:17,20,25 86:13 86:14,24 88:24 89:4 89:10,22 90:12,17 direct 7:6 95:10,23 131:8,9 159:10 187:13 directly 169:18 170:12 189:18 238:17 director 228:17 230:6 disagree 86:3,5,15 86:18 89:3,20 113:21 176:12,16 210:11 238:23,24 240:5 disallow 238:21 disaster 43:24 disc 44:22 discard 101:7 disclaiming 192:4 discovered 21:25 28:8 75:17 discovery 21:22 33:23 35:17,21,25 36:4,6,13 42:24 43:9 80:18 81:5,10 183:2,18,21 185:13 188:2 200:9 236:10 236:11,13 discovery's 36:16 discredits 218:18 238:15 discrepancies 55:3 discrepancy 48:10 discuss 9:9,12 38:17 70:2 119:20 131:3 220:18
---	---	---	---

discussed 35:15 130:22 137:7 188:11 211:2 213:10 220:24 discusses 85:13 discussing 13:8 103:14 159:13,18 216:7 227:13 discussion 38:20,23 38:24 58:11,14 85:4 138:15 197:19 221:16 discussions 54:2 disk 25:4 66:22 221:11,13,21,22 222:6,6 233:17 disks 221:25 227:12 display 171:18,23 172:4 174:18 displayed 171:9 displays 171:6 dispute 90:15 227:18 231:8,14 232:4 233:24 disputed 125:16 disputes 227:20 disputing 29:23 district 1:2,3 division 11:11,20 divorce 149:2 doc 140:23 document 14:7,8 15:7,9,14,15,19 16:2,10,16 21:2 22:22 27:25 29:6 48:25 56:3 57:11,23 85:24 96:16 109:2 109:16,25 115:2 131:5,12 132:9,12 132:13,16,17 134:22 135:2 138:8 139:6,13,15 140:22 140:25 141:3,5,12 142:9,11,25 145:15 146:11,16 155:24	156:15 164:6 165:3 176:11 178:2,12 181:10,15 191:5,16 191:17 198:6 199:16,16,18 200:24,25 201:7 202:15 205:4,7,11 206:19 209:8,25 212:20 215:17 216:2,8,21 219:19 219:21,24 221:18 222:5,12 225:20 227:4 231:22 238:9 238:10 239:10 240:24 242:9,18 243:4,8,10,24 244:15 245:20 246:20,20,22,23,25 247:2,7,10 248:3,4 248:21 249:17 254:13 documentation 34:12 documents 22:21 34:16,18,22 51:6,8 65:18 66:10 67:22 85:14,18 86:21 93:7 95:14,15,24 115:3 131:4 132:11 140:21 142:20 144:14,18 148:8 149:6 163:23,23 164:15,24 165:7,10 167:5,11 172:2,15 173:4 183:6 189:4 189:20 202:18,21 211:8,21 212:10,12 213:16,18 214:2,3,7 215:15,20 216:10 217:18,24 221:10 222:10,10,12,14 225:22 226:15,21 226:22 230:18,22 233:18,21 234:3 242:7 243:13 246:3	246:5 247:13 doing 56:21 80:14 104:19 151:25 175:8 224:6 225:19 233:12 245:15 246:19 dollars 10:7 double 190:21 doubt 29:16 234:12 downloaded 25:14 downtown 151:4 dr 238:5 draft 214:6 drafters 235:10 drafting 11:13 13:10 drafts 12:17 214:8 draw 238:8 243:15 243:17 245:2 247:14 drawing 113:6 135:23 drawn 213:4 242:12 drive 24:19,25 25:2 25:11,12,18,20,22 26:7,14 65:19 66:2 66:8,11,16,24 67:2 67:10,24 93:22 94:15,20,21,23 95:2 95:7,9 96:10,12 107:11,13,21,25 108:2,4,9,13,18 111:8 112:3 148:9 195:9,11,12 203:8 203:21 221:4,7 248:8 251:23 drives 32:18 107:18 drop 134:24 duly 6:6 253:12 dunn 1:18 2:11 51:8 53:10 118:7,20,23 123:10 183:4,11,14 187:13 215:10 224:21 225:18	duplicate 42:22 189:23 duplicating 5:14 dupree 2:16 3:4 194:6,15 203:24 205:7 206:18 207:11,15 212:2 218:22 224:3,14 229:16 231:11,20 234:16 237:19 248:13,16,22 249:21 250:5 252:9 252:10 duty 42:24
e			
e 2:2,2 6:5 24:19 26:8 32:12 35:20 40:5 42:2,5,14,15 42:25,25 43:8,16,21 43:22 44:5,8,12,14 44:18 45:5,11,15,20 46:8,12,17 47:8,14 47:14,22,23 48:19 49:4,7,7,20 50:7,9 50:13,22,25 51:21 54:18 55:4 56:19,22 57:7 58:15,17 59:5 59:7,11,15,15,19,20 60:3,6,14,17,20 61:10,21 62:7,8,20 62:22 63:4,6,10,15 63:19,21,22 64:10 64:13,18 65:10,11 73:20 76:16,20,21 76:22,24 77:2,14,20 78:3,4,5,8,18,20,25 79:3,10,15,16,19,20 79:23 80:4,4,13 81:4,9,14,17,20 85:15 90:9 91:13 97:16,20 98:11,13 98:18 99:5,7,14,15 99:19,21 101:2 102:2,19 104:9,10			

104:13 109:10,21 110:18,20 111:3,6 112:18,25 113:13 113:16,17 114:12 114:15,16,22,24 115:5,6,12,25 116:21 117:19 118:8,9,17,20,23 119:14,18,22,24 120:4 121:18,22 122:6,9,13,16,16,19 122:22,23,25 123:6 123:14,15,18,23,25 124:6,9,13,15,17,21 124:23,25 125:4,7 126:6,12,15,20,21 127:7 128:7,8,13,15 128:20,22 129:3,6,8 129:12,13,17,19,20 129:25 138:14,18 146:23 147:20,21 149:4,13,14,15,19 149:21,25 150:9,15 150:18,24 151:8,17 151:17 152:7,15,18 152:19,24 153:4,21 153:25 154:3 156:6 156:9,11,19 157:4 157:10,12,17,17,21 158:17,23 159:3,4,4 159:7,8 160:11,20 161:3 162:12,15,16 162:17,19 163:2,9,9 163:12 164:10,12 164:14,17,21 165:7 165:10,16,19,23,24 166:3,9,10,19,20,22 168:14 169:3,7,11 169:15 170:19,20 171:17,17 173:16 174:2,9,13,15,16,24 175:5,14,15,17,21 175:22,23 176:3,18 176:21,22 177:4,9 178:10,11,12,17,18	178:23 179:5,16,22 179:24 180:4,9,15 181:12 182:15,20 182:22 183:7,10,18 183:23 184:3,9,19 185:2,8,14,19 186:3 186:11,16,23 187:3 187:7,11,16,20 188:3,12,18,21,24 188:25 189:25 190:8 191:24 192:3 194:2,2,18 210:6,8 210:9,18,19,20,21 211:7,10,12,14,20 211:25 212:3,7,12 212:14,18,24 213:2 213:4 216:4,11,17 217:24 225:14,23 226:14,18,23 227:3 227:6 228:12 230:18,22 231:16 232:5,18,21 233:2,6 233:11,16,19 253:2 253:2 254:2 earlier 22:5 65:24 74:18 87:9 94:8 103:12 110:8 166:22 earliest 93:18 124:19,21 early 41:22,23 184:13 easily 218:19 223:20 238:16 244:14,19 eastern 58:24 60:24 166:2,4 226:19 edit 215:22 edited 212:8 216:2 226:22 editing 23:24 213:2 216:5 editor 130:3,8,11,14 130:15,19,19 131:7 131:12,21 132:2,10 132:18,22 133:10	135:11,16,18 136:2 139:19,24 140:6,18 142:18 147:8 editorial 12:18 editors 130:17 eduardo 53:14 effect 51:7 166:3 eight 74:24 either 22:25 41:24 42:3 73:13 79:24 95:20 139:3 176:8 186:13 214:24 234:8 238:18 248:20 electronic 19:24 20:17,20 22:20 30:17,19,22 31:3,20 31:24 32:4 40:16 52:3 53:3,13,24 54:3 144:14,18 145:5 182:25 185:19 217:9 225:7 231:19 electronically 136:9 elements 213:8 eliminate 111:11 112:15 elliott 1:8 embedded 198:15 198:17 227:6 employed 202:20 employee 245:6 employees 81:21 106:11,14 215:3 encase 131:18 135:8 ends 150:13 205:20 205:22 206:10,15 enforced 146:6 engage 147:3 engaged 48:17 50:25 155:13 244:13 engagement 8:23 entered 147:16	entire 10:23 17:3 103:8 117:14 118:16 127:11 154:20 155:8 163:12 202:15 246:18 251:19 entitle 223:24 entitled 201:2 228:6 237:24 254:15,19 equate 49:9 equivalent 79:14 eric 9:24 12:15 errata 255:2 error 175:14 220:23 246:8 247:3 escape 244:19 esq 2:9,15,16,17,18 essentially 30:10 73:16 131:7 132:10 133:3 135:4 198:4,7 198:21 222:5 230:4 233:12,14 et 116:23 232:9 evaluate 20:8 34:3 36:3,17 72:19 89:7 90:19 99:20 177:18 evaluated 15:14,19 34:2 36:5 136:8 137:8 164:21,24 211:7,9 227:11 247:21 evaluates 34:25 evaluating 247:9,10 evaluation 35:2 38:18 72:25 73:19 101:25 233:8 247:6 event 151:12 everybody 214:23 everyone's 79:18 evidence 3:21 25:24 26:4 28:21 30:18,19 30:22 31:3,20,21,24 32:4,6 34:5 36:10 40:17 41:10 51:14 51:18 52:3,22 53:13
--	--	--	---

53:23,24 62:18 63:7 63:11,12,13,13,16 63:16 64:20 65:14 73:6,10,13,14 75:7 78:8,12,19,21 83:14 83:17,25 84:5 92:24 95:19,22 96:2 97:23 98:9,23,24 99:15,25 100:7 101:8,16,19 102:6 106:17 110:19,23 111:24 113:2 114:23 115:18 116:7 120:2 120:19,20 122:12 122:14,15,18,25 123:23 124:12 129:15,18,23 130:10,13 131:19 132:15 135:24 136:8 139:22 140:12,15,16,19 142:19 143:12 144:21 146:5,10,22 148:14,15 149:3,4 150:4,12,14 151:21 153:13,14 154:19 154:21,22,24,25 155:2,5,10 156:16 159:22 163:8 164:14 167:3 190:18,25 191:8,11 191:13,20,23 192:11 199:21,21 199:23 207:19 212:9 213:6,8,12,17 217:7,15,19,21 218:2 220:13 221:2 221:7,9,13,23 222:7 224:6 225:12 228:7 231:6,13 232:2,3,4 232:6 237:13 239:12 246:18 247:15,19 254:16 exact 10:5 33:4,9 97:13 189:23	203:19 exactly 19:4 22:23 32:25 181:9 206:6 235:24 examination 6:8 194:20 254:3 examine 138:8 examined 6:7 41:12 examiner 14:8 207:25 237:18 examiners 10:4 12:21 example 23:20 35:2 64:22 67:16 133:20 166:9 191:24 215:7 226:13 239:4 240:4 240:20 241:4,9 242:4,20,25 244:7 244:24 247:3,4 251:8 examples 177:5 220:19 239:6 240:2 241:2,21,21 243:13 243:19,20 245:25 246:15 exceedingly 115:10 161:23 excerpt 238:5 exchange 158:11 exchanged 135:14 164:10,12,22 177:9 exchanges 162:20 178:23 225:23 excluded 44:18 exclusively 221:3 227:11,14 excuse 126:23,25 exercise 11:14 exhibit 5:6 6:2 8:5 9:3,16 10:20 14:18 17:10,23 19:12 20:13 27:24 29:8,14 29:17 30:15 40:6,18 58:6 82:16 84:11 87:6,7,14,17,20,23	88:2,4,12,15,16,20 90:23,25 91:3,10 93:9 107:6 120:23 121:7,9,10 155:19 197:6 200:20,21,25 205:3,4,10 206:2 207:5 208:20,21,22 208:23 228:6,10 237:24 238:4 248:19 249:2,3,4,5 249:8 250:14 254:7 254:9,11,13,15,19 exhibits 5:12 249:10 250:2 254:6 exist 16:23 78:13 101:2 104:4,6 117:13 142:13 204:10 existed 46:12 72:14 72:20,23 75:8 77:21 101:3 186:9 200:6 200:13 204:9 existence 14:21 17:6 74:18 81:20 217:20 242:17 existing 54:5 120:4 123:12 214:24 exists 16:20 expect 167:12,13,17 167:22 170:16,18 170:21 214:4 215:13 expedited 33:23 35:16,21,25 36:4,5 36:13,16 42:24 43:8 80:18 81:5,10 183:18,21 185:12 188:2 236:9,10,13 experience 69:11 94:2 172:6,8 214:5 248:2 experiment 214:7 expert 16:24 19:18 19:20 22:4,16,17,19 22:22 26:21 34:25	41:9,12 69:12 84:16 100:10,11,12 102:19 182:2 191:16 204:11 205:11 207:25 208:12 209:22 219:9 227:9 233:19 237:10,10,11,15,18 240:8 expert's 70:18 expertise 18:3 experts 15:15 100:23 103:8 142:24 156:24 196:17 209:18,19 223:23 228:8 229:6 232:13 237:3,6,14 254:17 expires 255:25 explain 198:19 explained 114:19 explanation 47:15 47:19 70:6 72:16 111:9 131:22 133:9 135:17,25 155:11 155:15 161:2 162:7 176:14 explanations 47:12 131:23 133:13,14 155:9 176:20 express 115:25 116:8,14,18,19 117:16,17,24 118:2 118:3,6,15,25 195:7 195:18 extent 25:23 78:3,18 80:15 81:10 167:10 202:25 203:2 215:23 235:13 239:21 external 100:6,7 101:17 116:20 extra 49:2 50:16 51:5
--	--	--	--

extremely 177:25	fair 7:22,24 16:12	field 219:3 236:25	203:11,20,23 204:2
eye 23:20,24 24:6	16:18 20:11 24:23	file 5:19 19:24 20:17	204:3,4,5,8,8,10,12
f	40:25 41:2 42:2	66:15 75:23 76:4	204:13,22 205:17
f 93:9 194:2 249:2,4	50:4,11,14,19 58:5	77:21 86:10 89:10	206:25 207:6,6,8,17
253:2	58:10 59:22 61:7,22	91:13 92:4,19,20	218:10,11 219:14
face 227:3	73:7 87:19 100:22	93:2,17 94:3,14,15	220:6 222:3,17
facebook 1:9 15:25	101:3 107:14 124:8	96:6 101:21 102:14	229:11 240:11
18:16 53:20 106:9	140:8 181:17 208:8	132:3 134:20 135:7	filing 29:5 200:14
120:18 121:23,24	220:6 237:7	135:10,14 139:9	final 98:5 216:18
122:2,6,10,17	fairly 144:7 152:3,4	195:14,14,18,22,24	finally 250:18
123:15 141:23	153:14 196:13	195:25 196:5,6,19	financial 145:23
142:2,10 145:21,24	223:20 226:17	196:23 197:2,8	find 20:18 27:11
189:5 231:9,18,21	fake 141:3,5 144:13	198:2,5,6,7,20	75:22 78:7 92:24
231:24	146:5,16 149:5	199:7,9,10,11,12,14	93:3 95:19 116:7
facebook's 142:4	191:12,18 192:13	199:20 201:9,14,14	130:7,10,14 137:24
faced 227:2	faked 146:17	201:17,18,19,21,22	183:19 186:11
facility 38:14	fakes 165:16	201:25 202:2,6,11	188:25 190:24
fact 20:3 28:22 51:6	false 141:12 142:11	203:5,10,15,18,21	192:2,3,7 194:24
62:19 63:15 65:18	familiar 23:21 52:13	203:22,25 204:6,7	195:3 196:7 217:8
66:11 78:2 84:14	52:17,20 64:23,24	204:14,15,19,20,20	221:6,8,15,23 231:6
91:17 92:11,12,15	119:14 139:8	205:5,14,19,22	231:13,25 232:6
97:23 98:9,10,21	177:11 209:8	206:7,8,11,16,17,23	233:24 240:15
107:21 108:4,21	familiarity 3:19	219:25 221:20	fine 55:17 85:3
109:18 111:7,9	far 4:13 118:11	222:21,23 227:7	93:15
113:5 120:21	163:24 220:23	229:8 232:11,14	finish 126:24 127:5
122:21 123:13	224:13	239:18 254:14	127:25 128:2
131:3,11 135:8	farfetched 245:16	file's 102:11	160:18
136:2 144:21	farther 158:3	filed 5:17,25 8:7	firm 70:14 83:10
146:11 149:11,18	fashion 49:17	29:11,18,25 30:14	215:11 216:16
149:21,24 152:2	father 109:8,21	87:11,13,18 91:5,10	245:10
154:21,22 156:18	110:12	108:25 137:22	first 21:17,21 27:23
156:19 159:15	father's 108:25	190:10 200:25	28:10,11 38:2 40:22
161:7 162:9 165:20	faulkner 53:11	205:8	45:18 60:8,10,23
169:14 176:3,19	faulty 77:25	files 22:21 24:25	76:2 91:18 92:16
196:6,11 207:10	february 42:20	25:17 57:6,7 68:11	93:14,22 95:9,12
226:11 239:9	45:12 222:11	90:6 96:18,23 97:12	96:4,7,9 97:16
241:13,13,15	federal 3:20,21	104:16 111:7	98:24,25 100:14
243:21	fee 214:13,18 215:4	116:22 134:2,6	107:20 126:15
factor 14:16 98:19	215:8,9,20,21	145:6,8 195:13,16	134:23 186:20
146:13	feed 95:14,15	195:20 196:5,6,18	205:13,13 224:6
factors 100:6	feeding 95:24	197:4,10,11,20,20	225:17 249:3,5
facts 97:5,8 135:18	feel 11:19 153:2	197:21,23,24	fit 138:9
242:12	171:13 237:16,20	198:13,16,18,25	five 77:15 78:2,11
	feet 151:11	199:3 200:6 201:8	78:12 205:4 234:14
		201:12 202:7 203:6	254:13

fixed 24:5 flip 205:25 241:22 flopping 241:22 floppy 25:4 66:22 221:11,13,21,22,25 222:5,6 227:12 233:17 florida 115:13 flowed 210:25 focus 35:20 focused 36:22 183:21 227:15 folder 76:16 79:15 folks 12:13 21:3 following 3:24 97:22 follows 6:7 194:19 footnote 58:18,23 59:2 forensic 10:3 12:21 22:17 25:24 26:4,21 37:20,25,25 38:10 41:12 44:7 45:7 52:8 56:21 59:9,13 62:10,15 63:7,11,12 63:16,17 65:14 77:5 77:8 78:7 80:14,19 80:20 93:4 107:12 107:25 108:4,8,9,14 108:17 110:19 111:2,24 112:20 131:17 133:5 135:9 140:12,15,19 144:21 150:9 154:19 155:10 156:24 165:9 182:5 189:12 190:13 191:8,20,23 196:16 208:7 212:9 227:18 227:24,25 228:8 231:6 237:14 254:17 forensics 18:4,5 19:9 24:18 40:25 41:4,9 57:3 62:16 65:22 69:12 77:9	84:16 113:8 115:23 139:22 140:16 143:2,19 146:15,19 146:20 147:11 148:14,15,21 155:15 156:16 159:20 182:2 190:24 209:14 235:7 236:25 237:3 237:5,13 238:2 240:8 254:21 forge 131:12 forged 140:25 forgery 214:6 forgetting 175:20,20 forgive 151:14 form 15:2 17:25 18:21 21:15 31:7 44:10,22 47:17 56:15 58:2 73:22 76:18 86:8 105:9 113:20 115:20 145:18 153:7 207:11 212:2 217:9 231:11,19 237:19 249:21 250:5 formal 40:5 200:2 240:9 format 19:25 20:3 55:2,3 81:19 168:12 168:23 169:10 171:7 179:24 180:4 180:14 formats 56:24 139:9 formatting 47:24 48:9,12,18,23 49:5 49:10,18,20,25 50:3 50:13,21 51:20 54:17 55:20 56:2,12 56:17,18,24 57:4,7 57:13,24 139:15 166:8,23 167:2,8,12 173:8,22 176:6,10 176:15 213:10	formula 232:12 formulates 169:10 forth 62:23 159:9 163:3,6,15 170:24 216:17 225:9,14 242:2 253:11 forward 94:6 forwarded 98:13 160:4 found 19:9 21:9,12 24:15,16 26:25 28:19,21 34:12,14 34:17,18,19,20 58:15 61:21 67:11 67:17 71:3,5,9,14 72:9,13 73:20 75:6 75:25 79:14 86:2 88:25 89:22,23 95:22 101:19 107:4 107:11 108:24 120:19 121:16 122:12 130:13,18 138:3,11 146:15 149:12 150:24 151:5 183:7 189:3 190:19 191:8 194:24 195:6,6,8,23 197:20 221:20,21 227:19 232:2 four 12:6 31:4 64:5 94:4 163:9 234:24 fourth 89:13,15 fragile 239:19,23 241:15 frame 172:2 frankly 70:5 130:16 132:14 150:6 216:3 227:2 fraud 18:8 48:18 49:9 50:4,12,21 51:10,18,25 56:4,8 56:10 59:10,14 142:20 144:22 146:8,22 147:3 153:14 155:13	167:3 175:12,17,19 175:19 176:3,8 179:12,18 182:8,10 207:19,20,25,25 216:24 217:7,15,21 218:3 236:23 237:8 237:10,17,17,18 241:17 242:10,11 242:21,24 243:7,16 243:17,25 244:3,6 244:13 245:3,9,12 245:19,21 247:20 248:4 fraudulent 51:12 115:2 132:9,12,17 146:11 155:14 166:14 214:6 244:23 247:25 frequently 114:2 friday 156:7 friedberg 3:9 6:2 8:14 9:17,24 10:9 10:13 12:15,16,24 13:3,14,24 14:4 22:9 37:23 39:7 40:14,23 43:14 48:17 49:14,18,19 49:24 50:4,6,12,15 50:20,24 51:9,18 56:13 83:13 88:23 91:8 137:12,14,20 170:8 173:2 187:9 187:20,25 214:9,17 215:3 228:18 230:5 234:10 254:7 friedberg's 8:8 81:13 front 65:8 120:23 129:21 156:21 179:2 full 85:12 89:15 198:8 209:3 228:24 228:25 229:20 235:4 238:13
--	--	---	--

function 68:7,10 96:13 118:18 139:5 169:5 functions 69:23 further 213:17 252:8 253:15 future 4:21	213:18 geographically 83:17 getting 39:20 getzuck 119:14 121:3 126:20 128:7 128:9 gibson 1:18 2:11 51:8 53:10 118:7,20 118:23 123:10 183:4,11,14 187:13 215:10 224:21 225:18 gif 19:25 give 20:2 97:13 131:8 134:3 135:12 145:24 175:22 224:17 234:25 235:4,18,23 239:3 240:19 241:9 244:7 252:4,6 given 39:15 50:23 51:11,24 62:19 65:17 111:7 130:16 133:14 144:21 155:10 161:7 179:20 183:12 185:22 187:11 196:11 218:2 250:13 253:13 giving 5:14 156:20 228:10 241:4 go 7:3 27:10,14 42:11 48:7 60:15 67:21 82:9 83:16 84:18,24 85:2 91:21 93:10 118:14 119:19 130:22 134:22 136:23 137:5 151:19 155:18 157:16 158:3 159:9 165:16 183:14 193:6,16,18 201:11 207:3 214:7 216:16 230:13	241:25 246:11,12 250:6 goes 185:11 going 7:19 14:25 27:10,14,15 46:7 78:19 83:5 94:5 127:10,12 131:6 132:23 134:23,24 134:25 136:20 137:16 145:3 146:8 156:3 163:15 167:9 172:3 180:19,23 192:24 194:9 200:15 206:18 210:18 219:25 222:7 224:19 240:19 good 6:10,11 8:3 209:20 235:22 gotomeeting 67:20 68:4 gotomypc 64:22 65:3,16 67:16 68:4 68:6,9,17 gotten 94:20,23 182:23 184:12 government 209:19 grab 91:19 grant 9:13 227:9 233:20,25 graphic 27:12 76:15 greater 111:21 greatest 141:5,13 greatly 44:2 group 165:24 groups 202:19 guess 75:9,13 119:3 145:19 151:20 175:20 181:9 202:25 204:16 228:19 guessing 193:15 guidelines 209:14 gun 150:14	guys 216:25 223:25 h h 2:15,16 27:24 228:8,12 249:3,5 254:17 habits 161:12 hacker 104:25 106:3 106:22 107:2 hackers 73:4 103:16 103:18,20,21 104:5 104:9,15,18 106:14 hacking 69:8 105:8 105:21,23 106:6,10 106:17 half 58:25 61:17 141:23 142:2 145:24 194:7 hand 10:17 84:19 91:22 208:24 223:19 228:23 253:21 handed 8:4 28:24 30:11 88:20 248:23 handle 172:17 handwriting 156:15 156:23,24 handwritten 63:24 64:3 150:3 154:23 156:17 handy 48:5 happen 94:24 119:8 134:14,16 135:13 216:3 244:6 251:16 happened 40:11 58:3 65:16 125:14 134:9 135:20 151:13 155:4 187:3 187:7 231:3 241:24 happening 95:21 191:24 happens 246:6 251:14 happy 127:20
---	--	--	--

hard 24:18,25 25:2 25:11,12,18,20,22 26:7,14 32:18 65:19 66:2,8,11,16 67:2 67:10,24 93:22 94:15,19,21,23,25 95:7,9 96:10,12 99:20 107:11,13,18 107:21,25 108:2,4,9 108:13,18 111:8 112:3 148:9 195:9 195:11,12 221:4,7 248:7 251:22 harvard 32:12 41:25 42:5,13,15,19 42:25 44:4,14,25 45:4 46:6 52:18 54:18 56:19 59:15 78:25 79:15 80:4 81:8,16 124:15 126:7 147:21 182:15,20,22,22 183:10 184:11 186:2,14 188:2,25 232:18 harvard's 43:16 head 144:8 headed 205:5 254:14 header 58:12,16 210:8 headers 97:21 211:2 headings 30:9 hear 180:24,25 181:2 250:23 heard 251:12 held 1:18 help 99:8 190:23 helpful 238:19 helping 43:7 helps 251:9 hereinbefore 253:11 hereunto 253:20 hesitate 210:11	hex 130:2,8,11,14,15 130:17,19,19 131:7 131:12,21 132:2,10 132:18,22 133:10 135:11,15,18 136:2 139:19,23 140:6,18 142:18 147:8 hey 151:17 153:22 185:7 246:16 high 115:10 224:18 224:23 higher 94:9 hire 18:7,23,25 34:7 114:25 115:3 132:16 146:24 164:6,6 189:9,24 190:5 191:5,12,17 216:8 217:11 221:18 225:13 242:18 247:17 hired 106:14 hiring 216:16 historical 45:5,15 46:17,22 53:6 54:5 78:16,22 79:11 81:25 182:23 186:9 historically 32:20 33:6 46:22 83:9 137:10 history 192:7,11 hit 23:11 99:2 111:4 hm 121:21 198:12 200:8 209:6 229:3 hold 5:10 48:3 holds 146:25 hope 248:14 hopefully 194:15 hotmail 166:18 167:11 168:2,8 169:5,10,14,21,25 170:9,18,22 171:9 171:14 172:9,11 173:12,14 174:20 175:2 211:14,16,22 212:15	hour 9:24 10:2,7 193:14 194:13 hourly 9:18 223:4,5 hours 193:2 194:7 223:8,14 235:24 house 114:6 html 139:10 hundred 236:20 hundreds 74:5 hypothetical 17:14 18:12 57:10 99:18 100:25 101:6,11 109:14,19 113:11 118:22 125:14 126:12 134:9 144:11,16 150:22 151:15,24 152:13 174:3,5,21 178:25 179:4,13 182:11 207:4 245:16 hypothetically 64:19 73:12 94:25 99:15 110:11 114:11 144:19 174:23 245:10 hypotheticals 100:18,23 102:4 i idea 51:4,9,10 135:5 171:13 identical 49:4 150:18 203:15 206:16 identification 6:4 82:17 200:23 205:6 228:9 238:3 identified 17:10,23 123:11 165:9 207:8 243:5 identifies 61:21 identify 8:6 11:25 20:12 45:4,15 181:15 183:8 189:23 225:15	identifying 220:25 233:11 ignore 217:16 illegible 249:15 image 19:18,22 20:3 20:23,23 21:4,7 22:4,16,18,21,22 24:6 37:25 44:7 64:2 87:21 88:13,15 88:17,19 90:12 91:3 91:4,9 92:12 94:9 94:10 96:23 107:25 112:3 151:10 152:3 152:11 153:17 159:18,19,21,23,23 249:25 images 19:20 20:9 20:13,19 21:8,9,18 21:23 23:2,4,16,25 24:12 26:25 27:4,7 27:12 30:13 38:11 52:8,11 62:8 65:25 66:7 67:10,17 68:13 85:15 86:2,13,22 87:2,5 88:24 89:5 89:22 90:9 91:12 97:7 99:10 101:5 102:18,22 106:19 108:24 147:25 148:2,16,20,21 149:11 150:2 153:3 153:5,6 159:24 160:2,6,7,10,21 161:8,14,17,23 162:5,6,8,10 190:9 194:23 195:7 232:8 232:10 249:19 imagine 49:9 imaging 232:13 immediately 10:17 97:22 112:3 157:22 195:9 impact 115:21 145:23
--	--	---	---

impacted 102:8 implausible 70:6 138:25 171:18,20 171:21,24 172:4 implying 88:3,6 important 41:8,11 210:6 impossible 149:2 inaccuracy 226:16 inauthenticity 34:6 36:10,14,18,23 138:8 225:13 inbox 116:22 117:8 117:8 118:16 inch 90:2 inches 85:21 86:6 90:6 include 52:8 181:12 181:12,13 197:19 201:23 included 12:5,6 36:2 42:19 81:9 122:22 125:6 163:16 180:10,17 181:5 186:12,24,25 189:25 210:17 231:18 includes 90:12 129:19 201:15 including 22:21 65:10 98:4 131:4,5 135:10 138:13 149:4 159:15 235:6 239:20 inconsistencies 48:24 166:15 167:4 167:9 240:3 inconsistency 239:12 inconsistent 167:7 222:15 inconsistently 172:4 incorrect 165:20 239:5 244:11	incorrectly 58:24 175:8 independent 97:25 98:7,16 indiana 114:2 230:13 indicate 50:4 65:14 70:9 98:8 166:7,13 198:24 201:7 indicated 7:4 45:13 47:21 83:10 92:25 105:22 146:16 178:13 indicates 123:17 124:8 135:10 156:22 191:9,11 197:11 200:6 202:23 241:6 indicating 159:25 indication 179:18 216:24 indications 176:8,11 216:2 individual 147:8 154:17 180:9,15 242:25 247:6,20 individually 1:9 individuals 13:25 31:19 69:12 125:8 219:2 industry 21:4 inference 160:14 inform 241:3 information 8:15 35:18 58:12,16 77:9 89:6 90:18 106:7 129:21 151:6 169:18 170:12 171:10 182:19 199:2 209:15 211:22 220:10 227:25 228:3 234:2 234:9,11 250:24 251:2	informed 21:22 inherently 222:15 initial 97:15,20 148:23 initially 202:18 initiated 218:21 238:18 ink 249:11 innumerable 69:4 inquiries 226:11 insert 49:20 50:7,16 167:14 inserted 51:5 138:4 221:24 inserting 49:18 insertion 56:2,6 inside 144:8 inspection 225:7 installation 69:18 installed 69:10,24 130:12,15 instance 48:24 49:2 63:14 67:20,22 72:11 75:17 132:5,7 140:22 166:17,25 167:14 210:25 218:15 220:21 222:9 239:6 241:22 245:25 247:20 institutions 43:23 instruct 127:19 instructed 224:10 224:12 instructions 224:5 intent 56:9 intentional 134:8 intentionally 49:17 49:24 interested 182:8 253:18 intermediary 59:7 98:5 149:15 177:3 244:10,17 245:15 internal 245:9,10	internet 25:15 58:16 67:4 97:21 123:12 139:5,9,13,16 168:7 192:11 198:22 199:5 210:25 211:15 interpret 247:22 interpretation 228:2 229:6 242:9 interpreted 239:24 interrupt 93:9 interspersed 133:7 intervening 162:11 interview 80:16 introduced 56:25 166:24 176:15 intrude 104:12,15 intrusion 73:6,11 106:23 inventory 33:11,13 33:16 investigation 112:17 210:7 investigations 185:23 investigator 12:2 invoices 10:18 223:18 involved 10:10 11:6 11:10 12:16 31:4 43:6 52:4,11 53:19 105:7,20,23 136:13 183:9 184:10,13 235:15 236:12 involvement 37:12 involves 56:8 185:12 involving 52:14,18 53:13 ip 113:3 irrelevant 183:15 isolate 154:16,16 issue 28:25 37:7 49:6 54:16 55:12 92:6 177:11 213:15 227:16 232:7
---	---	---	--

issued 31:20 32:5 225:8,20 240:7 issues 41:14 48:13 48:23 213:10 issuing 14:5 30:19 31:5 33:7 40:18 item 60:2 95:12 177:14,18 178:9 181:6 items 59:18 75:22 76:4,16 77:16 78:8 79:9,9,14,14 117:2 117:3,21 177:15,20 181:7 202:14 213:21	jury 17:17 justice 209:5,13 k kasowitz 177:10 179:22 keep 126:25 251:9 kept 35:11 keyboard 111:4 keys 111:4 kilobytes 90:6,7 kind 69:18,21 72:15 72:24 104:2,4 117:4 147:3 172:22 241:7 242:4 243:12 kinds 71:21 72:3 know 4:6 7:8 9:19 10:8,13 11:14 18:8 19:11 21:24 22:6,7 22:15,25 24:17 25:25 26:18,19 27:3 29:9,19 30:23 31:2 31:18 32:25 33:4,9 34:8,22 35:10,12 37:11,17,21 38:5,8 38:9,21,22,24,25 39:6,11 40:9,14 41:13,15,16,17,22 43:4,11 44:4,21,23 46:3,15,17,18,23 48:5 49:12 51:19 52:21 53:2,15 54:6 58:4 61:24 62:3,4,6 63:14 67:12,13,19 68:2,6 69:2,3,12,17 69:19 71:19,20 72:2 72:11 73:18,25 74:4 74:6,14,17,20 75:11 75:15,16,16,20 78:13 80:15,21 81:3 81:8,16 83:15,19,21 83:24 84:6,9 86:21 89:2 91:7 93:3,21 96:16 99:25 100:3,5 100:22 101:8 102:6	102:10 103:11,25 111:10 112:5,7,8,10 112:14 114:18 116:10,10,12,13 117:20,24 119:5 120:16 122:2,5,7,8 122:9,20,21 123:12 123:18,19,20 124:2 127:17 128:23,24 128:25 129:2,22 130:21 131:4,11,16 131:22,25 133:8,12 133:21,23,24 135:22 136:5,14,20 137:11,17 138:6,6 138:12,23 141:10 141:15,17 142:18 144:23 145:20,21 146:10,12 147:6,9 147:13 148:5,9,18 152:4,8,12,15 153:16 156:25 159:6,17,19 160:2,3 160:4,7,14 161:8,10 161:11 162:5,6 163:2,5,7,10,18 166:17,20,22 169:4 169:8 170:2,11,12 170:22 171:3 172:10,25 173:5,23 174:19 175:2,21 178:5,22 180:5 181:12 184:10 185:15 187:5,10 192:10,12 193:3,5 194:6 196:23 197:3 199:2,22 200:3,15 203:5,10,16 204:25 206:20 207:16 208:16,17 209:16 210:14 211:10 212:22 213:5 219:8 220:2,8 221:9,12 223:7 226:20 228:11,14 230:8	232:9 233:15 234:7 235:4,24,24 236:11 237:4 240:12 241:25 242:2 243:11 246:2,9,13 249:11,12 250:10 250:13 251:6,7,11 251:16,18,23 knowing 81:24 knowledge 208:5 209:12 240:8 kole 59:19 60:3 61:20 62:25 63:19 73:20 85:15 90:9 91:12 98:13 102:18 109:10 138:14 150:2,25 152:9 154:22,23 155:23 156:6,9,11,19 157:8 158:12,17,22 159:4 159:4,8 160:22 162:12,15,17,19,20 163:3 190:9 kole's 156:22
j j 1:17 6:5 194:18 252:16 253:10 254:4 255:6,21 january 120:5 122:22 123:17,21 123:25 127:8 128:15 129:2,11,19 jason 10:2 12:20 13:8 jerry 227:8 233:20 jim 62:25 150:25 151:17 152:9 154:22,23 155:22 156:6,19 160:22 190:9 jobs 94:5 jog 177:7 jpeg 19:25 jr 2:16 judge 6:24 7:4 127:18 july 1:14 15:15,20 107:22,24 236:14 253:21 255:5 june 124:20 125:8 125:25 126:3,8,14 187:17 188:19	know 4:6 7:8 9:19 10:8,13 11:14 18:8 19:11 21:24 22:6,7 22:15,25 24:17 25:25 26:18,19 27:3 29:9,19 30:23 31:2 31:18 32:25 33:4,9 34:8,22 35:10,12 37:11,17,21 38:5,8 38:9,21,22,24,25 39:6,11 40:9,14 41:13,15,16,17,22 43:4,11 44:4,21,23 46:3,15,17,18,23 48:5 49:12 51:19 52:21 53:2,15 54:6 58:4 61:24 62:3,4,6 63:14 67:12,13,19 68:2,6 69:2,3,12,17 69:19 71:19,20 72:2 72:11 73:18,25 74:4 74:6,14,17,20 75:11 75:15,16,16,20 78:13 80:15,21 81:3 81:8,16 83:15,19,21 83:24 84:6,9 86:21 89:2 91:7 93:3,21 96:16 99:25 100:3,5 100:22 101:8 102:6	102:10 103:11,25 111:10 112:5,7,8,10 112:14 114:18 116:10,10,12,13 117:20,24 119:5 120:16 122:2,5,7,8 122:9,20,21 123:12 123:18,19,20 124:2 127:17 128:23,24 128:25 129:2,22 130:21 131:4,11,16 131:22,25 133:8,12 133:21,23,24 135:22 136:5,14,20 137:11,17 138:6,6 138:12,23 141:10 141:15,17 142:18 144:23 145:20,21 146:10,12 147:6,9 147:13 148:5,9,18 152:4,8,12,15 153:16 156:25 159:6,17,19 160:2,3 160:4,7,14 161:8,10 161:11 162:5,6 163:2,5,7,10,18 166:17,20,22 169:4 169:8 170:2,11,12 170:22 171:3 172:10,25 173:5,23 174:19 175:2,21 178:5,22 180:5 181:12 184:10 185:15 187:5,10 192:10,12 193:3,5 194:6 196:23 197:3 199:2,22 200:3,15 203:5,10,16 204:25 206:20 207:16 208:16,17 209:16 210:14 211:10 212:22 213:5 219:8 220:2,8 221:9,12 223:7 226:20 228:11,14 230:8	l l 228:12 labor 11:11,20 lacking 72:11 lake 108:19 lakewood 2:8 landed 24:14 26:7 26:13 74:15 language 3:23 48:15 131:9 189:6 laptop 197:10,21 198:10 large 43:20,23 248:20 249:9 larger 28:23 249:24 250:7,9,15 law 215:11 245:10 lawyer 150:16 152:16 161:14

<p>lawyers 7:8,14 178:19,23 179:11 179:18 182:18 200:16 224:21 225:2 230:18,23 lead 152:5,6,8,10 191:13 leading 236:6 leads 131:10 leaf 27:16 learn 105:7,20 203:14 leave 73:6,10 82:5 106:23 107:2 led 123:19 legal 2:4 3:17 156:20 legible 30:2,3,11 248:20 249:9,14 250:8 legitimate 212:7 letter 177:10 letters 64:5 level 27:19 155:20 157:12,13,22 224:18,23 lie 181:22,24 light 110:22 lightness 249:11 likelihood 111:17 113:16 114:6,14,22 185:18 188:9 196:4 203:18,23 207:8,13 limit 163:11 194:9 limited 35:21 36:13 81:17,23 181:8 limiting 143:2 line 17:15 49:3 50:17 55:10 76:11 76:13 85:10 91:24 92:14 180:22 255:7 link 197:10,20 198:2 198:5,13,15,18,20 199:7,10,14 201:18 204:7,19,22 205:14</p>	<p>205:17 206:17,25 207:6 linked 204:2 links 197:10 list 31:21 32:6,9 35:7 68:21,22,23 71:24 74:10 77:15 97:8 133:20 139:21 197:16 202:17,18 235:5,19 listed 8:16,19 30:20 31:5 39:17 203:3 205:19 232:15 lists 202:21 literally 72:5 litigation 52:10,17 53:19 190:2 litigations 52:9 littered 74:4 little 15:4 22:23 27:21 60:5 61:7,16 62:14 99:20 103:12 139:19 158:3,4 177:7 188:20 190:22 193:6,9 194:12 203:2 live 46:7,8,11 livenote 84:23 llc 2:4 llp 1:19 2:11 located 21:20 83:25 112:24 location 114:7,21 115:16 194:25 195:17 198:22,23 199:6 locations 229:10 230:12 locked 38:13 log 177:20 180:10 180:17 220:23 229:10 logical 120:5 146:17 147:12</p>	<p>long 22:8,13 43:25 177:25 178:12,14 longer 24:6 128:16 look 8:4 10:18 27:14 34:5 49:2 58:6 60:13 62:18 76:9 81:8 84:10 85:7 87:11,25 90:8 92:11 98:22,24 99:25 101:8 106:17 109:13 120:22 138:7 149:10 164:18,23 175:24 188:6 192:20 200:17 201:6 208:23 215:7 220:14 227:14 228:19 242:15,15 242:16,17 244:25 246:2,2,3,20,22,25 247:3,7 looked 37:3 87:9,17 88:12,20 106:21 123:6 139:16 192:17 227:22 looking 29:5 36:9 65:20 81:19 87:12 90:22 127:23 175:17 192:16 202:15 210:22,23 210:24 211:3 220:9 220:10 239:16 241:24 242:22 245:4 247:8 looks 8:7 159:6 loosely 22:23 lose 145:16,20 lot 117:10 145:16 low 28:15 113:17 114:6 lower 163:11 luehr 228:8,13 254:18 lunch 193:8,9,20</p>	<p>m machine 65:21 73:17 133:7 211:4 magnified 249:17 250:2,15 magnify 91:9,9 mail 32:12 40:5 42:2 42:5,14,15,25 43:16 43:21,22 44:5,8,12 44:14,18 45:5,11,15 45:20 46:8,12,17 47:8 49:7,20 50:7,9 50:25 55:4 56:22 59:5,7,8,15,19,20 60:3,17 61:10,21 63:6,15,21,22 64:10 64:13,18 65:10,11 73:20 76:16,20,21 76:22,24 77:2,20 78:8,25 79:3,10,15 79:19 80:4,13 81:4 81:9,14,17 85:15 90:9 91:13 97:16,20 98:11,18 99:5,7,14 99:15,19,21 101:2 102:2,19 104:9,10 109:10 111:3,6 112:18 114:16 115:25 116:21 117:9,15,19 118:8,9 118:20 119:14 121:18,22 122:6,9 122:16,16,22,25 123:6,14,15,23,25 124:13,15,21,23,25 125:4,7 126:15,20 127:7 128:8,13,15 128:20 129:3,6,12 129:13,19,20,25 138:14,18 147:21 149:19,21,25 150:9 150:18,24 151:8,17 151:17 152:7,18,24 153:21,25 154:3</p>
---	--	---	--

156:6,9,19 157:4,10 157:12,17,17,21 158:17,23 159:3,8 160:11 161:3 162:12,15,16,17,19 163:9 168:12 172:24 173:16 174:2,9,13,15,16,24 175:15,17,21,22,23 176:3,18 178:10,11 178:23 179:22,24 180:4,9,15 181:12 182:15,20,22 183:10,18,23 184:3 184:9,19 185:2,19 186:3 187:11 188:21,24,25 189:25 190:8 191:24 192:3 210:6 210:8,9,18,19,20,21 211:12,20 212:12 212:14,18 213:4 216:17 225:23 227:3,6 230:18,22 231:16 232:5,18 233:16 mail's 123:18 mailbox 78:15,22 186:10 195:7 mailed 24:19 26:8 149:13,14,15 150:15 152:15,19 226:18 mailing 57:7 mails 35:20 42:25 43:8 47:14,14,22,23 48:19 49:4,7 50:13 50:22 51:21 54:18 56:19 58:15,17 59:11,15 60:6,14,20 62:7,8,20,22 63:4 63:10,19 77:14 78:3 78:4,5,18,20 79:16 79:20,23 80:4 81:20 98:13 104:13	109:21 110:18,20 112:25 113:13,16 113:17 114:12,15 114:22,24 115:5,6 115:12 118:17,23 119:18,22,24 120:4 122:13,19,23 124:6 124:9,17 126:6,12 126:21 128:7,22 129:8,17 146:23 147:20 149:4 153:4 156:11 159:4,4,7 160:20 163:2,9,12 164:10,12,14,17,21 165:7,10,16,19,23 165:24 166:3,9,10 166:19 169:3 175:5 175:14 176:21,22 177:4,9 178:12,17 178:18 179:5,16 183:7 185:8,14 186:11,16,23 187:3 187:7,16,20 188:3 188:12,18 211:7,10 211:14,25 212:3,7 212:24 213:2 216:4 216:11 217:24 225:14 226:14,23 232:21 233:2,6,11 233:19 main 47:12 maintain 43:21,25 44:2 maintained 38:15 149:19 majority 235:6,7,11 making 88:10 226:23 malware 69:19,24 70:3,5,12,15,25 71:3,15,17,22 72:5 72:7,9,10,13,19,21 72:22 73:2,16,16,20 73:25 74:5,10,12,14 74:17 75:5,8,11,14	75:16,17,19 103:13 managing 228:17 230:6 manipulate 114:25 132:3,16 133:19 140:7 145:5,8 244:21 manipulated 101:20 132:25 176:12 212:8 226:22 245:8 246:24 manipulation 100:2 101:25 102:7,11 115:3 142:19 149:5 191:11 212:25 213:6,8 241:7 242:4 242:8,18,19 246:14 246:16 247:13 248:4 manipulations 217:16 242:16 manually 49:13 212:20 march 6:3 8:8 148:9 148:12 149:14,24 156:7,11,12 157:9 158:7,8 159:5,7,14 159:24 174:7 187:17 188:19 254:8 margin 217:16 242:19 mark 1:8 5:5 15:10 17:18 18:13 32:11 32:15 33:5 42:25 53:7 78:24 79:15 81:3 102:17,24 105:17 106:2 128:5 142:13 145:13 149:23 182:14,16 183:17,25 184:9 191:18,22,25 200:19 205:2 231:10,16 237:22	marked 6:3 8:5 82:17 84:10 200:22 205:5 208:18 228:9 238:2 marks 135:4 marriage 253:17 massive 155:13 material 225:16 materials 123:8 124:4 math 59:23 61:18 mathematical 232:12 matter 41:20 55:22 75:14 112:15 117:12 148:23 168:6,9,10 235:9 253:19 matthew 2:17 3:4 mcgowan 8:13 10:2 13:8,11,23 21:23 22:10 31:15 33:9 169:19,21 234:8 235:7 mcmanis 53:10 mean 14:13 15:3,16 18:25 19:23,24 21:12 22:18 37:5,6 40:4 42:22 43:17 53:9 55:22 58:19 67:20 68:24 69:3,16 71:21 72:3 73:12 76:19 77:24 82:4 95:25 96:8 99:18 101:6,7 102:13 103:24 104:10 111:16 112:7 113:22 117:12 119:2 120:8 130:25 131:2 133:18,22 134:21 137:24 138:6 142:16 144:5 144:7 145:9,19 148:23 150:6,12,13 151:16,20,23 152:6
--	--	--	---

153:12 154:14 155:4,20 163:7 165:6 171:13 172:10 177:25 181:4,6,11 184:22 192:10 196:23 198:5,16 199:9 200:2 202:17,25 204:6 210:15,23 211:13,13 212:6,8 213:15 215:6 218:14 220:12 222:6,22 223:17 225:6 226:3,10,14 226:15,17 232:6 236:5,8 237:12 242:11 243:10 249:13 meaning 111:3,22 128:16 224:10 means 19:4,4 22:24 41:16 44:12 67:14 86:21 measure 88:24 measurement 88:23 media 12:23 20:20 21:20 24:15 28:8,18 34:25 35:8,18 36:19 37:19,20,24 39:16 61:22 70:3,12,15,24 80:19 93:4 95:20 107:5,17 108:19 112:21 121:18 123:13 124:3 130:12 138:9 150:7 183:22 195:4 197:17 200:7,14 204:9 205:17 217:10 225:11 meeting 6:21 members 37:13 83:10 memorize 177:22 memory 48:6 177:7 235:5	mention 27:6 77:15 142:10 mentioned 11:9 108:15 155:22 230:11 232:17 mentions 231:24 mercuri 219:9 238:2 238:5 254:21 mercuri's 238:23 mere 176:17 217:20 merely 51:18 135:13 181:13 245:13 merge 132:11 merged 140:24 message 153:22 154:7 158:5 met 54:8,12 metadata 90:8,11,16 96:17 131:15,16 132:3,19,21 133:2,3 133:4,6,16,19 134:5 134:7,22 135:3,5,6 135:9,12,13 140:7 143:22 198:15,17 198:24 205:14 218:5,10 220:5 225:25 229:11 232:10,15 238:19 242:23 247:8 method 25:20 methods 25:19 26:2 220:24 mexico 115:13 microsoft 57:11,12 57:14 74:20,25 75:2 75:12 166:17,20 172:14,16,22 173:3 173:7,11,21 218:17 220:22 233:21 238:14 239:2 240:7 240:14 246:9 microsoft's 218:5,24 219:3,6 220:12 middle 58:12 61:11 91:23	mike 8:13 10:2 13:8 21:23 22:10,19 33:8 169:19,20 mind 4:7 55:6 98:20 151:21 minneapolis 228:18 230:7 minor 47:23 48:8,12 48:18,23 49:5,10 50:12,21 51:20 54:16 55:3,20 minus 179:8,9 minute 61:6,7,16,17 82:12,25 136:17 151:14 234:14 minutes 24:19 60:5 misapprehension 93:13 mischaracterizes 66:5 158:25 misconfiguration 244:14 misconfiguring 245:13 misdescription 92:13 misrepresenting 126:25 missing 47:13,14 147:21 196:20 197:9,12 207:9 misspoke 68:3 mm 121:21 198:12 200:8 209:6 229:3 modified 135:14 227:5 229:7 modify 239:11 mom 151:18 moment 27:11 82:10 115:12 195:21 money 141:8 142:3 142:5,17 145:16 morning 6:10,11,20 148:9	mother 151:2,10 251:4 motivating 144:7 motivation 50:16,19 51:10 141:3,4,6,13 141:15,17,19,20,24 141:25 142:3,5,6,11 142:16,17 143:18 143:21,23 145:5,8 145:11,14,25 146:4 146:9,13 147:6 motivations 141:11 242:7 motive 144:2,6,8,13 144:17 247:25 mountains 41:18 move 41:18 83:6 msn 157:11,25 158:6,13 159:9 160:22 161:4,14 162:21 163:4 213:4 msn.com 157:4 msn.com. 157:14 multiple 5:15 36:21 66:14 148:19 149:7 161:17 189:8 214:2 215:4,8,9,23,25 217:25 246:6 247:12
n			
n 1:21 2:2 6:5 194:2 194:2,2,18 253:7,24 254:2 name 52:16 53:16 63:21 64:6 76:23 77:12 92:4,20 93:2 94:14,15 96:6 125:6 152:23 154:13 158:19 195:14,23 196:5,18,24 198:13 201:9,14,14,17,22 201:25 202:6 204:6 204:12,14,15 228:12 255:5,6			

named 52:18 131:5 194:23 197:25 219:9 228:11 names 91:13 92:15 94:3 133:21,25 134:24 140:22 201:12,21 202:7,12 203:21 222:25 234:25 naming 92:19 93:5,7 201:19 native 179:24 180:4 180:14 near 110:14 118:5 228:23 necessarily 19:7 46:11 67:14 78:19 79:8,16 176:5,8 241:12 247:8 necessary 72:24 182:25 need 69:23 72:16 82:7 127:17 139:19 needed 85:14,24 153:20 negative 190:21 negotiate 216:15 negotiations 217:6 neighborhood 33:2 neil 82:16 84:15 254:9 neither 13:3 network 53:21 220:12 251:20 never 57:23 80:10 80:11 102:25 109:9 109:23 110:6,7,13 110:14,14 163:2 180:10,17 182:14 182:16 191:25 209:11 new 1:3,19,20,22 2:14,14 3:22 8:20 75:13,19 113:4,6,14 113:15,25 114:13	115:13,14 151:4 159:8 214:21 215:21 253:3,5,9 255:3,3 night 10:22,24 nilly 171:2 notably 72:11 notary 1:21 6:6 252:22 253:8 255:25 note 58:20 150:3 154:23 156:17 170:14,16 241:14 noted 194:3 252:13 notes 34:11,16,18,21 34:24 58:18 110:2 notice 1:20 244:19 notion 62:9 novak 10:3 12:20 13:8,15,17 31:15 234:8 235:8 november 22:14 42:19 45:12 46:10 46:13 186:2,10,19 232:17 233:2 number 27:15 33:9 60:16 62:23 74:22 85:10 94:9 109:2 114:17 162:25 167:8 200:24,25 208:21 221:19 235:23 numbering 27:20 numbers 58:8 76:12 76:13 84:19 208:24	206:19 207:11 212:2 231:11 237:19 249:21 250:5 objection 3:14 28:20 31:7 39:8,18 43:3 51:22 56:15 58:2 66:4 71:8 77:23 80:8 83:18 87:10 126:10 136:11 150:21 153:7 157:6 158:24 164:13 181:3 184:4 207:15 218:22 231:20 objectionable 180:22 obligations 43:4 obtain 44:7 207:24 obtained 41:24 63:17 77:10 83:14 83:20 obvious 96:5 153:13 153:14 obviously 4:2 16:4 46:20 69:17 141:6 177:24 226:7 229:20 233:4 occasion 241:15 occasionally 23:7 216:19 230:13 occasions 73:9 149:7 177:14 occur 49:11 57:4,8 57:13,17,19,20 166:5 167:2 173:5 176:9 244:14 occurred 42:7 50:22 173:8 187:2 241:19 occurring 57:22 october 42:16,21 45:12,25 47:7 165:25 186:21 226:18 233:3 odd 151:23 188:20 188:25	offer 22:20 110:12 185:17 188:14 209:16 offered 15:8,9 18:7 47:2,2,6 102:25 103:5,8 112:11 190:4 offering 96:15 128:18 189:15 190:16 offers 116:18 office 40:10 118:5 118:14 134:4 223:12,13,22 228:18 230:7 offices 1:18 38:14 118:7,24 offset 166:3 oh 5:24 68:5 213:24 ohio 2:8 okay 5:4 7:10 11:23 15:23 16:6,7 20:22 21:6,16 22:3 23:8 23:13,15 28:3 31:14 36:25 38:8 39:14 41:6 58:9 60:9 89:18 100:9,21 108:16 118:13 125:14,24 147:19 151:4 158:15 162:24 169:23 170:7 175:11 180:3 192:6 202:5 218:9 230:10 234:16 236:18 238:7,11 246:19 248:16 old 66:22 once 23:19 46:20 75:16 one's 111:12 ones 5:13 72:18 78:10 131:5,5 157:9 226:2,2,2 online 118:7
---	---	---	--

<p>open 57:12 133:22 174:10 229:6 239:10</p> <p>opened 118:25 120:9,13,21 174:13</p> <p>opens 159:8 174:15</p> <p>operate 12:25 65:7 171:12 172:7 174:20</p> <p>operated 67:25 116:14 175:3</p> <p>operates 67:20 170:22</p> <p>operating 218:6,12 240:10</p> <p>operation 103:20 167:14 176:16 215:15,25</p> <p>operations 218:20 238:17</p> <p>opine 237:16</p> <p>opinion 20:2 24:13 48:16 79:7 85:23 96:15 102:19 103:9 109:20 110:17,24 110:25 111:25 128:18 135:16 140:13 142:22 143:4,7,9,11,15 144:11 176:2 179:19 185:17 188:9,15 191:15 196:7 209:17 211:21 212:11 218:4,25 219:4,6 237:9,10,11,12,15 238:22 241:4 245:17 252:4,6</p> <p>opinions 142:24 190:16</p> <p>opportunity 229:19</p> <p>opposed 21:2</p> <p>opposite 146:4</p> <p>oral 54:24</p>	<p>order 36:21 92:15 95:7,16,23 96:14,19 183:20 188:2 220:20 236:13</p> <p>ordered 33:23 35:17 36:13</p> <p>orders 36:21</p> <p>ordinary 134:14,16 134:17,20 135:7</p> <p>organization 44:2,3 52:14 142:5</p> <p>organizations 43:20</p> <p>original 14:15 15:16 16:10,13,19 20:4 23:3,10,13 24:3,7 37:19,20,24 90:4 158:4 189:19 191:5</p> <p>originals 24:13 38:10</p> <p>originated 106:19 109:10 148:6</p> <p>origination 96:16</p> <p>orin 54:6</p> <p>outcome 253:18</p> <p>outlined 122:15</p> <p>outlook 77:22 115:25 116:8,14,17 116:19 117:15,17 117:23,25 118:3,6 118:15,25 195:7,18</p> <p>outrageous 50:5 51:12</p> <p>outside 98:23 99:20 101:9 105:25 113:14,15 143:18 185:11 209:19</p> <p>overall 12:16,19 13:9</p> <p>overwhelming 115:18,24 146:21 242:14 247:18</p> <p>overwhelmingly 191:9</p> <p>owned 152:19</p>	<p>owner 61:25</p> <p>owns 145:21</p> <p>p</p> <p>p 2:2,2</p> <p>p.m. 193:20 194:3 252:13</p> <p>page 11:7,8 14:11 15:7,9,13,19 16:2 17:7,15 18:15 27:10 27:14,17,23,24 28:9 28:10,11 29:6 30:12 30:13 55:7,11,16 58:6,8,10,13 59:17 60:11,12,15,16,21 61:3,11 75:22 76:3 76:9 79:8 84:18,19 85:7,9 88:13 89:9 91:14,18,21,23 92:3 92:9,12,16,17 93:14 93:14 95:13 96:3 97:17 107:6,9,19 108:15 120:22,24 121:12,14 130:22 142:24 155:18 164:2 190:20 191:2 191:21,25 192:5,9 192:14,15 197:5,8 197:15 199:15 205:4,15,16,22,25 206:3,5,8,13,14 208:23 210:4 213:23 214:17,19 221:16,19,19 228:20,21 229:17 231:22 238:9,10 249:2,3,4,5 254:3 254:13 255:7</p> <p>page1.tif 205:20</p> <p>pages 28:9 93:18 205:13,14 248:21</p> <p>paid 9:16 10:8 214:10 223:25</p> <p>paper 14:8,10,11,21 15:4,9,14,14,21</p>	<p>16:2 17:2,7,12,16 18:9 20:15,18 86:25 87:8 88:18 89:11,24 90:3 125:16,20 142:24,24 143:3 144:10,12,17,19,24 145:12,15,17 146:2 164:2 189:5,15 190:14,17,20 191:3 191:5,15,16,22 192:9,15 250:3</p> <p>paragraph 51:15 58:19 85:12 86:6,16 86:17,20 87:3 89:5 89:8,14,15 107:20 198:8 201:6 202:4,9 203:11,19 209:3,9 209:24 210:17 228:24,25 238:9,14 239:4 240:6</p> <p>paragraphs 203:4</p> <p>pardon 54:10</p> <p>parents 59:19 60:3 73:19 106:18 112:24 114:2,6,7 230:14,17,22</p> <p>park 1:19 2:13</p> <p>part 9:2 14:16 30:3 33:20 35:23,24,24 36:4 43:8 48:9 61:22 73:15 81:9 105:19 108:19 119:19 155:3 159:5 212:4,11 248:20 249:9</p> <p>partially 195:16 196:2</p> <p>particular 78:22 79:12 93:6 102:2,11 113:24 114:8,21 115:9 116:12 133:8 134:15 233:15 239:16,22 242:8,23 247:10</p>
---	---	--	--

<p>particularly 58:16 196:11</p> <p>parties 17:22 19:13 21:19 102:21 103:3 103:10 126:14 148:17 188:18 189:16 225:21 253:16</p> <p>parts 30:4,5 249:13</p> <p>party 52:5 185:24</p> <p>pass 123:10</p> <p>passed 169:17</p> <p>paste 139:4 164:25 166:21,24 167:10 167:11,14 176:16 211:25 212:4 215:14,16,24 216:4</p> <p>pasted 139:6,12 164:16 165:3,5 169:3 172:16,24 173:20 211:9 233:19</p> <p>pasting 167:20 172:18</p> <p>path 135:10</p> <p>pattern 135:12 140:24</p> <p>paul 1:5 3:7 17:19 61:25 62:23 63:4,9 63:15,18 64:13 67:15 73:19 77:14 92:9 105:14 106:18 108:10,20,22,24 109:8,21,22 110:6 110:13,17,20 111:2 112:18,23 113:11 115:6,17 138:16,17 139:24 140:17 149:22 150:24 151:2,18 152:9,15 152:25 160:21 161:4 163:3 179:11 187:14,15 200:22 201:3 228:8,11 254:12,17</p>	<p>paul's 157:3</p> <p>paulceglia 157:4,11 157:14,25 158:6</p> <p>pause 84:21 151:14</p> <p>payment 30:10</p> <p>pc 197:17</p> <p>penalty 109:22</p> <p>pending 127:12</p> <p>people 6:24 11:9 12:4,9 31:4,11 40:23 57:6,20 64:22 69:16 73:4 75:11 130:17 151:25 161:21 181:22,24 182:7 183:9 207:24 214:5 234:5,24 235:14,15</p> <p>people's 69:14</p> <p>percent 89:11,23 90:4</p> <p>perform 69:23 182:24,25</p> <p>period 161:13 162:12 186:3,5,6,7 187:16,22 251:24</p> <p>periods 147:22</p> <p>perjury 109:22</p> <p>permit 71:22</p> <p>perpetrate 245:13</p> <p>perpetrated 146:22</p> <p>person 7:7 8:11 9:23 14:5 21:17 40:13 64:8,12,17 65:2 67:15 129:12 139:23 141:4,5,13 147:2 170:4 174:10 174:15 184:25 191:2,21 228:16 230:8</p> <p>person's 104:16 210:21</p> <p>personal 53:11 139:3 161:12 237:9</p> <p>personally 23:6 39:3 145:20</p>	<p>personnel 137:12,15</p> <p>persuasive 196:25</p> <p>phase 183:21 236:10 236:11</p> <p>phone 39:4 62:23</p> <p>photo 23:23</p> <p>photograph 150:25 151:24</p> <p>phrase 30:24 120:7 121:20 207:19</p> <p>physical 26:24 27:3 65:19,20 67:23 88:22 89:21 108:8 111:10,20,23 112:4 113:12 114:20 232:9,11,13 238:10</p> <p>physically 83:16 111:3,8 112:24 113:14,18 114:13 117:3 138:16,19</p> <p>pick 219:25</p> <p>picked 75:18</p> <p>picks 219:19</p> <p>picture 23:9,11 24:4 151:12 155:3</p> <p>pictures 23:20</p> <p>piece 34:25 35:8 75:19 87:8 88:18 89:11,24 90:2 98:24 150:7 154:17,21,22 154:24,25 155:5 246:17 250:3</p> <p>pieces 72:4,22 73:2 75:16 86:25 107:5 107:16 199:21</p> <p>pinpoint 147:8</p> <p>pixels 232:14</p> <p>place 37:10 104:2 229:9 244:19</p> <p>placed 30:14 218:11</p> <p>places 75:23 76:6</p> <p>plaintiff 1:6 2:5 3:7 109:9 150:7 187:25</p> <p>plaintiff's 70:18 84:16 142:23</p>	<p>208:12 227:9 233:19</p> <p>plaintiffs 16:25 26:21</p> <p>planned 193:4</p> <p>planning 4:8,14</p> <p>plans 4:11,18,22 5:2</p> <p>plausible 176:13</p> <p>play 146:9</p> <p>pleadings 163:25 190:4,9</p> <p>please 5:6 28:12 32:10,16 68:21 175:9 202:4 205:3 237:23</p> <p>plug 251:17,19</p> <p>point 4:20 11:14 18:14 26:7 78:22 79:12 86:25 109:3 113:24 114:8 115:10 145:25 148:12 152:13 166:2 167:10 186:10 193:17 198:16,18 200:13 202:20 234:3 252:3</p> <p>pointed 152:25 158:16 199:4</p> <p>pointer 198:7 199:8 199:10,13,16,18</p> <p>pointing 55:9 198:21 199:12 204:20</p> <p>points 191:23 220:10,19 246:11</p> <p>poor 27:7</p> <p>portion 37:15,16 158:4</p> <p>portions 11:8,18</p> <p>posited 151:24</p> <p>positing 64:9</p> <p>position 63:7 103:2 128:6,8,12,14 151:10,13 153:24 154:4 158:21 159:2</p>
---	---	--	--

160:11 168:13 possession 51:19 90:19 202:19,22 possibilities 95:6 154:18 possibility 69:25 111:11 112:16 116:25 possible 14:4 33:8 38:14 54:25 55:8 56:22 68:15 73:12 73:15 75:15 94:22 95:11,15 106:22,24 106:25 112:6,14 114:19 117:5,13 119:12 123:24 131:22,24 133:11 134:18 135:23 136:4 138:15,16,19 138:20,21 139:2 154:17 155:5 181:11 184:18,21 184:22 185:24 230:21,24,25 234:7 239:10 245:11 possibly 114:4 post 4:8,15,19,23 122:22 129:19 190:2 potentially 216:21 practice 13:24 14:3 37:23 70:14,16 238:20 practices 3:25 81:14 81:25 pre 214:24 236:10 preceded 210:14 precise 114:10 115:12 139:19 150:23 precision 181:15 predates 239:7 241:5 predecessor 20:19	prefer 38:3 premise 75:10 77:25 preparation 6:15 9:5,21 11:7 54:13 240:15 prepare 224:7 prepared 205:11 preparing 8:16 9:16 12:13 223:15 present 2:21 38:22 38:25 presented 191:6,16 231:23 preserve 225:11 president 12:15 presumably 194:14 presumptively 123:8 124:4 225:16 pretty 67:7 prevent 146:5 previous 26:3 30:24 214:20 previously 3:19 83:23 108:5 primarily 235:8 primary 12:2 235:10 principle 116:5 117:25 print 91:9 printed 27:13 88:19 156:19 189:14,17 189:22 printout 87:12,16 87:23 prior 26:14 50:8 51:2 52:3,9,10 74:12,24 75:7 120:5 123:21 127:8 128:15 129:2,11 148:12 179:11 210:16 236:12 privilege 123:10 180:10,17 225:17	privileged 39:21 224:16 probability 111:22 114:15 115:8,14 207:14 probably 5:11 113:12 119:4 161:16 192:17 193:6,14 194:8,13 243:20 problem 102:4 241:7 problems 23:20 217:17 procedural 225:15 procedure 3:21 proceed 100:4 proceeded 128:5 proceeding 203:3 process 11:15 48:22 50:25 55:3 56:23 57:8 134:5,9 139:14 173:9 processes 79:25 processing 183:2 produce 29:8 33:16 42:24 43:7 45:7 75:11 124:24 125:7 150:7 215:21 225:6 225:16,17 produced 9:2 10:20 29:4,7,17 45:10,11 70:11 105:14,17 107:22 108:2,10,11 108:18,20,21 123:9 125:5 150:11 188:5 197:17 200:9 201:8 202:14,24 206:9,15 207:7,10 223:8 231:14 producing 11:12 41:10 150:18 231:7 product 68:9 production 10:10,11 28:25 43:12 125:11	186:24,25 187:4,24 188:4 191:6 232:18 232:22 236:7 productions 186:13 186:20 232:22 professional 40:24 139:4 proffered 16:10 proficiencies 106:7 proficiency 106:3 program 64:23 65:11 69:19 117:15 130:8,11,20 131:18 172:23 programming 139:9 programs 104:9,11 117:6,7,8,9,11,13 133:18,21 projects 235:13,16 pronounce 228:12 proof 50:20 56:4 proper 103:24 properties 206:4,6 206:14 prosecution 238:18 protocol 183:20 225:7 proves 14:22 17:9 63:8 provide 39:22,24 46:22 72:10,24 81:18 183:4 189:12 provided 5:22 9:6 12:19 47:12 54:4 72:14 73:3 105:14 110:9 124:25 126:15 147:15 159:14 187:25 197:7 provides 209:7 providing 47:15,18 192:11 provisions 30:9 prudent 184:24 185:3,6,15
--	---	--	--

public 1:21 6:6 252:22 253:8 255:25 publications 40:24 41:4 publicly 4:25 published 41:4 pull 116:21 118:19 155:4 pulled 228:2,3 purport 211:14 purported 81:20 146:23 149:4 183:7 216:11 217:24 225:14 226:14 purportedly 114:5 150:10 165:8 purporting 164:16 purports 191:17 purpose 63:3 239:23 244:23,23 245:7 purposes 43:24 76:2 123:14 pursuant 1:20 35:19 187:25 220:2 225:7 put 3:13 23:17 28:6 67:18 68:13 87:7 90:3 92:21 95:11 114:17 150:12 156:21 175:9 177:19 191:21 199:20 217:19 219:12 243:2 247:13 puts 89:5 163:11 198:5	50:19 51:13,16,23 53:8 57:5,18 66:9 66:10 70:8,10 71:21 74:19 75:10 76:2 82:5 86:4 89:19 94:13 100:22 109:17 112:12 113:22,23 122:18 123:22 126:24 127:5,6,11,23,24 128:3,4,5,12,21 133:15,17 135:4,19 139:20,25 143:10 144:4,9 145:2,14 150:20 151:20 152:6,9,10 153:10 153:18 160:18 162:3 168:17,18,20 168:22 170:15 172:21 174:8 183:14,19,24 184:3 184:6,7,16,17 185:9 185:10 187:10,13 211:18 212:23 218:7 226:9 243:2 243:11 questions 7:20 11:20 16:11 49:22 83:7 104:18,24 127:4,20 137:6 166:22 227:21 234:23 252:9 quick 27:15 quicker 198:6 quickly 91:20 194:16 quite 178:12 209:20 quotation 210:16 quote 131:8 209:23 209:25 210:4 213:23	253:2 ran 169:12 range 10:7 rate 9:19,22,24 223:4 rates 10:6 223:5 reach 196:17 197:3 reaction 192:19 read 10:19,23 11:15 12:17 16:24 17:2,8 26:20 28:11,14,17 29:22 30:5,7,8,9 55:6,18 70:17 86:17 89:16,18 108:24 109:3 121:18 150:3 156:5 159:16 160:11 177:23 178:4 203:12 209:4 209:11,24 225:8 229:22 230:2,3 241:14 250:9 reading 11:3 30:6 55:8 71:11 90:16 183:20 227:17 250:12 reads 238:14 real 142:8,12,25 144:14 145:10,12 156:3 226:23 228:6 244:17 254:15 reality 245:5 really 21:3 26:9 69:4 75:9 82:4 102:5 117:10 185:16 193:5 237:9 realm 143:18 reason 13:17 16:22 29:16 44:17 46:16 76:25 89:3,20 90:15 116:15 215:19 244:20 245:18 255:7 reasonable 74:8 131:20 135:17,25 155:9,11,14 160:13	160:25 reasonably 41:20 reasons 37:3 rebecca 219:9 238:2 238:5 254:21 recall 17:5 26:23 30:13,16 33:11 39:5 47:5,9 48:11,15,22 52:12 71:10,11,14 75:24 90:13 91:11 119:21,24 130:4 172:13 177:20 178:21 179:25 180:5,6,8,11 181:4 184:16 187:18 192:18,19,22 198:6 227:13,20,23 228:5 230:3,20 232:18 233:9,15 250:11 recalling 66:11 195:2 receipt 120:18 receive 122:16 received 9:2 41:25 42:4,10,14,17,18 45:24,25 57:23 59:20 60:4 61:3,3 61:13,14 121:22 122:10 123:6,21 129:3 159:25 160:2 160:8,10 162:7 175:7,24 186:14 210:7,12,19 211:4 211:20 227:3 receives 210:21 receiving 98:6 123:14 149:20 recess 82:15 136:25 193:20 234:18 recipient 57:25 217:3 recognize 52:16 recollection 33:10 52:24 91:17 92:2 97:13 109:4,7 120:2
q			
qualified 19:20 20:2 22:19 153:2,8 252:3 quality 28:15 question 7:6,7,20,25 10:14,16 11:6 23:5 26:3 30:24 34:15,19 37:22 43:19 50:18			
	r		
r 2:2 6:5,5 194:2,18 194:18 228:12			

120:15 170:3 231:4 232:25 248:11 reconstruct 10:18 235:17,21 record 3:13 8:6 42:6 78:17 79:12 82:10 82:22 84:14,25 85:2 85:4,6 88:4,9 127:14 136:24 137:4 178:9 193:17 193:18 224:14 229:16 234:17,21 252:12 recorded 97:2 98:22 210:8 220:22 recording 82:21 records 35:10 40:10 40:14 recover 78:19 79:21 79:25 126:7 187:20 196:12 222:18 recoverable 195:16 196:2 recovered 227:24 recovery 43:24 red 23:20,24 24:6 redacted 8:7 131:9 redirect 252:11 refer 189:9 205:17 reference 60:18 159:15 162:4 197:11 203:20 referenced 85:10 157:17 178:11,17 179:6 206:9 references 176:22 213:11 referred 17:8 76:3 211:11 referring 7:2 15:5 15:24 17:4 27:19 54:21 56:16 59:4,6 59:24 60:11 76:11 86:22,24 89:13 90:24 92:7 108:12	108:14 109:25 121:6 155:24 157:8 160:6,7,9 162:8,9 164:5 180:13 197:13 198:17 210:13,16 248:8 refers 203:3 209:8 reflect 40:11 reflected 211:20 reflective 174:14 reflects 42:6 refresh 91:16 92:2 97:12 120:15 248:11 regard 70:5 110:21 237:14 regarding 39:16,25 40:7 53:20 59:10,18 106:7 110:17 160:23 207:6 219:6 220:10 223:23 232:3,7,8 regardless 115:9 registered 77:4,11 113:3 152:22 158:18 regular 89:11,24 related 31:25 32:2,3 32:5 33:22 35:11 40:19 52:3,25 53:3 90:8 102:18 122:17 124:18 221:17 245:7 253:16 relates 55:12,17 relation 59:14 218:11 relationship 220:11 220:14 relatively 209:20 242:21 relevant 41:13 80:23,25 81:2,7,15 82:2,2 123:4,8 124:4 137:25 138:3 138:12 174:8	177:19,19,24 178:6 183:13,18 184:19 185:20 225:16 233:7 reliability 218:5,18 238:15 reliable 209:13 240:16 241:13 relied 8:16 146:24 240:21 rely 129:24 137:20 141:7 182:3 226:6 239:13 relying 240:9 remained 229:9 remember 29:13 47:15,18,24 48:8,13 66:3,6 103:13 166:10 227:15,21 230:14 remote 65:3,5,6,15 65:17 67:21 68:10 68:17,25 69:4,21 71:18,22 72:16,24 73:5 111:11,17,21 112:6,8,13,16 114:18 remotely 67:16 68:11 69:13 111:5 removable 198:19 198:23 199:5 200:7 200:13 204:9 205:17 renowned 106:14 repeat 64:11 86:4 139:25 231:12 237:8 rephrase 105:10 rephrasing 168:19 reply 157:3,23 158:22 159:11 replying 160:22 report 5:7 6:2 8:8,9 8:11,14,16,17,20 9:21,23,25 10:5,11	10:20,23 11:3,8,12 11:17,18,24 12:5,7 12:10,10,13,18 13:10,12,19,22 14:5 14:6,17,23 17:3,4 18:19 19:12 25:18 26:20,23 27:6,11 28:6 29:4,7,10,18 30:14,20,20 31:4,5 31:6,12,20,22 32:2 32:5,7,13 33:7,24 35:15,16,21,22 36:2 39:17,22,23,24 40:4 40:6,8,15,18 41:10 58:18 60:11 61:21 70:2,8,11,18 71:12 72:12,19 74:11 75:21,23 76:6,10 80:25 81:11,13 84:15,20 85:8 87:6 90:21,24 91:5,10,16 91:18,19 93:10,19 97:13 102:19 119:15,19 120:16 122:24 123:5 124:8 130:2 131:10 137:22 138:5 140:5 155:18 163:20 165:15 166:8 180:22 189:3,6 190:13 195:2 197:7 197:11 199:20 200:5,6 201:10,22 202:8 203:7,20 205:18 207:9 208:15,17,18 219:12 220:17 221:3,12 223:9,15 224:7 225:6 227:8 227:17 231:8,14 234:6,25 235:3,10 236:4,7,24 237:9 239:7 240:15,21 241:14 247:4 248:9 249:8,13 250:18
---	--	--	--

254:7	resulted 139:14	129:23 132:19	50:1 51:1 52:1 53:1
reporter 1:21 84:24	resulting 89:10 90:6	134:21 137:10,15	54:1 55:1 56:1 57:1
253:7	results 13:9 35:14	142:4 145:6 146:8	58:1 59:1 60:1 61:1
reporting 255:2	38:17 40:7	148:3 149:9 151:22	62:1 63:1 64:1 65:1
reports 14:2 16:24	resumed 194:18	155:25 157:5,15	66:1 67:1 68:1 69:1
39:15 227:15	resyncs 251:20	159:13 160:3	70:1 71:1 72:1 73:1
represent 55:14	retain 44:23	161:22 162:13	74:1 75:1 76:1 77:1
109:16	retained 202:20	163:2,16 164:4	78:1 79:1 80:1 81:1
represented 195:13	retains 251:18	165:21 166:6	82:1,16,24 83:1
represents 158:22	retrieval 186:12	168:14 170:24	84:1,11 85:1 86:1
request 7:6 33:19	retrievals 185:25	171:14 178:7,15	87:1 88:1 89:1 90:1
requested 194:7	returned 118:24	179:15 181:7	91:1 92:1 93:1 94:1
require 69:17,18	returning 135:5	186:22 197:18,22	95:1 96:1 97:1 98:1
required 3:23	reveal 59:10,13	199:3,24 206:17	99:1 100:1 101:1
researched 72:21	112:17,21,23	208:24 210:24	102:1 103:1 104:1
reserve 3:14 4:4	review 14:10 32:14	213:22 218:13	105:1 106:1 107:1
reside 113:23,25	41:9 51:3,9 52:2	221:25 222:6	108:1 109:1 110:1
114:9 117:4 211:16	53:12 123:10 183:4	223:18 226:17,25	111:1 112:1 113:1
resided 78:21	183:5 208:15,16	228:23 234:20	114:1 115:1 116:1
112:18,21 113:5,7	225:17 227:8	239:10 242:13	117:1 118:1 119:1
113:13 114:7	229:20 233:13	245:11 246:10	120:1 121:1 122:1
residence 230:12	reviewed 11:16	251:5	123:1 124:1 125:1
resides 114:5	29:10 30:18,19,23	ring 53:16 177:15	126:1 127:1 128:1
residing 149:16	30:25 31:4,19 32:6	rja 1:4	129:1 130:1 131:1
168:8	32:11 33:17 40:17	road 2:6	132:1 133:1 134:1
resolution 27:7	41:21 52:6,22 53:2	rogue 245:6	135:1 136:1 137:1,4
28:15	81:19 123:7 178:5	role 13:5 182:21	138:1 139:1 140:1
resolve 222:15	207:5 208:17	183:12 228:7	141:1 142:1 143:1
resolves 76:23 77:12	reviewing 13:9	254:16	144:1 145:1 146:1
152:23	70:23	rolling 137:2 194:5	147:1 148:1 149:1
respect 4:7	rewrite 214:18	rootkit 71:5 104:25	150:1 151:1 152:1
respects 250:8	right 3:15 4:4 5:10	rootkits 103:13,16	153:1,24 154:1,4,8
responding 161:5	12:5,8 18:11 20:16	103:18	154:9,9 155:1 156:1
responds 154:24	24:9 25:2 27:22	rose 1:18 3:8,8 6:10	157:1 158:1 159:1
response 155:22	54:6 56:20 58:22	7:1 8:1,5 9:1 10:1	160:1 161:1 162:1
156:12 159:25	61:11,23 64:6 65:4	11:1 12:1 13:1 14:1	163:1 164:1 165:1
224:18	66:16 72:5 81:17	15:1 16:1 17:1 18:1	166:1 167:1 168:1
responsible 13:7	82:9 84:19 85:19	19:1 20:1 21:1 22:1	169:1 170:1 171:1
rest 78:10 226:20	90:19 91:22 95:13	23:1 24:1 25:1 26:1	172:1 173:1 174:1
restore 220:9,19	95:23 97:12 98:23	27:1 28:1 29:1 30:1	175:1 176:1 177:1
246:11	100:11 105:12,13	31:1 32:1 33:1 34:1	178:1 179:1 180:1
rests 16:4	107:19 121:13,24	35:1 36:1 37:1 38:1	181:1 182:1 183:1
result 35:13 131:21	122:10 123:5	39:1 40:1 41:1 42:1	184:1 185:1 186:1
173:21 176:14	124:14 125:12	43:1 44:1 45:1 46:1	187:1 188:1 189:1
216:20 243:25	126:2 127:24	47:1 48:1,6 49:1	190:1 191:1 192:1

193:1 194:1,22 195:1 196:1 197:1 198:1 199:1 200:1 200:21 201:1,4 202:1 203:1 204:1 205:1,4,10 206:1 207:1 208:1 209:1 210:1 211:1 212:1 213:1 214:1 215:1 216:1 217:1 218:1 219:1 220:1 221:1 222:1 223:1 224:1 225:1 226:1 227:1 228:1,6,10 229:1 230:1 231:1 232:1 233:1 234:1,22,23 235:1 236:1 237:1 237:24 238:1,4 239:1 240:1 241:1 242:1 243:1 244:1 245:1 246:1 247:1 248:1 249:1 250:1 251:1 252:1,16 253:10 254:4,7,9,11 254:13,15,19 255:6 255:21 roughly 33:3 61:7 61:17,19 rule 7:16 111:16 134:17,18 160:15 160:20,23 214:11 214:12 ruled 160:24 161:24 162:8 rules 3:20,21 6:23 7:2,17 49:21 223:23 run 82:13 170:25 173:22	sat 100:15,16 satellite 198:9 save 67:23 68:11 189:24 215:16 219:24 222:5 saved 68:16 219:23 229:10 saverin 53:14 saving 215:15 savings 165:21 174:5,6,11 saw 74:10 249:20 saying 26:10 47:24 51:24 78:14,20 81:2 87:20 90:2 110:13 111:12 120:12 122:24 123:24 127:13 140:19 148:7 149:23 154:7 159:12 160:25 171:21 181:14 195:4 197:25 204:19 212:19,24 239:17 243:24 246:16,19 says 19:5 30:7,8 39:23 89:12 109:11 110:5 131:6 149:22 149:22 150:2 151:17 157:11 158:4,5,6 179:9 191:25 210:5 229:4 233:23 scan 70:12,15,24 90:5 94:4 95:8,8,10 95:13,23 scan0001 91:17 94:15 96:11 194:23 scan0001.tif 91:14 scan0002 94:14 96:6 96:9 scan0002.tif 92:4 93:17 scan0002.tif. 92:11	scan001.tif 93:23 scanned 64:2 65:18 85:13,18,25 86:21 86:22,25 90:5 93:7 93:17,19 94:9,10,18 94:19,25 95:8,12,18 96:4 112:3 148:8,11 scanner 92:20,21 93:6 94:3,5 95:2,4 95:12,16,25 scanners 95:13 scanning 95:23 160:16 scans 25:21 75:18 93:10 scenes 171:15,22 scheme 93:5 scratch 58:21 screenshot 206:4,6 206:13 207:2 seagate 93:22 96:10 96:12 108:2 221:3,7 248:7 251:22 search 35:3 45:14 125:5 183:3 seat 62:11,17 second 17:13 42:17 48:3 61:10 84:22 85:12 91:14 92:17 93:14 95:8,13 96:3 96:12,21 97:17 107:20 108:6 131:13 166:7 191:2 205:23,25 206:3 228:24 249:2,4 seconds 59:22 61:9 section 11:16,24 26:23 30:8 121:2 238:12 secured 38:13 security 219:8 see 27:25 53:5,6,23 55:9,11,16 58:25 59:3 60:15,18 73:13 77:17 85:12,16,17	89:12 91:20,22 115:4 121:5,20 124:3 132:24 133:2 133:6 135:9,24 145:9 153:4,16 157:20 158:6 167:22 173:4 176:11 177:19,23 187:14,24 188:4 197:8,13 198:11,21 201:4 205:16,19 206:7 209:23 212:16 214:4 215:14 224:3 229:2 238:13 242:3 244:13 246:7,11 247:11,12,12 248:3 seeing 242:3 seen 14:12,13,14,15 14:22 16:9,13,15,21 53:21 84:11 125:19 125:21,22 146:7,9 169:9 181:21 185:23 249:18,24 250:4,7,16 selected 210:16 self 182:8 semantics 75:14 send 57:12 64:10 65:10 76:24 104:12 111:2,4,6 113:13 118:9 122:5 123:23 129:13 161:13 230:22 sender 92:9 sending 24:22 63:3 63:6 149:20 154:8 161:17 179:25 sends 159:7 sense 66:15 75:10 106:4 222:14 sent 59:18 60:2,14 60:17,21,23 61:11 62:8,24 63:10,18 64:13,16 75:22 76:3
s			
s 2:2 6:5 166:22,25 168:14 170:20 171:17 194:2,2,2,18 255:7			

76:16 77:16,20 78:4 78:5,8,11,17 79:9 79:10,14,17,22 92:14 97:19 98:10 109:21 110:18,20 112:19,22,25 113:16,17 114:12 114:14,16,22 115:6 115:8,12,13,14,17 115:22 116:2 117:9 118:17,20,21,23 122:13,19,22,25 123:21,25 129:16 129:20,25 138:18 149:21 150:10 152:7,9 153:21,24 154:3,5,7,11,14 156:6,9,11 159:5,24 160:21 161:4,8,22 162:4,6,16,17,19,21 163:5 165:21,25 174:9,16 175:23 177:13 179:7,23 180:16 181:4,5 187:15 195:10,12 227:2 231:9,15 232:5 sentence 58:22,25 59:2,3 107:20 108:7 separate 42:11 43:12 159:3 separately 247:7 september 246:13 sequential 220:20 246:12 series 78:23 171:25 serve 48:6 server 44:5,14 45:20 46:2,6,7,8,11,21 58:11,20 59:5,21 61:4,14 98:2,5,5,19 98:25 99:2,3 151:5 151:8 169:21 173:15,16 186:2 210:9,19,20 211:3	211:12,23 244:10 244:17,18 245:15 servers 43:16,22 59:7 97:21 98:4,15 99:4,5,7,14,16,19,21 101:2,7,17 149:15 151:7 168:8 177:3 195:5 211:16 service 64:23 set 3:25 43:7 51:2,3 57:14,15 58:24 90:5 97:25 116:20,25 119:10 122:3,6 129:12,16,24 171:14 174:22 183:3 233:13,14 253:11,21 sets 56:18 62:23 225:9,14 setting 58:23 97:23 98:16 177:5 220:11 244:11 245:14 251:14 settings 250:25 seven 22:14 187:2,4 189:21 sfwebworkforhire... 131:14 sharing 147:6 sheet 255:2 shortcut 198:4,7 205:5 254:14 shortly 98:14 shoulder 200:17 show 18:10 93:5 102:13 122:25 198:16,18 200:15 204:22 212:25 247:20 showed 77:8,10 87:15 90:23 151:2 207:2 shown 87:6 229:18 shows 63:18 146:19 146:20 150:4 212:9	shut 75:17 194:9 shutter 23:11 side 7:8,14 19:9 149:20,20 192:16 192:16,17,18 sides 150:17 216:18 sidley 35:20 58:11 58:15 59:4,7,10,20 60:4 61:4,14 62:24 98:4 99:3,4,8 149:16,16,18 150:10,11,16 151:7 152:16 160:3 177:4 195:5 244:9,12,20 245:6 sign 12:9,14 13:18 13:22 14:2 190:20 192:9 signatories 13:21 signatory 14:6 signature 63:24 64:3 152:25 191:21 signed 8:9,11,14 13:11 62:23 63:15 63:20 126:13 147:15,17 152:24 153:23 188:10,13 191:2,17,25 192:4 231:17 significant 236:15 significantly 10:4 24:10 249:17 signing 125:17,22 188:22 signs 212:25 similar 189:4,20 190:5 197:5 simultaneous 163:14 single 125:7 178:10 229:18 243:8,10 245:12 sir 51:16 127:4 160:18 183:24	sit 22:16 228:5 sits 222:13,21 sitting 6:25 62:17 63:9 64:9,14,17 65:7 215:4 six 131:4 140:21 188:23 size 26:24 27:3 28:18,21 29:5,6,13 29:17,22,24,25 85:16,21,24,25 86:3 87:20 89:11,23 90:4 91:2,4 195:14,24,25 196:6,19 197:2 203:5,10,15,25 204:6,7,15,20,23 205:19,22 206:7,11 206:16 232:9,11,14 249:7,11 sizes 203:22 204:14 206:23 small 28:16,24 87:13 88:5 150:2 201:20 235:13 smaller 87:7 88:17 88:21 250:14 smoking 150:14 snapshot 79:11 186:9 snyder 54:6,16,23 54:25 social 53:21 software 13:2 35:5 69:9,19,24 92:21 93:2 94:3,5 103:25 104:4 133:23 somebody 80:21 114:5 135:14 141:9 141:11 239:18 240:23 244:12 someone's 104:12 104:15 143:23 somewhat 189:18 son 109:8 110:6
--	--	---	---

<p>sorry 59:25 68:5 70:22 90:22 94:13 121:10 140:2 157:4 162:17 204:10 249:8</p> <p>sort 11:25 136:21 143:18 151:23 214:7 218:20 224:10 227:5 232:13 236:9</p> <p>source 45:8 46:3,19 46:23 133:22 167:21,21,23,24 176:22 209:14 233:15</p> <p>sources 184:19 247:19</p> <p>southwell 2:15 3:2,3 3:12 4:14,17,20,24 5:4,9,16,21 14:25 15:16 16:8 17:25 18:21 21:11,15 28:20 29:23 31:7,23 32:2 33:15,18,22 39:8,18 40:3 43:3 44:10 47:17 51:22 54:20 55:11 56:15 58:2 59:24 60:10 66:4 70:20 71:8 73:22 76:18 77:23 80:8 83:18,23 84:21 86:7 87:10,16,22 88:3,8 93:8 105:9 109:24 110:4 113:20 121:6,9,12 126:10 127:18,22 128:4 136:11,18,23 145:18 150:21 153:7,21 157:6 158:7,24 164:13,18 168:21 180:12,19 184:4 186:15 191:4 192:24 193:7,12,16 249:16</p>	<p>space 49:3 50:7,17 51:5 167:6</p> <p>spaced 229:18</p> <p>spaces 167:8,15 201:16</p> <p>speak 80:9,12 214:22</p> <p>speaking 8:23 128:3 209:15</p> <p>specific 15:5 48:15 54:3 57:9 72:4,9 79:2 103:23 109:4 112:12 147:4 156:4 157:7 184:16,17 224:19 226:11,13 227:20,23 240:20 241:9,21 243:21 245:20</p> <p>specifically 35:14 59:8 63:5 67:19 71:10 90:13 117:18 117:21 122:4 148:15 175:3 179:13 180:12 212:3</p> <p>specifics 71:9 116:11 120:16</p> <p>specified 183:6</p> <p>specify 15:3 40:3</p> <p>speculate 17:12 18:9 26:16 37:22</p> <p>speculating 143:25</p> <p>speculation 136:12 207:12</p> <p>spelled 166:11</p> <p>spent 235:24</p> <p>split 49:7</p> <p>spoke 182:14</p> <p>spoken 80:6,10,11 182:16</p> <p>spoliation 199:23 200:4</p> <p>ss 253:4</p> <p>stages 235:15</p>	<p>stamp 5:19 197:8 218:19 226:16 238:16 239:19 241:16 244:22,22</p> <p>stamps 59:17 60:2 218:15 229:5 238:13 240:10 241:22,25</p> <p>stand 27:16</p> <p>standard 60:24 70:14,16 152:14 166:2 174:6 209:19 226:19</p> <p>standing 176:4,7,18 217:19 243:15</p> <p>standpoint 62:10,15 149:2</p> <p>start 60:8 72:7 82:19 194:4 198:9 214:19,19</p> <p>started 6:12 36:6 55:7 128:3 224:6</p> <p>starts 209:4 228:25</p> <p>state 1:22 65:2,12 74:6 113:14,15 114:14 178:8 253:3 253:8</p> <p>stated 37:2</p> <p>statement 41:8 50:11 54:15,19,22 55:5,20 78:23 107:14 110:21 140:8 171:5 182:3 210:3,14 211:10 220:6 223:24 229:14 238:23</p> <p>statements 78:24 79:3 182:9 229:25 240:9</p> <p>states 1:2 80:22 85:22</p> <p>stating 187:15 202:17</p> <p>statutory 3:23</p>	<p>stay 216:13</p> <p>stenographically 253:14</p> <p>steps 35:7</p> <p>stewart 204:11</p> <p>storage 55:2 56:23</p> <p>straightforward 153:15</p> <p>strange 151:15</p> <p>strangeness 152:12</p> <p>strategic 82:5</p> <p>strategy 13:9 80:16 185:10</p> <p>streetfax 14:22 17:9 17:22 18:5,18 19:8 19:12 20:12 23:3 24:12 28:7 30:8 58:15 60:20 63:4 77:13 81:21 92:3,10 102:22 103:9 107:3 107:11,17,23 114:24 115:5 142:9 146:10,14,20 148:2 148:25 150:14 155:11 191:9 192:12,16 242:17 247:16 248:18 249:5,19</p> <p>streetfax.com 183:9</p> <p>stricken 127:13</p> <p>stroz 3:9 6:2 8:8,13 9:17 10:9,13 12:16 13:24 14:4 22:8 37:23 39:6 40:13,23 43:14 48:17 49:13 49:17,19,24 50:4,6 50:11,15,20,24 51:8 51:18 56:13 81:12 83:13 88:23 91:8 137:12,14,20 170:8 173:2 187:9,20,24 214:9,17 215:3 228:17 230:5 254:7</p> <p>study 223:25</p>
--	--	--	--

<p>stuff 139:13 148:18</p> <p>subject 49:3 50:17 92:8,14 183:3</p> <p>submitted 16:25 163:24</p> <p>subpoenas 35:19</p> <p>subscribed 252:18 255:22</p> <p>subsequent 152:16 186:13,19 200:14 233:4,5</p> <p>subsequently 123:9</p> <p>substance 189:19</p> <p>substitute 214:25</p> <p>sufficient 13:21</p> <p>suggesting 190:19 190:25</p> <p>summarizing 175:8</p> <p>supervise 37:15</p> <p>supervised 31:11,16 37:13,16 84:4 137:18 235:9</p> <p>supervising 13:7</p> <p>supervision 12:17 12:19</p> <p>supplemental 200:21 201:2 254:11</p> <p>support 97:9 113:4 141:7 142:15,20 150:8 165:8,14</p> <p>supporting 166:13</p> <p>supports 64:20 111:25 139:22 140:13,15,17 192:8</p> <p>suppose 138:20</p> <p>supposed 225:3</p> <p>supposedly 106:19</p> <p>sure 10:5,15 15:6 22:23 25:6 28:23,25 31:8,10 39:20 55:7 69:25 74:19,21 75:4 79:6 82:14 85:3 89:17 93:12 97:10 140:4,20 144:3</p>	<p>148:6 172:20 181:9 181:14 182:23 184:8,11 190:23 224:15 225:8 226:3 226:9 235:16,18 248:12 249:22 250:22</p> <p>surface 48:25</p> <p>surprise 203:14,16 203:17</p> <p>surprising 130:16</p> <p>surrounding 176:19 204:17</p> <p>sworn 3:11 6:6 252:18 253:12 255:22</p> <p>sync 116:25 117:6,7 117:8,9,14 118:2,25 119:11</p> <p>synced 117:21 119:5</p> <p>synchronize 116:3,8 116:21 117:19 118:16</p> <p>synchronizes 116:19</p> <p>synchronizing 118:4,8</p> <p>syncing 116:12,16</p> <p>synonymous 247:25 248:5</p> <p>system 79:24 98:21 98:23 99:23,25 101:19,24 102:7,10 102:15 149:6 211:5 215:20 218:6,12,16 218:20 219:18,24 219:25 220:3,9,11 220:19,21,22 222:16 238:17 239:21 240:10 241:7,16 242:4 246:7,9,14,17 247:5 248:6 250:25 251:20</p>	<p>t</p> <p>t 166:20,22 168:14 169:7,11,15 170:19 170:20 171:17,17 194:2 253:2,2</p> <p>table 91:22 92:7 93:16</p> <p>take 7:11 37:10 82:12 86:17 103:20 104:9,10 127:20 136:16,21 164:18 193:8,8 234:13 245:23 247:6</p> <p>taken 82:15 136:25 142:17 147:5 155:15 234:18 253:13</p> <p>talk 19:10 21:7 33:25 60:21 61:2 65:23 75:22 76:3 104:21 119:13 121:2 130:2 143:17 145:3,11 181:18 189:6,8 195:21 220:20 221:13 225:18</p> <p>talked 14:23 26:24 56:19 103:12 141:20 148:3 150:2 176:7 185:25 219:3 219:5 230:11 248:7 249:25 250:19</p> <p>talking 7:17 14:8 15:25 16:6 17:16 18:16 20:15 23:2 31:23 32:23 37:18 51:4 54:17 60:7 63:21 68:3,4 72:4 81:11,12,13 86:7,9 87:14 88:9,16 107:4 112:8 117:3 124:5 131:2 134:11 157:21 159:21 160:17 171:25</p>	<p>181:10,16 186:18 191:4 197:9 198:9 201:9 202:7 203:6 203:25 204:2 208:6 216:6,9 219:17 223:4 225:19 230:15 236:16 239:15,22 243:4,12 249:22</p> <p>tape 3:10 44:21 82:21 137:2 194:4</p> <p>task 187:11 223:19</p> <p>tasked 183:15</p> <p>team 21:18 33:6 34:9 37:13 40:17 41:24 43:6,15 52:2 52:22 53:12 72:18 89:23 124:24 125:5 126:7 136:7 137:8,8 137:12</p> <p>technical 48:13 49:6</p> <p>tell 9:15 33:10 54:18 55:19 62:16 84:11 86:18 96:17 129:5,5 129:10,24 156:25 159:20 163:12 183:14 204:20 208:20 209:24 214:16 232:13 240:23 243:22</p> <p>telling 34:20 182:19</p> <p>tells 80:22 145:10 148:16,21 156:16 191:20</p> <p>template 212:15 213:4 214:24</p> <p>tens 72:5</p> <p>term 22:22 45:19 46:7 48:11 111:15 236:23</p> <p>terms 22:18 29:2 30:10 34:21 35:3 76:19 92:16 102:6 112:11 113:6 114:20 116:11</p>
--	---	--	---

125:6 145:21 148:24 177:2 183:3 188:10 195:14,17 215:20 225:9 226:20 test 131:5,7 132:9 140:23 173:3,18,22 tested 169:9,21 testified 6:7 18:23 65:24 83:23 94:10 94:12,16 194:19 232:24 testify 153:3,9 testifying 66:3,6 232:19 testimony 6:14,15 9:9,12 22:5,20 26:11 66:5 115:11 132:23 169:20,22 207:20 224:2,9 253:11,12 testing 170:9 tests 169:12 thank 93:15 121:11 248:16 theoretically 106:25 112:8 135:23 136:4 139:2 thing 5:15 96:2 101:10,11 115:19 155:6 184:24 185:3 185:6 237:23 246:6 things 20:5 37:3 41:17 67:23 72:6 95:14,21 103:21 105:25 123:7 137:6 166:12 169:6 194:9 216:7 226:18 239:20 243:3 248:14 think 10:15 14:3,14 16:9,23 18:4,22,24 19:3,7 22:22 24:17 24:20 27:16,17 33:8 36:16 37:5 41:15	45:9 50:15,23 57:16 58:7 63:11 64:19 65:17,19 67:24 68:3 72:6 74:8 77:8,24 77:25 79:18 80:24 86:20 95:22 97:2 98:9 99:13,21 100:3 101:24 105:3 107:5 107:15,16,18,19 108:6 110:19 111:9 111:19,20,21 112:2 113:4 114:3,4,19,22 115:4,8,18 116:24 117:21 119:2,9,11 121:2 125:19 130:25 131:3,4,19 132:11,24 133:7,13 135:17,21,25 138:12,12,25 140:23 141:2,11,12 142:5,10 143:24 144:5,5,7 145:16 146:7,16 147:9 148:24 149:11 152:5,8 153:13 161:7,16 162:2 166:9 167:3 169:9 171:11 172:10 174:17 175:9,16 176:10,13,25 177:2 177:6 181:8 182:11 182:13 183:12 184:24 185:5,16,18 185:22,24 187:12 188:8,20 189:17 193:3,13 194:7,8 196:9,22 200:20 204:22 208:18 209:22 210:2 212:6 212:7,9,14 213:22 213:25 214:23 215:24,25 217:22 217:23,25 218:7 219:16 220:7 221:5 223:2,23 224:17	226:15 227:24 229:24 231:2 232:2 232:24 234:14 236:3,13 237:23 239:4,13,23 240:2 240:21 241:9,11,14 241:21 242:3,6,20 243:13,19,20 244:20,25 245:3,12 245:16,18,23 246:3 247:15,18 248:2 third 42:18 46:5 198:8 209:3 228:20 228:21 238:10,13 thomas 2:16 thorough 45:14 thoroughness 185:22 thought 81:12 180:7 200:17 216:7 thousand 161:23 235:25 236:3,20 thousands 72:6 threads 163:15 three 42:10 43:12 77:16 99:7 101:2 165:9 167:15 194:7 205:13 213:20 215:17 216:10 220:24 235:9 tiff 19:25 20:13,19 20:23 21:8,9,18,23 23:2 24:12 25:17 26:25 27:4,12 30:12 30:13 62:7 65:25 66:7 67:10,17 68:13 85:15 86:2,9,13 87:2,5 88:13,24 89:5,10,22 90:9 91:3,4,9,12 96:23 97:7 99:9 101:5 102:18,22 106:18 108:23 147:25 148:16,20 149:11 159:18,19,23,23,24	160:2,6,7,9,21 161:8,14,17,23 162:5,6,8,9 190:9 194:22 195:6 199:15,15 200:5 205:15,16 206:8 232:8,10 tightrope 151:18,22 till 188:19 time 10:19 24:20,21 26:9,15,22 37:8 58:23,24 59:17,20 60:2,4,24 61:4 78:18,22 79:12 86:17 97:2,4,20,23 97:25 98:11,14,17 98:19,22 99:17 100:4,8,14 101:12 102:8,14 109:4 112:11,18,22,25 113:15,19,24 114:8 114:12 115:10 116:13 147:16,22 156:5 165:19,21,21 166:2,4 170:17 171:23 172:2,17 173:19,25 174:5,6,6 174:9,11,12,13,14 174:18,24 175:5,6 175:13,18,25 176:18,24 177:2,4 178:20,24 179:7,8 179:17 180:21 186:3,5,6,7 187:16 187:22 194:3 200:7 210:5,7,12,19 211:4 211:19 212:16 213:7 214:18 216:3 218:14,19 220:12 220:22 222:3 226:16,18,19 227:3 227:22 229:5,11,13 238:12,16 239:19 241:15,22,25 244:10,17,21,22
--	---	--	---

245:14,14 246:9 251:7,10,14,17,19 251:24 252:13 time's 244:16 times 41:15 42:3,7 97:8 98:3,8,15 99:22 148:19 171:17 207:20 224:8 231:2 240:5 241:2 243:4 246:6 timewise 194:6 title 30:7 today 4:16 6:14,15 7:20 8:20 22:16 38:11 54:13 74:23 104:19 175:23,23 175:24 197:7 207:21 215:5 227:23 228:5 235:19 248:23 today's 9:5 toggle 242:2 told 170:4 tom 3:4 tomorrow 4:17,19 5:12 17:15 tool 131:17 133:5 tools 23:24 35:5 69:8 133:22 top 5:19 27:19 61:3 76:11,13 85:10 91:23 107:6 120:24 155:20 157:5,8,10 157:12,13,22 197:8 197:15 210:4 222:13,22 topic 46:24 83:5 137:7 192:25 197:5 216:13 239:2 topics 47:3 toshiba 197:10,21 198:9 total 10:8 223:7,14 trace 106:23 107:2	track 251:9 tracks 250:23 trading 57:6 training 3:20 8:25 20:7 238:25 transcribed 253:14 transcript 127:23 transcripts 9:6 transmitted 99:2 trash 117:4 tremendous 141:8 tremendously 142:4 trub 2:22 true 24:25 25:3 42:7 43:16 64:8,10,18,19 65:8,9 67:18 73:23 76:17 79:7,13,18 83:11 84:16 87:8 90:11 91:13,15 94:21 101:5 102:21 108:11 109:19 113:19 116:4,6,23 117:16 122:13,19 123:3 124:10 125:2 130:6 137:18 138:24 146:7,25 152:11,20 154:14 154:15 156:9 162:18 164:22 166:14,24 189:6 200:7,10 202:14 206:11 213:8,9,13 215:5,6,14 216:4 219:20 221:4,5,22 222:18 227:12 229:21 230:5 232:23 243:9 245:21 truecrypt 177:13 179:23 trust 179:3 try 15:4 18:11 131:12 132:11 140:24 142:11 146:4 150:19 173:2	177:7 182:9 221:15 trying 49:24 81:18 88:8 150:22 168:17 176:25 214:5,6 241:23 tuesday 166:11,18 169:6,10 213:11 turn 118:15 twice 41:24 twins 52:18,19 two 10:3 12:4,9,14 13:14,20 14:11 15:7 15:9,13,19 16:2 17:7,15,22 18:15 20:13 21:8,9,18 22:25 26:25 27:4 30:13 31:19 42:6,9 46:25 47:12 48:23 49:4,7 52:18 55:4 60:5,6,20 62:7,8,20 67:10 77:13 93:18 95:21 96:23 97:7 98:4 99:4,5,8,9 101:4 107:4,18 118:14,23 123:7 125:8 137:7 142:24 147:25 148:20 151:3 156:10,13 158:22 159:24 160:8 161:8,13 162:5,11,16,25 163:6,22,23 164:2 165:13 167:7,14 194:22 196:6,18 197:3,11,20,21,24 198:13 200:5,16 201:8 202:7 203:6 203:10 205:14 207:17 215:12 222:9 231:22 250:2 type 64:5 typed 63:21 149:22 152:25 153:22,23 154:4,9,13 212:20	types 71:17 74:5 214:17 typical 93:6 typically 21:3 34:24 35:4,7,9 37:24 typing 64:14,17
u			
u 166:20,22 168:14 169:7,11,15 170:19 170:20 171:17,17 228:12 u.s. 209:4 ultimate 142:16 247:14,17 ultimately 156:25 189:22 unable 116:8 uncomfortable 11:19 uncovered 110:23 237:14 underlies 37:5 underlying 212:15 229:12 underneath 158:4 underscore 201:23 underscores 201:15 understand 7:22,25 16:21 21:14 23:5 26:6,9 29:23,25 57:5 74:19 75:9 80:11 86:12 89:25 144:3 172:20 202:19 211:17 225:2 239:15 understanding 45:17 54:4 81:16 84:17 141:22 167:25 169:13,16 169:17 172:6 225:21 understood 7:21 184:15			

uniform 167:18 170:25 171:3 uniformly 171:23 unintentional 55:25 56:6 unintentionally 56:13,13,20 unique 6:23 233:2 233:11 unit 2:7 united 1:2 universal 165:19 173:25 174:12,14 174:24 175:5,13,18 175:25 176:24 179:8,17 180:21 university 43:21 unplug 251:8,15 unplugged 251:24 unquestionable 171:11 unrealistic 152:3 unredacted 5:22 unsigned 189:8,13 unsurprisingly 186:25 unusual 77:19 223:2 update 134:11,20 214:20 updated 239:20 241:16 upper 58:7,7 84:19 91:21 121:13 208:24 221:19 upstate 113:6 usage 134:14,16,17 135:7 usb 25:9 66:24 197:9,12,16,21 199:5 203:7,21 207:9 use 5:13 23:6 32:21 45:18 46:7 63:5 65:3 77:7 92:21 114:3,9 120:3,8,10	120:11,12,20 123:14 124:12 125:14 126:20 127:8 129:2 130:13 130:17 131:17 133:10 147:7 181:18,22,25 206:19 214:13,20 230:13 232:9 238:19,21 241:3 247:24 user 61:25 76:23 77:11 79:24 80:21 95:18,24 152:23 158:19 172:11 218:20 238:17 239:20 v vague 218:22 valuable 142:4 value 80:20 variation 75:20 variations 71:22 189:21 varies 44:2 variety 65:25 66:7 125:5 239:20 247:19 various 26:2 32:17 32:21,22 35:18 40:24 42:3 68:24 75:23 81:20 167:8 181:7,7 183:9 184:14 197:17 202:19 214:3,8 225:15 235:14,15 242:6 vary 9:22 116:13 117:21 189:18 229:11 vast 235:6,6,11 vera 76:16,19,24 77:2,12 152:19,23 158:19	vera's 77:6 verified 206:21 veritext 255:2 version 5:17,20,22 5:25 8:21 28:22,23 74:22,23,24,25 75:12 90:21 116:13 117:22,22,23 172:14 197:6 214:20 248:22 249:16,18,25 250:14,15 versioning 116:11 234:3 versions 74:18 75:7 133:23 173:3 189:9 189:14 190:5 195:8 195:22,23 196:6 214:3,8 215:4,9,18 215:19,23,25 216:8 216:9,21 217:8,20 217:25 221:17 233:20 247:12 250:7,9 versus 145:20 video 3:23 4:5 82:19 videographer 2:22 3:10,14,17,18 4:2 82:7,21 137:2 194:5 234:19 videoing 4:7 videotape 4:12 videotaped 1:17 3:16 view 133:3,5 135:8 174:19 217:7 viewed 131:16 229:8 vilan 2:22 virtual 228:7 254:16 virus 75:18 visit 113:25 visually 192:14 vpn 69:2,7 vs 1:7 255:5	w waded 216:13 walker 151:4,22 walking 151:3,11,18 wall 251:8,15 want 3:13 4:3 16:11 39:19 69:20 79:3 82:12 84:24 92:5 93:11,11 114:17 137:5 185:17 188:14 193:11,16 207:24 214:22 219:13,22 224:15 234:13 236:8 244:21 wanted 194:10 warren 2:6 way 21:10 22:4 26:19 29:19 34:23 35:12 57:2 62:6 66:10 67:9 68:12,15 68:17 75:3 87:7 90:20 92:22 94:20 94:22 95:17 102:16 103:4,5,11 106:15 111:6 116:20 120:14,17 132:22 135:20 136:5,15 146:8 147:11 150:19 166:16,17 166:18 167:13,18 169:10,14 170:17 171:12,14 172:7 173:15 181:25 196:16 197:3 201:8 209:7,17 219:4 220:4,7,14,16 222:20 230:20 231:5 235:3 240:12 240:22 241:8,17 248:21 249:12 253:18 ways 25:2 64:12,21 64:21 65:25 66:7,15
--	--	---	--

67:6,9 68:20 69:3,4 69:6 117:11 132:21 133:16 220:9 225:15 we've 18:5 38:15 88:20 107:3 148:3 169:9,9 174:10 177:15 web 112:11 116:3,9 117:15,19 118:4,8 118:17,19 168:12 172:24 173:19 192:7 webmail 118:2,23 119:5,10 121:3 168:7,23 171:6,9 172:18 173:20 weeks 177:10 188:23,23 went 24:5 26:2 35:7 56:11 69:6 119:9 151:6 154:21 163:2 174:5 223:8 western 1:3 108:3,4 108:12,17 whatsoever 40:7 128:18 143:7 232:3 whereof 253:20 whichever 39:4 207:14 white 49:2 50:7,16 51:5 willy 171:2 windows 218:5,9 winklevoss 52:19,23 wire 151:3,4,11 witness 3:11 6:5 7:12 16:9 28:24 55:18 88:7 100:11 100:12 127:19 181:2 182:3 229:19 253:10,13,20 254:3 witnesses 9:7 woman 151:25	word 21:2 57:11,13 57:14 63:8,20 74:20 75:12 157:18 164:24 165:3,7,9 166:11 172:14,16 173:3,21 178:4,5 207:14 211:8,21 212:10,12 216:10 217:23 219:21 225:22 227:4 228:25 233:18,21 234:3 243:23 247:24 word's 172:23 words 28:17 92:13 95:10 170:18 175:9 186:8 189:20 219:21 226:15 250:9 work 9:16 10:10 12:12 13:8,10 18:7 18:23,25 33:20 34:6 37:6 38:4 84:7 105:6 114:25 115:2 132:16 139:4 146:24 164:5,6 170:17 181:21 182:22 183:15 185:13 189:9,24 190:5 191:5,12,17 214:23 216:7 217:11 221:18 223:8 225:6,13 234:6 235:2,6,11,11 236:11,15 242:18 247:16 worked 22:8,10,11 22:13 124:24 131:7 132:10 169:25 170:4,10 worker 230:4 working 9:23 141:9 147:7 178:19,23 230:19,23 233:13	works 75:2 170:15 world 31:24 57:3 69:13 104:6,19 117:14 152:2 worth 41:19 141:7 wrap 194:14 234:15 248:13 write 134:25 writing 214:19 written 18:15 40:23 41:3 214:14 216:12 239:8 240:4 241:5 wrong 47:11 63:8 107:10 121:17 176:18,23 177:4 179:9,16 197:25 226:7 228:3,3 wrote 156:17 157:2 230:5	z zone 58:23 174:18 176:18 177:5 212:16 213:7 226:16,19 229:11 244:10,22,22 245:14 251:14 zones 177:2 zuckerberg 1:8 15:11 16:5 17:18 18:13,22 19:5 32:15 32:19 52:4,14 53:7 53:19 54:5 59:14 80:3,6,10,16 81:3 81:13 83:9 102:17 102:24 103:5 105:17 106:2,5,13 124:16,19 125:7 126:9 136:8 137:9 142:14 145:13 146:3,17 147:12,14 164:11,12,17,22 182:14,16 183:8 184:2 185:7 186:16 187:7,16,21 188:12 188:19 190:19,25 191:18,22,25 192:4 192:8 199:14 203:6 205:15,15 206:4,8 206:14 212:13 225:24 231:10,16 231:24 255:5 zuckerberg's 32:12 33:5 41:25 42:4,13 42:15,25 43:8 44:8 44:12,18 45:5 52:7 53:11 78:25 79:15 81:25 126:7 136:7 147:21 183:17 184:9 185:14 188:24
---	---	--	---