

TESTIMONY OF David J. Kappos
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IBM Corporation
Before the
United States Senate Committee on the Judiciary
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Mr. Chairman, Ranking Member Specter, and members of the Committee. My name is David J. Kappos and I am Vice President and Assistant General Counsel for Intellectual Property Law and Strategy for the IBM Corporation. I appreciate the opportunity to offer IBM's views on patent law reform and the actions that this Committee should take to preserve America's innovation leadership and competitiveness in the world, and to encourage investment to produce economic growth and create jobs.

IBM supports S. 515, the Patent Reform Act of 2009, and urges the Committee to pass this important piece of legislation to create a contemporary U.S. patent system. The last half-century has been a time of unprecedented technological change. However, during this same period, the laws governing our U.S. patent system have not been significantly updated to reflect these changes. Innovation today is characterized by diverse forms of collaboration, multidisciplinary problem-solving, interconnected technologies, and complex products incorporating multiple inventions. The patent system must adapt to these changes.

SUMMARY

IBM is committed to ensuring that our patent system is robust and that the United States economy is strong. We have been the leading assignee of issued patents in the United States for 16 consecutive years, and we earn about \$1 billion annually in intellectual property related-income. IBM also invests more than \$6 billion a year in research and development, and earns about \$100 billion annually providing products and services. IBM is therefore uniquely positioned to promote a balanced patent system that will benefit patentees, producers, and the public.

The patent system must balance the interests of all industries. IBM is not a member of any of the coalitions that have formed to advocate on behalf of particular industries. Rather, IBM believes that these interests are reconcilable and meaningful compromise can be achieved so that the patent system will meet the

needs of innovators in all industries, and most importantly, serve the best interests of the American public.

The nature of innovation has changed. Today, we benefit from inventions made possible through highly collaborative and interconnected technologies. Many of the products that consumers demand are complex and include contributions from multiple innovators that incorporate hundreds if not thousands of patented inventions. At the same time, many new innovations require investments of unprecedented size to achieve a single new product protected by a single patent. For the United States to remain competitive our patent system must accommodate all of these innovation models. Yet our patent laws have not been significantly updated for over 50 years. IBM believes that enactment of S. 515 is necessary for our nation to remain intellectually and economically competitive.

While progress has been made in recent years through judicial reform in areas such as obviousness, injunctions, willfulness, and most recently venue in patent litigation, much remains to be done to restore balance to our patent system. The problem of poor quality patents persists. Uncertain patent rights create speculation and lead to excessive litigation.

IBM supports S. 515's approach to improving patent quality, including "first window" post grant review, enhanced inter partes reexamination, and pre-issuance submission of information. These reforms reduce the impact of poor quality patents by making it easier to promptly challenge the validity of a patent without resorting to litigation, and without subjecting patentees to an undue period of uncertainty.

A particular point of contention has been and remains the appropriate standard for reasonable royalty damages determinations. As with other issues with competing interests that have been resolved, IBM believes that this issue is reconcilable and a balanced solution can be achieved.

In IBM's experience, the current legal standard does not provide the certainty needed to enable modern business to operate effectively. As a result, the precious time of skilled scientists and engineers is too often spent defending against costly and time-consuming litigation, instead of creating innovations that drive economic growth.

In reforming the law in this area, we must nevertheless be mindful of the fundamental importance of ensuring that patentees are appropriately compensated, or the patent system will fail to provide the incentive innovators require.

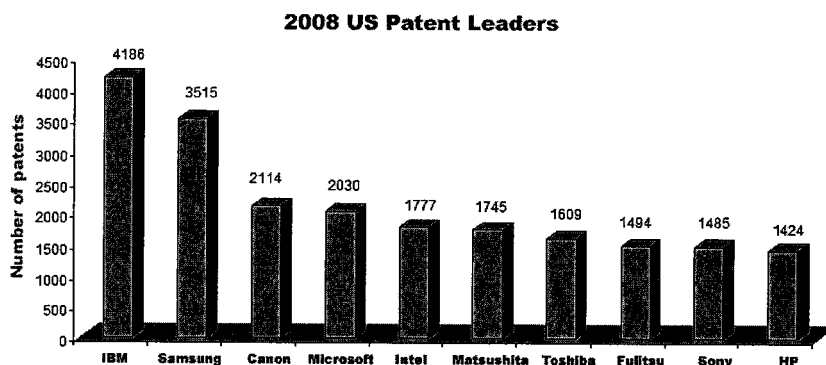
IBM believes that the Supreme Court provided critical guidance in its recent, unanimous *Quanta* decision. In addressing the related issue of patent exhaustion, the Court focused on the essential features of the invention to determine if the patentee had received full compensation. An approach that uses the *Quanta* standard as a starting point will provide the guidance needed to properly compensate the inventor by focusing the damages inquiry appropriately.

IBM believes that by improving patent quality and reducing wasteful patent litigation, S. 515 will remove roadblocks to the development and implementation of new innovations, spurring economic growth. For the United States to maintain innovation leadership, our patent system must be in the future what it has been in the past – the best in the world. The need to act is urgent, the goal is achievable, and failure to act will harm our nation’s economic interests. We urge enactment of the Patent Reform Act of 2009.

IBM IS A TECHNOLOGY LEADER

IBM is an innovation company and inventions are critical to our success. In 2008, for the 16th consecutive year, IBM was the recipient of more U.S. patents than any other assignee. IBM received over 4,000 U.S. patents, the first company ever to do so in a single year. We have a deep appreciation of, and commitment to, technology development and scientific pursuits. During the company’s nearly 100-year history, its employees have included five Nobel laureates, five National Medal of Science recipients, and seven winners of the National Medal of Technology. IBM has invented industries such as hard disk drives, relational databases, and RISC computers.

IBM Patent Leadership



- IBM ranked #1 in U.S. patents for 16th consecutive year.
- Over 6,000 IBM inventors were responsible for the 4,186 patents received by IBM in 2008. They reside in 44 different states and territories in the U.S. and 27 other countries globally.
- More than 40,000 patents in IBM's global patent portfolio.

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IBM employs approximately 120,000 people in the U.S., located in each of the 50 states and the District of Columbia. Their jobs depend on IBM's success in the global economy. Most of these are high-skill, high-wage jobs, including thousands of technical positions in software engineering, hardware development, technical services, consulting, research and manufacturing. The majority of IBM's worldwide jobs in hardware development, software engineering and research are in the U.S.

In addition to developing, manufacturing and delivering information technology, we focus on delivering innovative solutions to IBM clients. Nearly half of IBM's U.S. employees work in our services business, including thousands of consultants and technical experts who serve clients operating around the world. Our clients want an innovation partner who can help them apply and integrate technology in ways that deliver new and lasting value. IBM is at the forefront of innovation in new products and services, and entirely new business models.

The United States is IBM's largest market in terms of revenue, and IBM invests heavily here. For example, in 2007 over 75% of IBM's \$6.2 billion in research and development (R&D) spending was invested in the U.S. Of the over 39,000 U.S. patents issued to IBM between 1993 and 2007, 90% were based on inventions made in the U.S. This R&D investment has made it possible for IBM to generate about \$1 billion in IP-related income annually and has enabled IBM to operate a profitable global business with annual revenue exceeding \$100 billion.

THE NATURE OF INNOVATION HAS CHANGED

IBM strives to maintain and foster an innovation culture not only to meet our clients' demands, but also to remain competitive and thereby benefit our shareholders, our employees, and the communities we serve. Demands on our business and the businesses of our clients, partners and competitors are driven by new global marketplace realities. If America is to remain competitive, create jobs, and continue to be one of the most innovative nations on earth, it must adapt to these new realities.

In the Industrial Age, innovation primarily was the result of work by individuals or small groups within an enterprise. Today, interconnected technologies have created an environment that allows groups of people to innovate together across enterprises and national boundaries. This rich environment enables the development of multifunction products and services, and creates efficiencies and synergies through the contributions of many different creative sources. Many of the products that consumers demand are complex, include contributions from multiple innovators, and incorporate hundreds if not thousands of patented inventions. We benefit from inventions that are made possible through this "collaborative" innovation.

Incorporating innovation from multiple sources is enabled by: (1) open innovation environments; (2) technology standards, where innovators work collaboratively to create a common platform for product-level competition; and (3) licensing and cross-licensing of technology to gain access to others' innovations. The diversity and interconnectedness of modern innovation models increases the need for predictability and clarity in determining the valid scope of patent rights, as well as valuing them for licensing purposes. For example, a licensing agreement that directly affects two parties is likely to indirectly affect many more. As a result, there is a heightened sensitivity to uncertainty. Such uncertainty in this context will increase transaction costs and make it increasingly difficult for innovators and implementers to trade the intellectual property (IP) rights needed to bring innovative products and services to consumers.

Collaborative innovation through open platforms and standards has blossomed across numerous industries in recent years. Such development occurs in diverse ways. It may be horizontal -- in which multifunction products such as computer systems incorporate innovative features from multiple sources -- or vertical, in which single function products such as pharmaceuticals reflect

inventions from multiple “upstream” and “downstream” participants in the development “chain”.¹

So, what role should U.S. patent policy play in making sure that we continue to be a nation of innovators? How should the patent system help us to capture these technological developments and translate them into differentiators for American prosperity and drivers of growth?

THE U.S. PATENT SYSTEM HAS NOT KEPT PACE WITH THE CHANGING NATURE OF INNOVATION

The U.S. patent system is widely acknowledged as underpinning America’s leadership in innovation and IBM strongly shares this view.

Patents play as important a role for IBM as they do for any other U.S. company. They provide an incentive to innovate by protecting our inventions while providing us the freedom of action to bring new products and services to market and partner with our clients to meet their needs. Patents spur successive innovation because patentees must disclose their inventions to the public, enabling others to build upon these innovations. As America competes in a global economy, we must rely on innovation for competitive advantage. Ensuring that our patent system properly promotes innovation is therefore central to America’s ability to compete and to produce economic growth and jobs.

Unfortunately, we continue to see developments that threaten the ability of the U.S. patent system to keep pace with and respond to changes in the nature of innovation. The U.S. patent system must be properly positioned to help our country maintain and grow its innovation leadership.

Two significant developments arise from the failure of our patent system to adapt: the granting of low quality patents, and the adverse effects of excessive patent litigation.

Low Quality Patents: High-quality patents that have been properly prepared and examined to ensure that they meet all of the legal and policy objectives of the patent system increase certainty around intellectual property rights, reduce contention and free resources to focus on innovation. We believe the

¹ *Rising in the East*, The Economist, January 3, 2009, at 47. Citing as an example the Apple iPhone: “Apple’s contribution is the design and software – and importantly, integrating the innovations of others.” See also Carl Shapiro and Mark Lemley, *Patent Holdup and Royalty Stacking*, 85 Texas Law Review 1991 (2007).

quality of patents issued in the U.S. has diminished, and that the substantial improvements needed to address this quality crisis are not possible without Congressional action.

Patent professionals are concerned about patent quality and are not confident that matters will improve. In August 2005, the Intellectual Property Owners Association (IPO) conducted a survey of its member corporate patent professionals regarding their views on U.S. patent quality. The findings are revealing. Over half (51.3%) said they rate the quality of patents in the U.S. as poor or less than satisfactory. This conclusion did not significantly vary based on industry. When asked whether they thought patent quality would decline, improve, or stay the same over the next three years, 28.7% responded that they thought patent quality would worsen, and 51.2% thought things would stay the same. Responses varied some by industry, but the most noticeable differences were in responses by smaller companies (under \$1 billion in revenue) and by companies in the computer, electronics, and software industry, where the percentage of respondents expecting a decline in patent quality was nearly twice the average. Forty-four percent of smaller company respondents thought that patent quality would get worse and 40% of the computer, electronics, and software industry respondents thought that quality would worsen.²

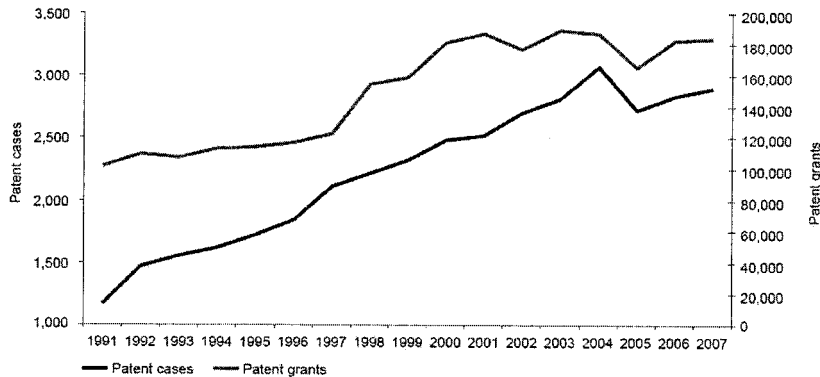
The U.S. Patent and Trademark Office (USPTO) has not been able to keep pace with the avalanche of applications it has received in recent years. In fiscal year 2007, the USPTO received nearly 485,000 patent applications which represented a seven percent increase over the previous year. The backlog of applications is growing. The USPTO has been hiring more examiners to reduce the backlog. But with such a significant increase in the number and complexity of applications, it is difficult to assure high quality.

Excessive Patent Litigation: Patent litigation has increased significantly for more than a decade, in part driven by low patent quality that creates uncertainty around intellectual property rights, spawning increased speculation. This excessive litigation threatens to sap America's innovative capacity and its ability to compete in the world if left unaddressed.

² See IPO Survey: Corporate Patent Quality Perceptions in the U.S. 2, 4-5 (Sep. 20, 2005).



Rise in Patent Litigation



Years are based on September year-end.

Sources: U.S. Patent and Trademark Office Performance and Accountability Report and U.S. Courts' Judicial Facts and Figures.

From "A Closer Look*: 2008 Patent Litigation Study: Damages awards, success rates and time-to-trial," PricewaterhouseCoopers (2008).



Chart from "A Closer Look*: 2008 Patent Litigation Study: Damages awards, success rates and time-to-trial," PricewaterhouseCoopers (2008).

The number of patent infringement suits filed annually in the U.S. nearly doubled in the ten years ending in 2004, going from 1,617 in 1994 to 3,075 in 2004.³ There were 2,830 cases filed in 2006.⁴ Patent litigation has remained at this elevated level with some fluctuations.⁵ The National Academy of Sciences reported in its 2004 study on improving the U.S. patent system that the number of patent infringement lawsuits settled or disposed of in federal court doubled between 1996 and 2002 from 1,200 to 2,400 cases per year.⁶ In 2007, nearly 2,800 U.S. district court patent cases were terminated, over 3,600 cases remained pending, and nearly 2,900 new cases were filed.⁷ From 2006 to 2007, the number

³ See "2007 Patent and Trademark Damages Study*," PWC Advisory: Crisis Management 8 (2007), available at [http://www.pwc.com/extweb/service.nsf/docid/3ca24a75615f03948025711e004b69a0/\\$file/2007_Patent_Study.pdf](http://www.pwc.com/extweb/service.nsf/docid/3ca24a75615f03948025711e004b69a0/$file/2007_Patent_Study.pdf); see also 2007 Annual Report of the Director: Judicial Business of the United States Courts 150 (U.S. Government Printing Office, 2008).

⁴ J. Shawn McGrath and Kathleen M. Kedrowski, *Trends in Patent Damages 1* (IP Remedies, American Bar Association Section of Litigation website, Nov. 2007); available at <http://www.abanet.org/litigation/committees/intellectual/articles.html>

⁵ See Presentation by Professor Paul M. Janicke, *Patent Damages February 2009*, during the Federal Trade Commission "The Evolving IP Marketplace" Workshop panel discussion on February 11, 2009 ("2700 PATENT SUITS FILED PER YEAR"); available at <http://www.ftc.gov/bc/workshops/ipmarketplace/>

⁶ A PATENT SYSTEM FOR THE 21ST CENTURY 32 (National Academies Press 2004).

⁷ 2007 Annual Report of the Director: Judicial Business of the United States Courts 207 (U.S. Government Printing Office, 2008). Data covers the 12-month period ending September 30, 2007.

of U.S. district court patent cases pending three years or more increased by over 15% from 353 to 408.⁸

Patent litigation, according to the Phoenix Center for Advanced Legal and Economic Public Policy Studies, costs the economy \$4.5 billion annually.⁹ In a survey conducted in 2007, the American Intellectual Property Law Association found that the median cost to a party in bringing a patent infringement case to trial verdict with less than \$1 million at stake was about \$600,000 and in a case with more than \$25 million at stake, the median cost was \$5 million for each side.¹⁰ These figures do not include private settlements in the form of negotiated license agreements to avoid litigation. In its August 2005 patent quality survey, IPO also asked its member company respondents if, in the next 3 years, they expect the resources spent on patent litigation to increase, decrease, or stay the same. Almost 74% said they expect to spend more resources on patent litigation.¹¹

This high level of patent litigation, particularly in the IT industry, shows that valuation issues are not being resolved in negotiation. IBM believes that this indicates both that patents of uncertain scope and validity are being enforced, and reasonable royalty damages determinations are not providing the needed guidance for the IP licensing market.

As a matter of patent policy, the requirements for patentability and patent validity should be clear and predictable. As the U.S. Supreme Court in *Festo* explained, “[t]he monopoly [conferred by a patent] is a property right; and like any property right, its boundaries should be clear.”¹² Otherwise, the public cannot discern the scope of the patent until after all infringement litigation has concluded and will not invest in innovative products that might potentially fall within the patent’s scope.¹³

Court awarded reasonable royalty determinations provide the backdrop against which all patent settlements and patent licensing activities are measured. Collectively, these settlements and licenses define an IP market in which developers and implementers of IP come together to trade the rights necessary to

⁸ *Id.* at 64.

⁹ Ford et al. *Quantifying the Cost of Substandard Patents: Some Preliminary Evidence*, PHOENIX CENTER POLICY PAPER SERIES 1, 3, 29 (Phoenix Center for Advanced Legal and Economic Public Policy Studies, Sep. 2007).

¹⁰ REPORT OF THE ECONOMIC SURVEY 2007 25 (American Intellectual Property Law Association, 2007)

¹¹ See IPO Survey: Corporate Patent Quality Perceptions in the U.S. 6 (Sep. 20, 2005).

¹² *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 730 (2002).

¹³ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150 (1989).

provide goods and services. This market must function efficiently, minimizing market friction and transaction costs that are ultimately passed along to consumers. Thus, it is paramount that royalties fairly compensate the patentee and fairly charge the licensee. Damages awards that reflect the economic value of an innovation appropriately balance interests and act as essential references for IP market participants, since patentees and licensees are respectively neither overcompensated/overcharged nor under-compensated/undercharged. IBM believes that an efficient IP market is important for promoting innovation, including for the development of complex products incorporating multiple inventions¹⁴ that have become commonplace; and that an efficient IP market rests heavily on the ability to predict with a high degree of certainty the legal remedies available for patent infringement.¹⁵

¹⁴ While multi-function products tend to have high visibility in the IT sector, there is a similar issue in biotechnology due to the multiparty nature of research. Some entities such as universities perform fundamental or “upstream” innovation while other “downstream” entities productize. See Michael Heller and Rebecca Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, Science, New Series, Vol. 280, No. 5364 (May 1, 1998), pp. 698-701.

¹⁵ The U.S. economy as a whole will benefit from an efficient IP market where certainty in damages determinations ensures efficient access to innovation, reduces transaction costs, and avoids unwarranted speculation. To offer the products that consumers desire and to license the related IP, providers need an efficient market in which IP rights can be readily valued and exchanged. Where there is divergence between licensor’s and licensee’s views regarding fair and reasonable licensing fees, transaction costs rise and the market becomes inefficient. Multiple parties make the problem more complex and increase sensitivity since more parties must agree regarding IP valuation. Without certainty, there is also a heightened risk of speculation. For example, parties may be encouraged to enforce patents for purposes of extracting high royalties from the producers of goods and services, while producers may be encouraged to hold out against taking licenses for purposes of extracting access to innovations at low royalty rates. The inability to agree on a royalty fee prevents innovators from being compensated, prevents products and services from reaching the market, and increases the incidence of costly litigation.

As products have become increasingly complex and integrated, the licensing necessary for the IP market to function has become more complicated. Companies need to consider not only their own internally developed technology and IP, but also the technology and IP of others.¹⁵ The oft-cited example of the computer, or even the CPU itself, containing hundreds if not thousands of patented innovations is illustrative. Similarly, a pharmaceutical product may incorporate the “fundamental” research of a university combined with the targeted product development of a pharmaceutical firm.¹⁵ The typical licensee/product-seller must consider all the fees to be paid to all patentees in order to make and sell its product. And the licensor/innovator must consider the role its innovation plays in the applicable product.

When a patented invention is included in a product of any kind, including in a complex multifunction product, its economic value should be determined based on the substance of the invention. Economic value should not be affected by the inclusion or omission of background or contextual elements added to the patent’s claims. Nor as a general proposition should economic value be affected by the aggregate cost of a complex multifunction product in which the invention is incorporated. This substance-based approach is fair to both the licensor and the licensee, avoiding both under-compensation and over-compensation. It also enhances predictability and certainty by causing all parties to focus on the inherent value of the patented invention. The public benefits when innovators/licensors and producers/licensees are able to readily come to terms regarding an invention’s economic value.

Market complexity creates significant challenges for determining royalty fees. As such, licensors and licensees will continue to be influenced in their negotiations by the legal standard for reasonable royalty damages and its application. This is not surprising – both parties understand that reasonable royalty damages is the metric by which the licensing fee should be judged since it is the measure for damages if they are forced to litigate. Given the challenging developments in the market and the resulting challenges in licensing, it is of paramount importance that the law of damages provides clear guidance.

As U.S. businesses, governments, and communities become increasingly interdependent, our nation's competitiveness will be even more susceptible to weaknesses in our country's patent system. The Congress must take action to reshape U.S. patent law to be responsive to the fundamental economic and technological shifts taking place. The goal of reforming U.S. patent law should be to preserve U.S. leadership in innovative capacity, enabling U.S. businesses to capitalize on developments in technology, infrastructure and business organization and making them differentiators for American prosperity.

THE PATENT REFORM LEGISLATION WILL BRING THE CHANGES NEEDED TO SPUR INNOVATION

IBM believes both patent quality problems and excessive litigation must be addressed, and S. 515 does that effectively. Although there are many provisions in the bill that enable a contemporary patent system, IBM's testimony focuses on the provisions in the legislation that address patent quality and reform reasonable royalty damages.

Improving Patent Quality: There are two crucial reforms in the legislation that should be implemented to improve patent quality. Both of these reforms are designed to open up agency patentability determinations to the public to encourage the public to come forward with relevant information not previously discovered or disclosed. First, the bill creates the opportunity for third parties to submit prior art to the USPTO during the patent prosecution process with commentary on how that prior art is relevant to the application under consideration. This important and broadly supported change will be highly effective in raising patent quality, particularly because it takes advantage of the fundamental shift toward collaborative innovation. More and more collaborative communities are thriving today and their collective knowledge can be harnessed to bring forward information, especially prior art, relevant to the examination process.

Second, IBM believes it is vitally important to have an administrative proceeding to allow the public to bring forward relevant information, post-issuance, about whether a patent was properly issued. This will increase the quality of patents and will provide a low cost alternative to litigation. The solution in the bill represents a reasonable compromise between the need to provide a meaningful way to bring forward relevant information and concerns that the administrative proceeding will be used to harass the patentee. The bill provides the ability to challenge the patent in a post-grant-review proceeding for one year following issuance based on a broad array of grounds related to patentability. After one year, the public can bring forward relevant information through an "improved" version of the existing inter partes reexamination administrative proceeding. The improved inter partes reexamination proceeding will no longer prevent a challenger from going to court at a later time on an issue that was not raised in the proceeding. Further, in addition to patents and printed publications, a challenger may submit evidence that the claimed invention was in public use or on sale in the U.S. more than one year prior to the application. This is evidence that the examiner could have used to reject the patent application during prosecution, but which a third party currently can only use to challenge the validity of an issued patent by going to court.

Maintaining a meaningful ability to challenge low quality patents administratively is important to strengthening and preserving the integrity of the U.S. patent system. For the IT industry especially, being able to bring forward relevant evidence more than a year after issuance of the patent is necessary because it is difficult, if not impossible, to watch for all the potentially applicable patents that the USPTO issues. There can be many hundreds if not thousands of patents in an IT product. It is not uncommon to be unaware of a patent until a letter is received claiming that payment is due because the patent covers the IT product.

Both of these proposed reforms will help to minimize patents being granted on inventions that are not new or are obvious.

Reforming “reasonable royalty” damages: The reasonable royalty damages provision in S. 515 balances the varying needs of U.S. industries and businesses and IBM views this provision as a compromise. This provision allows the court to accommodate varying business models by deciding which of three listed methods should be used by the court and the jury to determine damages for patent infringement. We recognize that this provision has generated concern in the past. As a result, we discuss below an alternative which we believe will adequately

address the full range of how inventions are used in products and services across industries and will maximize the chance that a "reasonable" royalty is granted in every case.

As discussed above, IBM believes that IP market efficiency can be ensured by focusing the damages calculation on the economic value of the essential features of the subject invention. In particular, IBM recommends to the Committee that the legislation ensure this focus by: (1) incorporating *Quanta*'s "essential features" concept into the damages determination; (2) ensuring district courts increase precision in Entire Market Value Rule ("EMVR") and Convoyed Sales determinations; and (3) requiring district courts to better exercise their gatekeeper powers to cause rigorous expert analysis and review of damages evidence and reasonable royalty determinations. IBM believes these recommendations are representative of best practices that are supported by Supreme Court and Federal Circuit law.

Incorporate *Quanta* "Essential Features" Standard into Damages Determination

Application by analogy of the Supreme Court's formulation of the "essential features" of a patented invention in the *Quanta* case to damages determinations will focus the damages determination on the value of what the inventor actually invented. In the unanimous *Quanta* decision, the Supreme Court held that if a patentee sells (or licenses another to sell) a product that includes all the essential features of a patented invention,¹⁶ then the patent rights are "exhausted," meaning that the patent can no longer be asserted against downstream buyers of that product. The underlying theory behind the patent exhaustion rule is that "in such a transaction, the patentee has bargained for, and received, an amount equal to the full value of the goods."¹⁷ In other words, the patentee received full compensation when the product was sold, and is not entitled to collect an additional royalty.¹⁸ The connection between *Quanta* and the law of exhaustion on the one hand, and the determination of patent damages on the other, is the Court's renewed focus on the substance of the invention in determining the proper scope of patent protection.

¹⁶ The "essential features" exclude "common processes" or "standard parts," even if included in the claims. See *Quanta*, 128 S.Ct. at 2120. Determining what constitutes the "invention" is of course fundamental to the determination of damages under the patent statute, which requires that damages are no "less than a reasonable royalty for the use made of the invention by the infringer." 35 U.S.C. Sec. 284.

¹⁷ *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1426 (Fed. Cir. 1997); see also *Adams v. Burke*, 84 U.S. (17 Wall.) 453, 456-57 (1874); *Keeler v. Standard Folding Bed Co.*, 157 U.S. 659, 663-64 (1895).

¹⁸ See *PSC v. Symbol Techs.*, 26 F. Supp. 2d 505, 510 (W.D.N.Y. 1998) ("The purpose of the exhaustion doctrine is to 'prevent[] patentees from extracting double recoveries for an invention" *Cyrix Corp v. Intel Corp.*, 846 F. Supp. 522, 539 (E.D. Tex.), aff'd 42 F.3d 1411 (Fed. Cir. 1994).")

For complex products incorporating many inventions and unpatented elements, focus on the “essential features” results in fair compensation for the patentee. It does not overcompensate by including the value contributed by others, nor does it under-compensate by excluding the value provided by the patented invention. The standard is flexible and applies fairly to all inventions. Where, for example, the invention is in a combination of elements itself, the Court in *Quanta* recognized that the elements of the combination could not be evaluated separately or the invention’s “essential features” would be lost.¹⁹

Focusing on the invention’s essential features also assists fact-finders in determining equitable compensation. Inventors receive the same value whether or not background or contextual elements are added to their claims. An invention of significant scope and value should be entitled to a large royalty regardless of whether it is claimed precisely or includes additional elements that are not essential to the invention. Likewise, a minor improvement should be entitled to a limited royalty regardless of whether the claim includes elements that are unrelated to patentability.²⁰ Basing reasonable royalty damages on the economic value of the essential features of the invention should thus properly compensate the inventor by focusing the inquiry on the invention itself. Furthermore, as the essential features are determined objectively through examination of the public record of the patent file history, this approach will increase the predictability and certainty necessary for the functioning of an efficient IP market.²¹

There Must Be More Precision in EMVR Analysis and Convoyed Sales

Due to the increasing complexity of products, including systems incorporating many individual and grouped components, application of the EMVR and the related Convoyed Sales doctrine have become widespread. In these situations, for convenience and simplicity, damages analysis tends to emphasize the product environment in which a “component of a component” within a

¹⁹ See *Quanta*, 128 S.Ct. at 2121 (2008) (“Aro’s warning that no element can be viewed as central to or equivalent to the invention is specific to the context in which the combination itself is the only inventive aspect of the patent.”). The Court also held that the patent exhaustion doctrine applies to process claims. *Id.* at 2117.

²⁰ In this context, a “significant” invention, for the purposes of calculating damages, is one of significant economic value, and a “minor improvement” is similarly an invention of limited economic value. An invention may be significant technologically but limited in value, or limited in technological impact but significant in value. In either case, the substance of the invention must be determined first, and then its value can be assessed.

²¹ In proposing incorporation of the *Quanta* standard in determining reasonable royalties, we do not suggest that this is the end of the inquiry. To the contrary, much of the existing damages jurisprudence contains helpful constructs and models for assisting in the determination of an appropriate royalty. We propose simply that the inquiry should begin with the determination of the essential features of the invention and that this will provide an objective focus for the full analysis of compensatory damages.

component²² is placed, rather than the more precise and relevant issue of whether the infringing product corresponds closely to the invention. In a recent case covering a product of this type, Federal Circuit Judge Rader, sitting by designation in the District Court, recognized the significant burden of proof that application of the EMVR should require:

Moreover, neither Cornell nor Dr. Stewart has offered sufficient economic proof that the component of a component of a part of the server and workstation systems drove demand for the entire server and workstation products and entitles Cornell to damages on sales of Hewlett-Packard's entire servers and workstations.²³

It is important to encourage widespread and vigorous application of this evidentiary threshold so that the “reach” of patent protection afforded an invention does not extend beyond the actual invention and onto unrelated components or features of a product incorporating the invention, unless the invention is in fact “the basis for customer demand” for the entire product that nevertheless includes other functions or features.

Finally, as IBM understands application of the EMVR, it may be based on demand driven by the claimed invention as expressed by all of its respective limitations.²⁴ IBM suggests that, in an environment characterized by the proliferation of complex products incorporating multiple inventions, the fairest application of the law would require evaluating whether the demand is driven by the invention itself – i.e., by the essential features of the patented invention. This avoids giving weight to claim elements that may be unrelated to the invention in applying the EMVR.

²² Cornell University v. Hewlett-Packard Co., 2008 U.S. Dist. LEXIS 41848 (N.D.N.Y. May 27, 2008)(Rader, J., sitting by designation) (In this case the court excluded testimony of a damages “expert” for failure to consider apportionment and show a connection between the patented feature and the market demand for a complex multi-featured product.)

²³ *Id.* at 7.

²⁴ Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538 (Fed. Cir. 1995) (“Subsequently, our predecessor court held that damages for component parts used with a patented apparatus were recoverable under the entire market value rule if the patented apparatus ‘was of such paramount importance that it substantially created the value of the component parts.’ Marconi Wireless Telegraph Co. v. United States, 99 Ct. Cl. 1, 53 U.S.P.Q. (BNA) 246, 250 (Ct. Cl. 1942), *aff’d in part and vacated in part*, 320 U.S. 1 (1943). We have held that the entire market value rule permits recovery of damages based on the value of a patentee’s entire apparatus containing several features when the patent-related feature is the ‘basis for customer demand.’ *State Indus.*, 883 F.2d at 1580, 12 U.S.P.Q.2D (BNA) at 1031; *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 900-01, 229 U.S.P.Q. (BNA) 525, 528 (Fed. Cir.), *cert. denied*, 479 U.S. 852, 93 L. Ed. 2d 117, 107 S. Ct. 183 (1986).”). In *Rite-Hite*, the court declined to apply the Entire Market Value Rule to the dock levelers since they did not function together with the patented vehicle restraint to achieve one result, but could have been used independently. *See id.* at 1549-50.

Judicial Gatekeeping Needs to Be Strengthened

In the Cornell case mentioned above, the Court also excluded the testimony by the damages expert because the purported expert failed to “show a sound economic connection” between the claimed invention and the proffered royalty base.²⁵ IBM believes that such strong gatekeeping is highly supportive of an efficient market in IP, and should be required of the courts. District courts that provide clear articulation of the logic and factors relied upon in their damages decisions provide a better foundation for review. Such articulation also would provide the clear guidance for negotiators that is critical for commercial entities and the public. Rigorous requirements for damages experts, coupled with clear articulation of the bases for damages determinations, creates certainty for licensors and licensees alike, improving the efficiency of IP markets.

CONCLUSION

The nature of innovation has changed. The drivers of growth today are quite different from those in previous eras. America must rely more than ever before on the ability of its citizens to innovate to create economic growth and maintain competitive advantage.

The patent reform debate thus far unfortunately has been characterized as adversarial, pitting one set of industries against another set of industries. To be sure, industries use the patent system in different ways and these differences affect how they view some reform proposals. However, we believe any differences are not insurmountable.

The Framers of our Constitution wisely gave Congress the express power “[t]o promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”. Our patent system is facing real problems and urgent Congressional action is needed to address them. IBM urges you to enact S. 515 and reform our patent laws to remove the roadblocks to development of new innovations and seize new opportunities to spur economic growth.

Thank you again for the opportunity to present IBM’s views.

²⁵ See *Cornell University v. Hewlett-Packard Co.*, 2008 U.S. Dist. LEXIS 41848.