“Patent Reform in the 111th Congress: Legislation and Recent Court Decisions”

Senate Judiciary Committee
Full Committee
DATE: March 10, 2009
TIME: 10:00 AM
ROOM: Dirksen-226

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March 3, 2009

NOTICE OF COMMITTEE HEARING
The Senate Committee on the Judiciary has scheduled a hearing on "Patent Reform in the 111th Congress: Legislation and Recent Court Decisions" for Tuesday, March 10, 2009 at 10:00 a.m. in Room 226 of the Senate Dirksen Office Building.

By order of the Chairman

Witness List

Hearing before the
Senate Judiciary Committee

on

"Patent Reform in the 111th Congress: Legislation and Recent Court Decisions"

Tuesday, March 10, 2009
Dirksen Senate Office Building Room 226
10:00 a.m.

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Statement of

The Honorable Patrick Leahy
United States Senator
Vermont
March 10, 2009

Statement of Senator Patrick Leahy (D-Vt.),
Chairman, Senate Judiciary Committee,
Hearing on "Patent Reform in the 111th Congress:
Legislation and Recent Court Decisions"
March 10, 2009

Intellectual property is critical to our Nation's economy. It is an engine that drives our contemporary economy and will fuel our future. Industries that rely on intellectual property protection accounted for roughly half of all U.S. exports and represented an estimated 40% of U.S. economic growth in 2006, the last year in which our economy grew in all four quarters. Many of the jobs and expansion that can help us begin to recover from the costly economic recession will have their origin in our patent and copyright based industries. These range from computers and software programs, to new agriculture products, to our movies and music.

I am an ardent supporter of strong protection and enforcement of intellectual property rights. Last year, I led the bipartisan effort to pass the Prioritizing Resources and Organization for Intellectual Property Act to enforce laws against stealing America's intellectual property. The Chamber of Commerce estimates that IP theft costs American companies $250 billion a year, and our economy 750,000 jobs.

As a former prosecutor, I know first-hand how important it is to have a full arsenal of legal tools to ensure that justice is done. In Vermont, Hubbardton Forge makes beautiful, trademarked lamps. The Vermont Teddy Bear Company, like IBM, also relies heavily on its patented products. Likewise, SB Electronics needs patents for its film capacitor products. Burton's snowboards and logo are protected by trademarks and patents. Every state in the Nation has such companies and every community in the United States is home to creative, inventive and productive people. Americans suffer when their intellectual property is stolen, they suffer when counterfeit goods displace sales of the legitimate products, and they suffer when counterfeit products actually harm them, as is sometimes the case with fake pharmaceuticals and faulty electrical products.

Working together with 21 Senate cosponsors and our House counterparts, we moved that bill from introduction in July to the President's desk in October. I look forward to the new leadership of the Justice Department being confirmed and in place so that they may utilize the resources and tools we provided.
This year, we are working to make additional progress by modernizing the United States patent system. Last week, I joined with Senator Hatch, Chairman Conyers and Mr. Smith to reintroduce the bipartisan, bicameral Patent Reform Act of 2009 (S.515). This Committee was able to report patent reform legislation in the last Congress, and the House passed a companion bill. This year we need to enact it to help bolster our economy.

It has been more than 50 years since significant reforms were made to the Nation's patent system. Our legislation makes needed updates to the system that will improve patent quality and increase certainty among parties in litigation. Patent reform is ultimately about economic development. It is about jobs, it is about innovation, and it is about consumers. All benefit under a patent system that reduces unnecessary costs, removes inefficiencies, and holds true to the vision of our Founders that Congress should establish a national policy that promotes the progress of science and the useful arts. Our bill is intended to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs, while making sure no party's access to court is denied. I thank our bipartisan group of cosponsors, Senators Schumer, Crapo, Whitehouse, Risch and Gillibrand.

The legislation we introduced last week grows out of our work over several years. We have made some changes from the last Committee-approved bill in response to concerns we heard from groups ranging from labor unions to small inventors to manufacturers. We have removed the requirement that all patent applications be published 18 months after they are filed and we have removed the requirement for Applicant Quality Submissions. We have also adopted the House approach to improving the current inter partes reexamination process, rather than creating a new second window post-grant review.

Today's hearing is the eighth this Committee has held on patent reform issues since 2005. There have been several positive developments. Recent decisions by the United States Supreme Court and the Federal Circuit have moved the law in the direction of our legislation and reflect the growing sense that questionable patents are too easily obtained and are too difficult to challenge. The Supreme Court's Quanta decision may offer a useful way of describing the truly inventive feature of a patent. Senator Specter has made constructive suggestions about a "gate keeping" role for the court in damage calculations. There is much work to do, but I am optimistic that by continuing to work together, we will find the right language. We may be closer to reaching consensus on language regarding damages and venue than ever before.

The Patent Reform Act of 2009 promotes innovation, and will improve our economy. As we work with the Obama administration to help pull the economy out of the recession, Congress cannot afford to sit idly by while innovation – the engine of our economy – is impeded by outdated laws. Nor can we rely on the courts to do our work. Congress writes our laws.

Our legislation ensures that, in the Information Age, we have the legal landscape
necessary for our innovators to flourish. It will improve the quality of patents and remove the ambiguity from the process of litigating patent claims. As innovation is encouraged, and excessive litigation costs are removed, competition will increase and the consumer cost of products will fall. In this way, the bill directly benefits both creators and consumers of inventive products.

When Thomas Jefferson issued that first American patent in 1790 – a patent that went to a Vermonter – no one could have predicted how the American economy would develop and what changes would be needed for the law to keep pace, but the purpose then remains the purpose today-- promoting progress. Now is the time to bolster our role as the world leader in innovation. Now is the time to create jobs at home. Now is the time for Congress to act on patent reform.

I ask unanimous consent to put the full text of my statement in the record.

# # # # #
Chairman Leahy, Ranking Member Specter, Members of the Committee:

I am honored to appear before the Committee today to testify in strong support of S.515, the Patent Reform Act of 2009.

This is the Committee’s seventh hearing on patent reform. The extensive record created by the dozens of witnesses who testified in the prior hearings—which the Committee summarized in the report filed in the last Congress—demonstrates why we must update our fifty-year old patent law to reflect the realities of today’s innovation-driven economy.

I thought it might be most helpful to the Committee to focus my testimony on developments during the nearly two years since the Committee’s last hearing, and how they demonstrate the urgent need for enactment of this legislation.

Since this Committee last considered patent reform, when it reported out the legislation in the summer of 2007, much has changed. We have lost millions of jobs; our economy has slowed dramatically, with GDP declining by an annual rate of 3.8 percent in the last quarter of 2008; our banking system is in crisis; and our citizens’ life savings are in peril.

Congress and the Administration are understandably focused on doing everything possible to restore economic growth. In addition to the steps already taken, the government must create an environment that will foster greater and faster innovation. Some argue that our patent system is fine and that we should stay the course with the status quo. We know this is the wrong answer for the economy overall and it that is the wrong answer for promoting American innovation. Our economy urgently needs the boost a modernized, sound, and fair patent system will give.

Put simply, at a time when our country must do everything it possibly can to stimulate economic growth and job creation, the flaws in our outdated patent law are shackling our most innovative companies—slowing development of new products and services and the new jobs they would create, and diverting substantial resources that otherwise would be devoted to research and development into litigation costs. The longer we wait to address these widely-acknowledged
problems, the more we will deplete the innovation potential of the technology industry and deprive our economy of the resulting job creation and growth.

Let me begin by explaining Micron’s business and why a strong, effective patent system is critical to our continued success. From a three person start-up in 1978, Micron has become one of the world’s largest and most innovative providers of advanced semiconductor memory solutions. Micron is a global company with R&D headquarters in Boise, Idaho. In the U.S., Micron has manufacturing facilities in Utah, Virginia, and Idaho and design centers and sales offices throughout the country.

Micron produces leading-edge memory products, including DRAM and NAND Flash memory, as well as imaging chips that are used in products ranging from servers, computers, and mobile phones to cars and telecommunications equipment. Almost every digital device in the world uses the products that Micron makes and sells. As one of the most innovative companies in the world, Micron is a significant stakeholder in the patent system with a passionate interest in its improvement. Micron’s significant investment in research and development has led to a portfolio of over 18,000 U.S. patents. Micron is annually ranked among the top companies in the world in the number of patents issued, and the Patent Board, a leading intellectual property and patent portfolio analysis firm, ranks Micron’s patent portfolio as the second strongest semiconductor portfolio in world next to Intel. One other thing that distinguishes Micron is that three of the world’s top ten living inventors work at Micron.

The memory industry is extremely challenging and capital intensive and market cycles have changed the landscape of the industry drastically over time. Still headquartered in Boise, Idaho, Micron has gone from seeing its principal competitors as other US-based companies—in 1985, there were 11 major US-based memory manufacturing companies—to most competitors being based in Asia. And as the competitors shifted overseas, Micron has not only had to compete against these companies, but also compete against broad government support provided to these companies through market downturns.

Micron’s survival has been driven, in large part, by constant innovation in developing leading-edge technology and cost-effective manufacturing processes for new products. Unfortunately, the current patent system has now become a hindrance to innovation rather than the growth engine originally intended. Micron and other technology companies, regardless of size, are the victims of a growing wave of patent claims and litigation. Last year alone, Micron spent over $30 million on patent litigation—dollars that could have been used for research and development or for hundreds of new jobs but instead went to lawyers and litigation costs.

The patent system must be modernized and reformed through targeted legislation. Micron is working with the Patent Fairness Coalition, trade groups, and many others to support the passage of the Patent Reform Act. The Patent Reform Act will strengthen the patent system in at least three basic ways:

- By harmonizing U.S. law with that of our major trading partners, and therefore eliminating burdens on patent applicants;
• By improving patent quality through improvements to processes at the Patent and Trademark Office, and therefore reducing the number of poor quality patents; and

• By clarifying vague and uncertain litigation standards to ensure that patent plaintiffs are neither overcompensated nor undercompensated and that governing rules discourage, rather than encourage, the filing of abusive lawsuits.

There is widespread consensus on the harmonization provisions of the bill. With respect to the patent quality provisions, there also is a broad consensus, although I would like to focus the Committee’s attention on a few points. First, we preferred the stronger post-grant review provisions contained in the bill reported by this Committee in the last Congress. It is an oddity of the patent system that the PTO—unlike most other expert administrative agencies—has traditionally played such a minor role in resolving disputes about the correctness of its administrative decisions, especially given the technical nature of the issues that must be resolved. But, we recognize that the Committee’s prior provision generated some controversy and we accept the current approach as a reasonable compromise.

Second, an essential element of the narrower reexamination and post-grant review approach of the current bill is the provision permitting a reexamination request to be based upon “evidence that the claimed invention was in public use or sale in the United States more than 1 year prior to the date of the application for patent in the United States” (new Section 301(a)(1)). For relatively young and innovative industries like the technology industry, there may be little or no documented prior art. The ability to base a reexamination request on evidence of prior public use or sale is therefore essential in order to make the new procedure relevant to the technology sector—which, after all, is one of the key areas in which questionable patents have been granted.

Finally, we urge the Committee to include in the Patent Reform Act a provision barring diversion of PTO fees. The PTO must be able to utilize all of its available resources to address the backlog in patent applications as well as to put in place the mechanisms needed for the post-grant review process.

The third aspect of the Act—clarification of vague and uncertain litigation standards—is where I would like to focus my testimony. This is an area where effective reform is essential if we are to eliminate the current undesirable burden on innovation and job creation.

Technology companies have been victimized by a growing wave of patent litigation, and licensing fee requests that often precede the filing of a patent lawsuit. Here is a compilation of the number of licensing requests received by and patent suits pending against a group of nine leading technology companies, by year:

1 One company did not supply data for licensing demands.
<table>
<thead>
<tr>
<th>Year</th>
<th>Licensing Requests</th>
<th>Lawsuits Pending</th>
</tr>
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<tbody>
<tr>
<td>2004</td>
<td>185</td>
<td>97</td>
</tr>
<tr>
<td>2005</td>
<td>498</td>
<td>116</td>
</tr>
<tr>
<td>2006</td>
<td>679</td>
<td>118</td>
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<tr>
<td>2007</td>
<td>871</td>
<td>129</td>
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<tr>
<td>2008</td>
<td>1217</td>
<td>166</td>
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The nine companies that provided this data had 2008 revenues of approximately $197 billion; according to Census Bureau data they represent just one-sixth of the parts of the economy that make up the technology sector.² It therefore would be appropriate to multiple these numbers by six to determine the impact on the technology sector as a whole.

The data reveals a 650% increase in licensing requests and a 70% increase in lawsuits in just four years. This increase is consistent with the overall trend, which has seen a near-doubling of the number of companies sued in the last seven years (from 5,000 in 2000 to 9,000 in 2007).

What is the reason for this dramatic change? There simply is no reason to believe that infringing activity has suddenly surged in the last five years.

The change is largely attributable to a new source of patent claims. Today, nearly all of the patent claims against Micron and other technology companies are asserted by plaintiffs who do not make or sell any real product or service — often called “non-practicing entities” or “NPEs.” Oftentimes, they mask their true character by saying they are technology companies, using language that conveys the impression of offering technology to assist manufacturers—when in fact, their only purpose is to obtain patent royalties.

One recent study of these non-practicing entities (“NPEs”) observed that “[s]ome of the largest of these NPEs raise large funds with which to purchase the patents they seek to enforce—without any plans to turn those patents into marketable products or services. Instead, they then use these funds to enable—through direct or veiled threats of infringement—their pursuit of royalties from successful businesses.”³ Press reports from the last several years indicate that NPEs have raised

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² North American Industry Classification codes 334 (computer and electronic product manufacturing), 5112 (software publishers), 517 (telecommunications), and 518 (Internet service providers, Web search portals, and data processing services).
³ McCurdy, “Patent Trolls Erode the Foundation of the U.S. Patent System,” available at www.scienceprogress.org/2009/01/patent-trolls-erode-patent-system. The recent Center for American Progress report on the patent system recognized that the problems of the system have been “exacerbated by the emergence of so-called non-practicing entities, or NPEs, sometimes called patent ‘trolls.’ Unlike operating companies that produce products and services, and universities that generate most of their revenue from tuition and grants and generate intellectual property through academic investigations, patent-holding entities typically do not produce any products or offer any service beyond patent licensing and enforcement. Their primary revenue sources are royalties obtained from asserting patents against successful product and service companies.”
billions of dollars to purchase patents in the technology area alone, and that thousands of patents have been acquired.

The technology firms’ data confirm that the litigation surge is attributable to NPEs’ activity:

<table>
<thead>
<tr>
<th>Licensing Requests</th>
<th>Lawsuits Pending</th>
<th>Requests/Demands (^4)</th>
</tr>
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<tbody>
<tr>
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<tr>
<td>2004</td>
<td>185</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>2005</td>
<td>498</td>
<td>116</td>
</tr>
<tr>
<td></td>
<td>80%</td>
<td>20%</td>
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<tr>
<td>2006</td>
<td>679</td>
<td>118</td>
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<tr>
<td></td>
<td>85%</td>
<td>15%</td>
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<tr>
<td>2007</td>
<td>871</td>
<td>129</td>
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<tr>
<td></td>
<td>88%</td>
<td>12%</td>
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<tr>
<td>2008</td>
<td>1217</td>
<td>166</td>
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<tr>
<td></td>
<td>88%</td>
<td>12%</td>
</tr>
</tbody>
</table>

That is consistent with other data showing that litigation involving NPEs exceeded 10 percent of all patent lawsuits in 2006 and 2007, quadrupling the level between 1994 and 2002.\(^5\)

The stream of lawsuits is a product of the NPE business model, which necessitates the use of lawsuits to pressure companies to pay royalties—the threat of significant litigation costs together with the risk of a huge jury verdict creates very substantial pressure to settle; for claims that do not settle, the NPE may reap a large damages award. And the filing of lawsuits against some companies can be used to back up royalty demands addressed to other companies. NPEs accordingly have every incentive to file lawsuits frequently, with little regard to the merits of the underlying claim.

It seems to me that far from deterring the filing of such claims, the current rules actually encourage NPEs to pursue these opportunistic lawsuits. That is because legal rules developed for the litigation environment of the 1950s—when NPEs did not exist and virtually all patent claims were asserted by companies manufacturing products that competed with the products produced by the alleged infringer—do not fit today’s very different world.

First, the most widely-used standard for assessing damages is vague and unclear and creates a substantial risk that a jury will return an excessive verdict. NPEs invoke this risk to demand substantial settlements, even in unjustified cases.

The patent law sets forth two measures of damages—lost profits and a “reasonable royalty. When infringement lawsuits were filed by companies manufacturing competing products, lost profits was the dominant standard used, because the typical plaintiff claimed that the defendant’s infringement was diverting sales from the plaintiff to the defendant. Because they don’t

\(^4\) Percentage of NPE/PE determined based on requests/suits for which nature of claimant could be determined.

manufacture anything, NPEs can only seek damages under the statute’s reasonable royalty test, and—as a result of the influx of their suits—that standard is now the dominant damages measure in patent cases.

The problem is that the law gives juries, and even judges, no real guidance for calculating a reasonable royalty. This isn’t just my opinion, it is the view of a variety of academic experts:

- Paul M. Janicke, HIPLA Professor of Law, University of Houston Law Center, stated: “[F]or some reason we’re still using the Georgia-Pacific grab bag, where the judge throws the grab bag to the jury and says do what you think is right. I think this is where we need to tighten up damages law and I will talk about that further later. The grab bag approach of throwing 15 factors to the jury and saying ‘do what you think’ could be why we are getting erratic results. It certainly does not lend itself to being predictable results. I think that should be abandoned.”

- Tom Cotter, Briggs and Morgan Professor of Law, University of Minnesota Law School, observed that the “Georgia-Pacific factors . . . can be so easily manipulated by the trier of fact to reach virtually any outcome.”

- Professor John Thomas, Georgetown University Law Center: “[T]he case law and empirical evidence alike suggest that courts are inclined to award damages that far exceed an individual patent’s contribution to that particular product. . . . Damage awards that dramatically exceed the commercial value of the patented invention lead to a number of deleterious practical consequences.”

- Professor Mark Lemley, Stanford Law School: “Because courts have interpreted the reasonable royalty provision to require the award of royalties based on the ‘entire market value,’ juries tend to award royalty rates that don’t take into account all of the other, unpatented components of the defendant’s product. This in turn encourages patent owners in those component industries to seek and obtain damages or settlements that far exceed the actual contribution of the patent. There are numerous cases of just this problem occurring. . . . There seems to be consensus that reasonable royalty damages should be limited to the share of a product’s value that comes from the invention and that patentees should not be able to capture value they did not in fact contribute.”

It is remarkable to me that the law today permits reasonable royalty awards that exceed the infringer’s entire profit on the infringing product or service—making clear that the entire standard has no basis whatever in economic reality: such a royalty is by definition unreasonable, because a product manufacturer would stop making the product rather than pay it. But this legal rule authorizes NPEs to pursue irrational damages demands with impunity.

Unfortunately, the threat of a “jackpot” award in patent cases is real. Prior to 1990, there had been only one patent damages award in history larger than $100 million, but in the past seven

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years, there have been at least fifteen judgments and settlements in that category, with at least five topping $500 million.

Second, unlike companies that make or sell products, NPEs cannot be deterred from asserting opportunistic and unjustified patent claims by the counter-threat of infringement claims asserted by defendants back against them—their lack of any products or services prevents the assertion of such claims. Because the patent system was designed with product manufacturers in mind, not NPEs, the NPEs are able to exploit the lack of clarity of the reasonable royalty standard in a way that manufacturing companies cannot.

Third, because litigation costs are significantly higher for manufacturers, NPEs can assert infringement claims regardless of the underlying merits to exert pressure on the manufacturers. As a plaintiff, the NPE’s costs are minimal—basically some limited information relating to the patent. Each defendant, on the other hand, must produce a huge volume of information relating to the development of the products at issue, the basis for customer demand for the product, etc. Given the high cost of electronic discovery, the burden on a defendant is very substantial. Recent data indicates significant cases cost $5 million or more per company to defend.8

Moreover, the NPE has an incentive to spread its costs by suing as many defendants as possible. In that way, it need only exact settlements from a relatively small proportion of defendants in order to earn a profit on the litigation.

It is increasingly routine to read of a single lawsuit in which an NPE/plaintiff has sued a dozen or more companies. For example, a plaintiff recently sued twenty separate financial institutions in a single action, claiming that its patent on a point of sale debiting system was infringed by the institutions’ various payment services. Another case named 22 companies as defendants, asserting that each was infringing the plaintiff’s broadly-worded patents relating to security scanning.9 Another NPE just filed a lawsuit accusing 40 companies of violating two patents relating to computer-assisted sales.10

Under the current rules, therefore, an NPE has no incentive to focus its efforts on legitimate licensing demands. The greater the number of patents with respect to which the NPE makes licensing demands, and the greater number of companies targeted with respect to each patent, the more “chances” the NPE has to obtain a licensing payment. And the incremental cost of each licensing demand is extremely low.

The same is true with respect to litigation. The NPE has an incentive to file a lawsuit even with respect to the most marginal of claims. Its costs will be very low, but the costs it inflicts on defendants will be substantial and the risk to each defendant of a huge jury verdict because of the vague reasonable royalty standard cannot be discounted. As a result, the possibility of settlement payments from at least a few defendants is quite reasonable.

Fourth, the risk of an excessive jury verdict is heightened by the forum shopping that has become rampant in patent litigation. The number of cases filed annually in Marshall, Texas, grew from 24 in 2000 to 369 in 2007—a fifteen-fold increase. More patent lawsuits were filed in Marshall in 2007 than in New York City, San Francisco and Boston combined. More patent lawsuits were filed in Marshall than were filed in Los Angeles—indeed, more than one of every eight cases filed in the entire country.

Current law provides that a case may be filed in any district in which the defendant has committed an act of infringement. Therefore, companies whose products are distributed nationwide may be sued in any judicial district in the country. That loose standard leaves plaintiffs with an essentially unlimited choice of forum.

Of course, this imposes substantial costs principally on defendants, who must transport lawyers, documents, and numerous witnesses to the site of the trial—an expense that is multiplied when the trial is located far from the defendant’s place of business.

Plaintiffs generally focus on jurisdictions that are perceived to be “plaintiff-friendly.” Indeed, data indicates that plaintiffs prevail more frequently in some jurisdictions than in others—and those are the jurisdictions that are attracting patent lawsuits. For example:

- The median damages award in cases decided in Marshall between 1995 and 2008 was $20.4 million, the second-highest of any federal district court in the country.
- Plaintiffs’ win rate in cases decided between 1995 and 2007 in Marshall was 72%, the second-highest of any district in the country.

Combined with the other deficiencies in legal rules, forum-shopping enables plaintiffs to increase the pressure to settle.

* * * *

It is important for the Committee to recognize that this concern about vague and unfair litigation standards is not an abstract debate about legal rules. Reform is urgently needed because of the very real costs that unjustified patent claims and lawsuits are imposing on companies like Micron, costs that are hurting our entire economy. Companies with a successful history of creating large numbers of jobs here in America through innovative products and services are being forced to divert resources away from innovation and into unjustified litigation and unwarranted settlements. Each diverted dollar means less innovation and less job creation. And the fact that Micron, and the others like us, must factor the costs of unjustified litigation into our product development decisions means that some products will not be brought to market.

The Committee has heard from other companies that there is no problem with patent litigation. But that is because they are not experiencing the onslaught of patent claims that are flooding Micron and other technology companies—either because of differences in the nature of their products, or simply because NPEs have not yet targeted their industry. But the fact that others are not being attacked does not in any way change the fact that our problem is real, that it is harming the economy and job creation, and that it can and should be addressed.
I recognize that there may be some debate about the particular language in Senate Bill 515. However, Congress must recognize that the problems I have described must be addressed quickly and effectively. At this time of economic crisis, we simply do not have the luxury of more years of delay.
Prepared Statement of Philip S. Johnson, Chief Intellectual Property Counsel, Johnson & Johnson

On Behalf of the Coalition for 21st Century Patent Reform

Before the United States Senate Committee on the Judiciary

On “Patent Reform in the 111th Congress: Legislation and Recent Court Decisions”

March 10, 2009

10 a.m.
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Executive Summary  
Statement of Philip S. Johnson,  
Chief Intellectual Property Counsel,  
Johnson & Johnson

The primary focus of patent reform should be job growth. Congress should change our patent laws to ensure that meritorious inventions are uniformly accorded patent protection. The resulting patents should be promptly and reliably enforceable against infringers, and result in damages awards that fairly compensate for the unauthorized uses made of the patented inventions. Because the R&D investments made in reliance on the patents dwarf the costs associated with their filing, maintenance and enforcement, the principal objective of patent reform should not be on saving administrative costs, but on changes that will stimulate R&D investment. Collectively, these changes will stimulate job growth.

S. 515 is an excellent first step towards achieving these goals. The 21st Century Coalition supports, subject to certain technical amendments, the provisions in S. 515 that would: adopt the first-inventor-to-file principle (Section 2); expand the grounds for inter partes reexamination to include statements of the patent owner in prior proceedings – but not challenges on the basis of prior use and sale (Section 5); expand the opportunity for the public to submit publications to the USPTO (Section 7); and, permit interlocutory appeals – but only from denied, dispositive summary judgment motions where not duplicative of earlier appeals (Section 8); and permit the Director to set fees if accompanied by statutory protection limiting their use to the USPTO (Section 9).

The Coalition opposes the provisions relating to willful infringement as unnecessarily retarding, and perhaps disrupting, the orderly case law development of the objective recklessness standard as contemplated by In re Seagate (Section 4), and the provisions relating to venue as unnecessary in view of recent judicial developments facilitating the transfer of cases to districts with substantial contacts with the cause of action and as unfair to patent owners (Section 8).

As to reasonable royalty patent damages, the 21st Century Coalition believes that the case for remedial legislation has not been made. The sizes of patent damages awards have been relatively stable for many years, and typically barely cover the costs of litigation. At the very least, the Coalition believes it would be best to await the anticipated decision in Lucent v. Gateway, and/or the outcome of the study proposed in Section 18 of H.R. 1260, before considering such changes to our patent laws.

As Chairman Leahy has suggested, one promising future approach may be to enact appropriate “gate keeper” language. Any approach to reasonable royalty damages that would redefine the invention to be less than that to which the inventor has proven he/she is entitled, such as an “essential elements” approach, would amount to just another version of “prior art subtraction,” and would be grossly unfair to inventors.
Prepared Statement of Philip S. Johnson

Mr. Chairman and distinguished Members of the Committee: I thank you for the opportunity to testify on various aspects of patent law reform, and recent court decisions that may affect the advisability of enacting certain provisions contained in S. 515. Although I am active in a number of professional organizations with interests in patent law reform, including Advamed, the American Intellectual Property Law Association, PhRMA, BIO and the Intellectual Property Owners Association, I am appearing today in my capacity as Chief Intellectual Property Counsel of Johnson & Johnson, and as a representative for the Coalition for 21st Century Patent Reform (the “21st Century Coalition”).

I. Personal/Corporate/Coalition Introduction

By way of introduction, I am a registered patent attorney with 35 years of experience in all aspects of patent law. In addition to drafting and prosecuting patent applications, I have tried patent cases to both judges and juries, and have advised a wide variety of clients in many industries ranging from semi-conductor fabrication to biotechnology. Over the course of my career, I have represented individual inventors, universities, start-ups, and companies of all sizes. In January of 2000, I left private practice to join Johnson & Johnson as its Chief Patent Counsel.

Johnson & Johnson is a family of more than 200 companies, and is the largest broad-based manufacturer of health and personal care products in the world. Collectively, Johnson & Johnson companies represent this country’s largest medical device business, its third largest biotechnology business, its fourth largest pharmaceutical business, and very substantial consumer, nutritional, and personal care businesses. Johnson & Johnson companies employ approximately 118,000 people. Johnson & Johnson’s companies are research-based businesses that rely heavily on the U.S. patent system and its counterpart systems around the world.

The 21st Century Coalition is a broad and diverse group of nearly 50 corporations including 3M, Caterpillar Inc., Eli Lilly, General Electric, Procter & Gamble and Johnson & Johnson. For more than 100 years, our Coalition’s companies have played a critical role in fostering innovation. We invest billions of dollars annually on research and development to create American jobs and improve lives. Representing 18 different industry sectors including manufacturing, information technology, consumer products, energy, financial services, medical device, pharmaceutical, and bio-technology, our Coalition advocates for patent reforms that will foster investment in innovation and job creation.

As the manufacturers and marketers of thousands of products, the freedom to make and sell products in view of the patents of others is always a concern to our Coalition’s members. They therefore routinely review thousands of patents during their product development processes, make appropriate design changes to avoid the patents of others and/or obtain appropriate licenses or legal opinions prior to launching their products. Our member companies also become involved in patent litigation. Most of these litigations involve competitors or would-be competitors, although some involve
The 21st Century Coalition’s interest in patent law reform is to insure that the patent system fairly rewards those who contribute to our society through the invention and development of new and useful products and processes. A fair, efficient and reliable patent system will continue to stimulate the investment in innovation that is necessary in today’s technologically complex world to create the new products and processes that will lead to better lives for Americans and the rest of the world. In addition, the best promise for preserving and enhancing our place in an increasingly competitive global marketplace will be to stimulate U.S. investment in research-based industries.

II. The Primary Focus of Patent Reform Should Be Job Creation

As Chairman Leahy correctly recognized upon the introduction of S. 515,

Patent reform is ultimately about economic development. It is about jobs, it is about innovation, and it is about consumers. All benefit under a system that reduces unnecessary costs, removes inefficiencies, and holds true to the vision of our Founders that Congress should establish a national policy that promotes the progress of science and the useful arts.

The Chairman’s focus is the correct one. Patent reform should focus principally on stimulating the private sector to invest in economic development and job growth. All other considerations should be secondary

Johnson & Johnson’s companies are good examples of the relationship of the patent system, and patents, to jobs and job growth. Johnson & Johnson conservatively estimates that 60,000 of its full time jobs depend on the patent portfolios of its companies’ 8,000+ U.S. patents (and their foreign counterparts). Stated differently, we estimate that, on average, each U.S. patent results in, preserves and protects the jobs of, 7.5 employees per year, or, over its 20-year life, 150 job-years. This estimate does not take into account the jobs of countless others at suppliers, distributors and retailers involved in the research, manufacture, distribution and sale of our products that indirectly depend in whole or in part on our patent rights.

Over the past three years, Johnson & Johnson companies’ patent filings have averaged about 1,200 original applications each year. During that time, our companies have been awarded approximately 500 U.S. patents per year by the United States Patent and Trademark Office (“USPTO”). This 42% rate is very close to the current USPTO allowance rate, which is down from over 70% just a few years ago. During these same years, Johnson & Johnson companies have invested $22.4 billion in R&D, averaging about $7.5 billion per year, or $6.2 million in R&D for each patent application filed, and $15 million for each patent granted. Needless to say, these research and development expenditures have resulted in the direct employment of thousands of people throughout the United States in very good jobs with excellent benefits.
As these numbers reflect, the R&D investments stimulated by the patent system dwarf the costs directly associated with the filing, maintenance and enforcement of patents. Accordingly, in considering changes to the patent system, the primary concern should not only be on the costs of filing or enforcing patents, but on what effect changes to the system might have on R&D investment, and thus jobs and job growth.

As explained below, Johnson & Johnson believes that appropriate patent reforms will maintain current jobs and create new jobs by continuing to encourage private sector R&D investment. Proposed changes that increase the likelihood that meritorious inventions will receive patent protection, and that resulting patents may be reliably enforced against infringers to promptly recover fair compensation should be favored, as these changes will have the greatest impact on stimulating R&D investment and job growth.

A. The Causal Relationship Between Patent Protection and R&D Investment

Johnson & Johnson companies are rational decision makers when it comes to deciding whether and how much to invest in R&D. When deciding whether or not to make, or to continue making, an investment in any given project, many factors are taken into account, including the cost of the project, the technical risk and likelihood of success of the project, the expected cost saving or product enhancement to be achieved, and the expected return on investment. In determining the expected return on investment, a critical element is the likelihood that meaningful patent protection will be accorded to deserving inventions resulting from the project, the degree and duration of exclusivity that resulting products or processes will enjoy, and the likelihood that the involved patents will either be respected by competitors, or promptly and successfully enforced in the event of infringement. When such projections indicate that the return on investment exceeds a threshold commensurate with the risk involved, the investment is, or continues to be, made. When it does not, the project is not begun, or is cancelled.

Johnson & Johnson’s companies, and many other manufacturing companies like it, are now finding that the current economic crisis is reducing the likelihood that reasonable returns on investment can be achieved for many of their ongoing R&D projects. For that reason, our companies, and many others like us, have made the painful decision to lay off thousands of employees involved in R&D and other product-related areas.

Simply put, rational business people cannot justify investing in R&D unless the size of the “carrot” and the likelihood of getting the carrot justify the cost of trying to get the carrot. Unfortunately, since the economic crisis is shrinking the size of the carrot, so too are the amounts being spent to get the carrot.

The patent system has a direct effect on both the size of the carrot and the likelihood of getting the carrot. Changes in the patent system that will increase the size of the carrot and/or the likelihood of getting the carrot will cause business planners to invest more in R&D, while those that result in decreases will have the opposite result.
B. How S. 515 May Impact Jobs

Whether the net effect of S. 515 will be to stimulate or retard job growth will depend largely upon its evolution as it is considered by Congress and enacted into law. The current provisions of S. 515 supported by the 21st Century Coalition will either be neutral to, or tend to stimulate job growth. With further work, the remaining provisions may be drafted to do the same. Accordingly, there is an historic opportunity for S. 515 to enhance the value of patents and stimulate investment to produce immediate and long lasting job growth.

Coalition members view our current economic conditions as analogous to the economic malaise of the 1970’s. Begun as Carter administration initiatives, in the early 1980’s Congress passed several bipartisan bills to enhance the value and enforceability of patents, including the Bayh-Dole Act1 and the Federal Courts Improvement Act of 1982, creating the Court of Appeals for the Federal Circuit.2 The reaction of the private sector was immediate and dramatic – investment in R&D substantially increased, and a sustained period of prosperity followed. In the Coalition’s view, the 111th Congress now has a similar opportunity….and its timing couldn’t be better.

As in the 1980’s, the focus of S. 515 should be on making changes that will encourage R&D investment. Were they able to justify to themselves, and to their investors, that such additional expenditures would make sound business sense, the 21st Century’s companies have both the wherewithal and the desire to hire back thousands of laid off workers, and many more. To do this in this economic environment, however, will require legislation that will ensure these companies that deserving inventions stemming from their R&D expenditures will receive prompt, high quality examination by the USPTO, and that the patents that the USPTO issues will provide a firm foundation on which to build a growing business. Just as no one would build a house on land whose title could be challenged over and over again, businesses need to be able to count on an extended period of quiet title to their patents if they are to make the kinds of investments in them on which future growth is to be founded.

Many of the provisions already contained in S. 515, such as those relating to the adoption of a first-inventor-to-file system and improved patent examination procedures, should prove to be beneficial to long-term investment and job growth. As Chairman Leahy and Senator Hatch appropriately recognized in their introductory statements, additional work remains to be done on a number of other important issues, particularly reasonable royalty damages. The 21st Century Coalition is confident that many of these provisions can be improved so that enactment of S. 515 will drive job creation by improving the reliability of achieving the patent reward, and by preserving its value.

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III. Improving the United States Patent and Trademark Office

The first priority of patent reform should be to improve the completeness of patent examination and the quality of patents that issue. These reforms focus on properly financing the Patent and Trademark Office, simplifying the patentability standards and their application, and expanding public input in the decision to grant a patent. They have garnered broad support from stakeholders and represent an achievable core of needed reforms to improve the operation of the USPTO. While these reforms may not immediately create jobs, they hold directly address the twin problems of an unacceptably large backlog of pending applications and the public’s perception that some patents granted by the USPTO are of low quality. Improvements in patent quality should also improve the reliability of patent protection and the downstream efficiency of enforcement proceedings.

A. Improvements to Guarantee the USPTO Financial Resources

Additional improvements that should be considered for inclusion in S. 515 are those that provide additional financial resources to the USPTO. For example, the adoption of two linked proposals contained in Sections 9 and 15 of S. 1145 as reported by this Committee in the 110th Congress could significantly improve USPTO. Section 9, continued in Section 9 of S. 515, would give the USPTO the authority to set its fees by regulation, tailoring the fees to better reflect the extent of the effort needed to thoroughly examine patent applications. The necessary corollary, missing from S. 515, is the creation of a revolving fund from which the USPTO could finance its operations. Such a fund would assure that the USPTO could use the fees that it collects to fund the work for which those fees were paid, and it would allow the USPTO to engage in strategic planning over the course of multiple fiscal years secure in the knowledge that it had a predictable source of funding.

Many of the quality and pendency problems confronting the USPTO, and the subsequent litigation that the grant of questionable patents can generate, can be directly traced to the diversion of USPTO fee revenues from 1992 through 2004 to fund other, unrelated government operations. Cumulatively, this diversion resulted in a loss of more than $750 million in fees paid by patent and trademark applicants for the processing of their applications. As a result, the USPTO was unable to hire the examiners it needed for a decade and has therefore had enormous difficulty hiring, training, and retaining the number of skilled examiners needed to catch-up and cope with the ever increasing number of patent application filings.

While the Congress has permitted the USPTO to retain essentially all of its user fees for the last four fiscal years, users of the patent system recognize that there is nothing to prevent the return of this devastating practice, a prospect that could more likely materialize in the current Federal budget deficit situation. The beginning steps taken by the USPTO to address its quality and pendency issues—made possible by its being appropriated all of its fee revenues—demonstrate the importance of a permanent end to this possibility. The USPTO must have such protection in order to intelligently plan for and meet the multitude of challenges it faces—its users who pay the fees deserve no less.
B. International Harmonization Provisions

An essential step identified by the National Academies' Board on Science, Technology, and Economic Policy ("NAS") for improving the US patent system is the elimination of the subjective elements in US patent law. The elimination of these subjective elements would improve the operation of the USPTO, benefiting all constituencies, by promoting patent quality, simplifying the administration of the patent law, and facilitating the ability of the USPTO to work cooperatively with other patent offices to address the global backlog.

1. First-Inventor-To-File

The cornerstone of these harmonizing changes is the proposal to adopt the first-inventor-to-file principle contained in Section 2 of S. 515. It will significantly simplify the patent law, provide fairer outcomes for inventors, speed final determinations of patentability, and reduce overall costs for procuring patents. With the accompanying changes that bring objectivity to the determination of what information can be used to assess the patentability of an invention, the adoption of the first-inventor-to-file principle would allow the United States to join the world patent community and make patentability determinations on objective criteria using publicly available information. The public could more readily assess the patentability of granted patents and avoid costly litigation.

2. “Best Mode” Harmonization

One recommendation of the NAS that does not appear in S. 515 is the elimination of the requirement for applicants to “set forth the best mode contemplated by the inventor of carrying out his invention.” The NAS noted that much of what is wrong with the enforcement of patents can be traced to the prevalence of so-called "subjective elements" such as “best mode” in patent litigation. Questions such as “What constitutes a mode of carrying out an invention? Was one mode thought by the inventor to be better than the rest when the patent application was filed? “Were details of such best mode sufficiently disclosed in the patent application? We believe that a convincing case has been made that simply eliminating the "best mode" requirement from the patent statute is appropriate. The public’s interest in having a complete patent disclosure is readily achieved by the requirements that the patent fully describe the claimed invention and contain all the information needed to make and use the invention.

3. Orderly Transition Period for First-Inventor-To-File

Before leaving the harmonizing topic, there is one technical problem in S. 515 that I would like to bring to your attention. The effective date provision contained in Section 13(a) of S. 515 would appear to apply the first-inventor-to-file principle to all applications issuing more than 12 months after the date of enactment. This approach is simply not feasible, as the decision to file, the preparation of the patent application itself, its filing and its examination should all be performed knowing the patentability rules that will apply to its grant. Such an important transformation needs to be made in an orderly

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manner to give USPTO, inventors and the patent profession time to properly engineer its implementation. In our opinion, it would be best to first apply the changes of S. 515 to original patent applications filed more than one year after enactment.

C. Public Input Into the Patent Examination Process

Another way to improve the quality of patent applications is to allow members of the public to provide timely input into the examination process. We are pleased to see the inclusion in S. 515 of Section 7 expanding the opportunity for the public to submit information to the USPTO. Allowing the public to submit information to patent examiners working on individual patent applications, together with concise descriptions of its relevance, will help ensure that all relevant information will be considered before a patent is issued. This provision will contribute to our long-standing objective to have the USPTO conduct a quality examination the first time, before a patent is granted, obviating the need to rely on post-grant clean-up procedures. The public and patent applicants alike will benefit from the grant of more reliable patents based on more thorough and complete examination that this procedure will offer.

IV. Expanded Inter partes Reexamination Proceedings

The 21st Century Coalition supports Section 5 of S. 515, subject to eliminating its provisions relating to prior use or sale. The provisions of Section 5 of S. 515 closely track the inter partes reexamination provisions contained in Section 6 of HR 1908 as passed by the House in 2007. Unfortunately, S. 515 dramatically expands the grounds upon which an inter partes reexamination may be instituted to include on evidence that the claimed invention was in public use or on sale in the United States more than one year prior to the application for patent. In particular, S. 515 amends paragraph (1) of Section 301 to allow the citation of such evidence.4

The Coalition for 21st Century Patent Reform has consistently opposed adding “prior public use or sale” to inter partes reexaminations because in this procedural setting patentees will be disadvantaged if such issues may be raised many years after a patent has granted. Challengers and patent owners should be given a full and fair opportunity to oppose and defend patents on a neutral playing field, preferably before the patentee has invested heavily in developing the invention. Adding prior public sale or use arguments in reexaminations proceedings initiated many years after the alleged acts took place, without guaranteeing the right of the patent holder to take discovery and cross examine witnesses, does not provide a fair proceeding for patent owners. This new avenue of challenge is neither appropriate nor acceptable.

4 H.R. 1260 accomplishes the same objective by adding a new paragraph (3) to Section 301 to allow the citation of “documentary evidence that the claimed invention was in substantial public use or sale in the United States more than 1 year prior to the date of the application for patent in the United States.” The language in H.R. 1260 further enhances the subjectivity of such evidence by specifically stating that the public use must be “substantial,” a requirement not found in the Senate language.
V. Patent Damages: A Solution In Search of a Problem?

No patent reform proposal has engendered more controversy than that relating to patent damages.\(^\text{5}\) We are grateful to several Senators (and their staffs) who have participated in many hours of stakeholder discussions concerning patent damages issues, and appreciate the willingness of the sponsors of S. 515 to continue working to achieve a consensus on these issues.

A. Available Data Indicates Damages Awards Are Appropriate

In the 21\(^\text{st}\) Century Coalition’s view, the case has yet to be made that any reform in patent damages law is needed.\(^\text{6}\) Contrary to critics’ assertions of just a few years ago, the number of patent litigations in this country is at least leveling-off, if not declining.\(^\text{7}\) Overall, patentees have had an overall success rate of only 36% over the last 13 years. When they do win, median patent verdicts have been fairly constant since 1995, even trending downward in 2008.\(^\text{8}\) These winning verdicts, if ultimately sustained, are barely enough to cover attorneys’ fees in most of these cases, much less to compensate patent owners for the infringement that has occurred.

Recent experience shows that of the 2,700 cases filed each year, fewer than 5 led to verdicts in excess of $100 million. Experience also shows that few if any of these verdicts survive post judgment review and appeal. A prime example is the Alcatel-Lucent v Microsoft verdict of $1.5 billion that was touted in the last Congress as the reason for patent damages reform, even though it was later promptly and finally vacated.

Nor have the advocates for a change demonstrated that these few large awards are disproportionate to the damage caused to the patent owner on account of the infringement. Companies in our Coalition, like other big businesses, have many products whose yearly sales are in the hundreds of millions or even billions of dollars. When infringement damages are awarded with respect to a multi-year infringement involving such a product, it should come as no surprise that the proper damages award may be in the range of tens, if not hundreds, of million dollars. Size alone, without reference to the


\(^\text{6}\) Recognizing that insufficient data exists on patent damages, Section 18 of H.R. 1260 proposes that such a study be conducted.


\(^\text{8}\) There is no empirical evidence to support the claim that damages awards are out-of-control. Indeed, several studies have found that damages awards are not increasing. A recent PriceWaterhouseCoopers study concluded “The annual median damages award since 1995 has remained fairly consistent, when adjusted for inflation.” Professor Paul Janicke from the University of Houston Law Center recently testified before the FTC that the median damages award in a patent case is $5-6 million, and if the cases where the patent owner loses (which happens in 64% of cases) are included, the median drops to less than $2 million.
magnitude and duration of the infringement, and the nature of damage caused thereby, does not indicate that the damages award was in any way inappropriate.

Critics from some large technology companies nonetheless contend that damages reform is needed because their fears that erratic or spurious awards will be granted cause them to settle their cases at higher amounts than are fair. This contention is hard to vet, as settlement terms are normally private, and entered at a fraction of the damages that would be assessed were the case to proceed to judgment. At least one commentator, however, has pointed out that few of these settlements are material to the accused infringer.9

**B. The Litigation Abuse Problem: Is a “Loser Pays” System The Solution?**

More commonly, proponents of patent damages reform complain that they are assaulted with baseless actions accusing their best selling products with infringement, and that the sole purpose of most of these actions is to coerce a settlement in an amount less than it would take to mount a successful defense. We have sometimes encountered this problem, which is unique to patent cases because the cost of a patent defense is so expensive that a settlement of a million dollars or more may be cheaper than the alternative. In our view, this problem stems from the common failure to award attorneys fees in patent cases. As a result, such conduct is encouraged, while the bringing of meritorious actions that might not recover enough to offset the litigation costs involved is unfortunately discouraged. One possible solution to this problem would be for the Committee to consider amending S. 518 to reinstate the “loser pays” provision that Senators Leahy and Hatch proposed in S. 3818.10

**C. Juries Are Being Appropriately Instructed on Damages Issues**

Contrary to the opinions of some, our experience is that judges and juries are not left at sea in ascertaining damages in patent cases. To the contrary, extensive discovery is permitted into opposing parties’ damages contentions, extensive expert reports are exchanged, and both damages-related witnesses and experts are deposed at length. Motions to exclude improper testimony are permitted and considered both before and during trial, and improper evidence is routinely excluded. To the extent it is not, the aggrieved party may preserve its objection for appeal. Juries hear only admissible evidence and testimony, including explanations from qualified experts for both sides, as to value of the use made of the invention, and the base and rate of a fair royalty to be paid for that use. Jury instructions are proposed and negotiated by both sides, and any objections to those instructions may be preserved for appeal. Within the limits of those instructions, skilled trial lawyers for both sides are given ample time to explain their damages positions in closing argument, and the court’s instructions are diligently administered. Following trial, either party may move for judgment notwithstanding the verdict, or for a new trial if the verdict is against the clear weight of the evidence.

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9 Pat Choate, “The Patent Reform Act of 2007: Responding to Legitimate Needs or Special Interests? The “Patent Fairness” Issue An Analysis,” suggesting that over the period 1995-2006, reported patent settlements for companies in the Coalition for Patent Fairness averaged one ninth of one percent (0.11 percent).


10 Section 5(b), S. 3818, 109th Congress.
Were district courts not generally discharging their duties in the area of patent damages, one would expect critics to have pointed to large numbers of appeals to the Federal Circuit where aggrieved defendants complained that the foregoing procedures were not being followed, or that reversible error occurred. They have not. To the contrary, the public record demonstrates that damages issues are raised in relatively few patent appeals, and then seldom with respect to any of the procedural errors that one would expect were the criticisms espoused reflected in actual experience. See www.patstats.org (compare, for example, the 374 appellate rulings on literal infringement issues to only 22 for reasonable royalties for the 2000-2004 time period).

D. Potential Value of “Gate Keeper” Provisions

While our experience in patent litigation does not suggest that district court judges fail to hear appropriate motions to exclude inappropriate evidence, or to exclude damages claims that are unsupported by substantial evidence, some critics continue to contend that their experience is to the contrary. As Chairman Leahy has mentioned, one appropriate response to this perception may be to enact so-called “gate keeper” language that would ensure that courts or juries consider only those damages contentions that are cognizable at law and supported by substantial evidence. Such language, originally suggested during the so-called Feinstein-Specter meetings, appears to have garnered widespread stakeholder support, and thus should be considered as an alternative to the damages language now included in S. 515.

E. Addressing Damages Involving a Small System Component

In addition to the foregoing, concerns continue to be expressed that there is an undue risk that damages will be oversized when the invention is a feature that is added to a larger system of which the feature is but a small part. In the context where the patent owner is a non-practicing patentee not otherwise active in the field, there appears to be widespread stakeholder agreement that any reasonable royalty damages awarded should be commensurate with the value added by using the invention. Nonetheless, after years of trying, no substantive language has been proposed that has gained widespread support. We believe that this failure to agree stems from a misunderstanding of the difference between the function of the patent claims to define the invention, and the methodology used to value that invention.

1. The Nature and Role of Patent Claims: To Define the Invention

To understand the difference, it is first necessary to understand the nature and role of the numbered “claims” that appear at the end of every issued U.S. patent. In order to gain patent protection for their inventions, inventors are required to meet certain strict disclosure requirements relating to the inventions they wish to protect. In particular, every patent application must include a “specification” that contains

a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to
make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention. 35 U.S.C. 112 (1st para.)

In addition to meeting these “written description” and “enablement” requirements, every patent application must

conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form. 35 U.S.C. 112 (2nd & 3rd paras.)

These patent claims, as interpreted in view of the description in the specification and the knowledge of a person skilled in the art, are the focus of the patent examination process. Upon approval or allowance by the Patent and Trademark Office, claims serve as the operating definitions of what is actually patented.

Most commonly, the original patent claims submitted with a patent application are not allowed in their original forms. During the patent examination process, each claim is carefully reviewed to ensure that it is adequately supported by the specification (that the invention it claims is both properly described and enabled), that it is sufficiently definite (that it particularly points out and distinctly claims the invention), that it seeks to cover subject matter of the kind that may be patented, that it is novel, and that it was not “obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.”¹¹ Most commonly, Patent Examiners find that an applicant’s originally proposed claims fail to meet one or more of these statutory requirements, and accordingly reject them in one or more “Office Actions” that are issued during the patent examination process. Applicants are allowed to file “responses” to such Office Actions, which may amend or rewrite the patent claims, submit additional evidence relevant to the patentability determination, explain how the claims should properly be interpreted, and/or explain why the stated grounds for the rejection of the patent claim(s) are unfounded. Most often, this back and forth process will result in a final decision on allowance after two Office Actions, although in a minority of cases, additional reviews and/or appeals will be needed before a final patentability conclusion is reached.

Once the Patent and Trademark Office has determined that the patent claims are proper in all respects, and after one final search to be sure that the same invention isn’t the subject of any another prior pending application, they are allowed, issue as part of the granted patent, and serve as the definition(s) of what is patented.

Under current law, the scope of a patent’s claims will be reconsidered at the request of any member of the public who files a reexamination request with the Patent and Trademark Office showing that a substantial new issue of patentability exists with respect to one or more of the patent’s claims in view of the disclosure(s) of one or more prior patents or publications.

¹¹ See 35 U.S.C. 101, 102, 103 & 112.
Whether or not a patent’s claims have been tested in reexamination, their validity and proper interpretation may again be challenged in federal district court by any accused infringer. During such proceedings, the district court judge is required to conduct a so-called “Markman” hearing to interpret the claims to ensure that they are construed consistently with the “intrinsic evidence,” which includes the specification as well as all of the back and forth communications (known as the “prosecution history”) that led to their allowance. Once such a claim interpretation is rendered, that interpretation is used in connection with decision of all subsequent issues, including any validity challenges, the determination of infringement, and the assessment of patent damages on account of the infringement.

2. The Proper Approach to Determining an Invention’s Value

The process of determining the value of the use of an invention by an infringer is quite different than determining the scope and patentability of the underlying invention. In the normal case, reasonable royalty patent damages are determined by looking at what the infringer would have been reasonably willing to pay, and what the patentee would have been reasonably willing to accept, for a license to use of the invention negotiated at the time just before the infringement began. In the normal context, where the patentee and infringer are competitors, or at least have other business interests in the same field, this determination can be complex, as the sales to be made by the infringer may have a substantial negative impact on the sales being made by the patentee, and/or a license may alter or disrupt market dynamics. Accordingly, litigants normally contest reasonable royalty issues by proffering evidence related to one or more of thirteen so-called Georgia Pacific factors that have been developed by the courts relating to various business circumstances that could have had an influence on the outcome of the hypothetical negotiation.

Where the patentee is not a practicing entity (and thus does not compete against or have interests in the same field with the accused infringer), the business context is simplified. In such cases, most stakeholders appear to agree in concept that the focus of the reasonable royalty determination should be on the incremental value of using the invention, and that that value should not be artificially inflated or diminished merely because an expanded or contracted royalty base is employed in its calculation. In particular, the business value of using an invention should generally be independent of whether it was claimed broadly or narrowly. For example, if the reasonable royalty for using a patented, variable-speed automobile windshield wiper is one dollar, it should not matter whether the amount is assessed as one dollar per wiper assembly, or one dollar per car. Stated differently, a patentee who has drafted his claim to “an improved car with the [novel] windshield wiper assembly” should not be awarded more than one who drafts his claim only to “an improved [novel] windshield assembly” – the resulting incremental value to an auto manufacturer of using the invention in this example does not vary, nor should the amount of reasonable royalty damages awarded.

3. Non-Use, or Non-Infringing Substitute, as a Focus for Comparative Valuation

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It appears that a promising approach to this reasonable royalty problem, at least for circumstances involving non-practicing patentees with no competitive interests in the field, may be to focus on ascertaining the incremental value to the infringer, at the time just before the infringement began, of using the invention compared to not using it, or to using its closest reasonably available non-infringing substitute, and then determining the fair proportion of that value that should be paid to the patent owner for that use. In the example of the windshield wiper example, the value of the car with the improved windshield wiper may be compared to the car’s value without a conventional windshield wiper, and a reasonable royalty that is a fair proportion of the determined incremental value could then be assessed.

4. The Invention Should Not Be Redefined for Damages Purposes

Unfortunately, proponents of reasonable royalty reform have gone down the wrong track, and appear to be at risk of doing so again, by trying to narrow the definition of the invention for damages purposes. According to this methodology, the definition of patented invention, as set forth in carefully crafted claims approved by the USPTO, would still be used in the validity and infringement phases of a patent enforcement litigation, but not for purposes of assessing fair damages “for the use made of the invention by the infringer,” as is now required by statute. Instead, these proponents would narrow the claimed invention using one or more definitional devices that are plainly intended to reduce inventors’ recoveries so that the royalties will be based on less than what the Patent and Trademark Office agreed to be patentable.

Some such definitional devices suggested during the last Congress included limiting the claimed invention for damages purposes to “its inventive contribution,” its “patentable features,” or, as proposed in S. 515, “the patent’s specific contribution over the prior art.” After extensive discussion and debate, it was recognized in the Senate Judiciary Committee’s report for S. 1145 that the language “specific contribution over the prior art” would have to be amended to address concerns in the patent-using communities. Indeed, in the 110th Congress, a number of witnesses and commentators noted that language that would require that a claimed invention be dissected down to less than all of its component parts for damages purposes would (a) systematically under-compensate inventors, and (b) be “toxic” to the progress of other meaningful patent law reform.

5. Quanta’s “Essential Features” Language Is Not the Answer

This year, some have suggested that the claimed invention again be re-defined for damages purposes, this time by reducing it to its “essential elements,” as noted by the Chairman in his introductory remarks for S. 515. This “essential elements” language is borrowed from the recent Supreme Court decision in Quanta Computer, Inc. v. LG Electronics, Inc., which used it in an entirely different context. Quanta in fact has nothing to do with determining the proper amount of damages to be awarded for the use made of an invention by an infringer, and by no means authorizes the kind of systematic limitation on patent damages that would result from this proposal.

Quanta deals with the doctrine of patent exhaustion: when in the distribution chain so much of the patented invention has been sold that it would be unfair to allow the patent owner to control (or collect further royalties from) further downstream sales. The Court held that patent rights are exhausted following the authorized sale of components that must be combined with other components in order to practice the method claimed in the patents in that case. In reaching this holding, the Court quoted its 1942 decision in United States v. Univis Lens Co.,14 “where one has sold an uncompleted article which, because it embodies essential features of his patented invention, is within the protection of his patent, and has destined the article to be finished by the purchaser in conformity to the patent, he has sold his invention so far as it is or may be embodied in that particular article.”

In the context in which the Court used the term “essential features” in Univis, the term was clearly intended to capture the thought that exhaustion applies where a patentee has sold a product essentially embodying the whole of a patented invention. The court was not attempting to dissect the invention into essential and non-essential features, nor suggesting the use of “essential features” in damages calculations. The Supreme Court in Quanta was only saying that, in line with Univis, exhaustion applies where a patentee sells a product that embodies essentially all of the features of a claimed invention so that “the only step necessary to practice the patent is the application of common processes or the addition of standard parts.”

Quanta’s “essential features” phrase cannot be applied to inventions made up of a combination of prior art elements because subtraction of the common processes or standard parts would leave nothing. For those who argue that the “essential features” phrase would not apply to combination inventions, the reality is that, at some level, all inventions are combinations of old elements. As Chief Judge Markey explained “there ain’t no new elements! Only God makes things out of new elements…. It may be possible to think of a non-combination claim, but it’s very hard. Perhaps chemical claims are meant, but they are usually combinations of chemical elements.”15 Thus, neither Quanta nor Univis address the value of the use made of an invention and the “essential elements” phrase should not be used in any damages legislation.

6. The Committee Should Await the Lucent-Gateway Decision

One judicial development that may have a substantial impact on the reasonable royalty debate is Lucent v Gateway,16 which is a reasonable royalty damages case now on appeal before the Federal Circuit. Over twenty stakeholders, including Johnson & Johnson, have participated in amicus filings in this case, which is likely to be argued in May of this year. It is very likely that the Federal Circuit will address some, if not most, of the damages issues raised in connection with this legislation. Accordingly, this Committee may wish to consider delaying its resolution of the reasonable royalty issues until this case has at least been argued, if not until a decision is rendered, likely as early as this summer.

14 316 U.S. 241, 250-51 (1942)
VI. Interlocutory Appeals of Markman Rulings Should Be Permitted, But Limited to Certified, Dispositive Summary Judgment Motions

Section 8 of S. 515 would amend section 1292 of 28 U.S.C. 1292 to permit patent litigants to appeal interlocutory claim construction rulings. Under current law, there are already two ways such Markman rulings may be appealed. The first is by bringing a successful, dispositive summary judgment motion; whereupon the claim construction ruling is reviewed as a matter of right on appeal. The second way, which has been very rarely granted, is to seek certification of the Markman ruling from the ruling district court judge, whereupon the appeal will be heard only at the discretion of the Court of Appeals for the Federal Circuit.

Although Section 8 of S. 515 would give the trial court discretion whether to approve such appeals and, if granted, whether to stay its proceedings during the pendency of such appeal, it would change current law by requiring that the Federal Circuit hear and decide the appeal. Our Coalition believes that this approach is fraught with opportunities for mischief. Such an approach is likely to lead to piecemeal litigation that will clog the docket of the Court of Appeals, slow the timely resolution of patent cases, and, ultimately, reduce the value of the patent award. As stated by Chief Judge Michel:

Interlocutory appeals of Markman rulings need no legislative compulsion because they already happen. The majority of our appeals are from summary judgments of non-infringement based on claim construction. What would be added are mainly cases where the claim construction is not dispositive, which hardly seems efficient. Greater cost and delay will follow when everyone agrees costs and delays need to be reduced.17

Moreover, where the case involves the alleged invalidity of a patent, and/or where factual disputes exist as to the nature of the alleged infringement, our experience is that further proceedings, including trial, are normally needed to develop the issues. For this reason, and because patent cases normally involve the assertion of multiple claims raising many issues of interpretation, many Markman rulings are not case dispositive. Moreover, it is not infrequent for district court judges to modify their claims construction rulings during the course of the case, as they become more familiar with the technology at issue and better appreciate the context, significance and potential ambiguities of their initial interpretations.

Although previously rarely granted (as previously noted), there are signs that this may be changing. On February 6, 2009, the Federal Circuit granted permission in Shire LLC v. Sandoz concerning the effect of a prior district court Markman ruling.18

For these reasons, and because it would compound and delay already-complex patent litigation, we do not favor giving litigants an unfettered right to bring interlocutory appeals on all claims construction rulings. Nonetheless, if a right of interlocutory appeal

http://www.patentsmatter.com/issue/20090128_michel_acpc.htm
is to be given, it should be limited to appeals from denials of potentially case-dispositive summary judgment motions based on the interpretation of one or more of the patent claims in issue. Moreover, such appeals should not proceed unless the district court believes that the evidentiary record is sufficiently developed to fairly support the appeal, the ruling is sufficiently final as to be unlikely to be modified in ensuring proceedings, one or more issues to be appealed is outcome determinative, and an immediate appeal would otherwise further the interests of justice. Finally, if such an interlocutory appeal is taken, the appellant should not be permitted to institute a second appeal as to any claim construction issue that was raised or could have been raised. By including these important limitations, district courts will maintain control of the management of their cases, and those claim construction issues that are appealed will be of sufficient importance to merit the time and attention of the Federal Circuit.

VII. Legislative Action on Willfulness Is No Longer Needed

The 21st Century Coalition opposes the willfulness provision of Section 4 of S. 515, as the Federal Circuit’s recent decision in *In re Seagate*\(^{19}\) abandoning the former “duty of care” standard in favor of the higher “objectively reckless” standard obviates the need for any further legislation at this time.

First, the willfulness provision contained in S. 515 is a carry over of a provision written to establish a safe harbor from liability that might have existed in a “duty of care” environment. It proposes, for example, to establish a good faith state of mind defense, even though, as the Federal Circuit explains in *Seagate*,

> The state of mind of the accused infringer is not relevant to this objective inquiry. If this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.\(^{20}\)

Moreover, in determining whether an accused infringer “acted despite an objectively high likelihood that its actions constituted infringement of a valid patent,” courts must consider “both legitimate defenses to infringement claims and credible invalidity arguments . . . .,” provisions not addressed in the current proposal. Accordingly, the potential exists that S. 515 may be interpreted as altering the law of *Seagate*, rather than codifying it.\(^{21}\)

Second, while the Federal Circuit set forth the objectively reckless standard in *Seagate*, the court explicitly recognized “that the term [reckless] is not self-defining” and that future cases are needed to “develop the application of this standard.” Thus, to enact legislation at this point would likely interfere with the orderly development of important case law that will elucidate the practical considerations to be met in applying this standard.


\(^{20}\) See id.

Third, as an immediate and direct result of *Seagate*, district courts have begun routinely dismissing claims of willfulness from cases before they reach the trial stage, thus suggesting that undue allegations of willfulness are no longer the problem they once were. In the Coalition’s view, the best course under these circumstances would be for Congress to exercise legislative restraint in deference to the progress made on this issue by the courts, recognizing that there will be time for further legislative action, should subsequent developments indicate such a need.

**VIII. Legislative Action Regarding Venue Is No Longer Needed and As Proposed Would Be Unfair**

The 21st Century Coalition opposes the provisions of Section 8 relating to venue, because this provision is no longer necessary in view of recent judicial decisions, and in any event would unfairly discriminate against patent owners.

Section 8 of S. 515 is presumably directed at prohibiting plaintiffs from filing cases in the Eastern District of Texas, which has been criticized by some as a pro-plaintiff forum. If such a remedy were ever needed, several developments now appear to have made it unnecessary. First, there was a 17% decline in filings in the Eastern District in 2008, perhaps due to its mounting case backlog. Second, the Fifth Circuit’s recent decision *In re Volkswagen of America, Inc.*, which was promptly followed by the Federal Circuit’s decision *In re TS Tech Corp.*, appears to have remedied the venue shopping problem by holding that cases must be transferred to locales where there is a considerable nexus to the forum, such as to those *fora* where the witnesses and evidence may be found.

Should the Committee opt to retain a provision on venue, the Coalition urges that the language be balanced so that it recognizes a patent owner’s legitimate interest in bringing an infringement action in the district where it performs its research, development, manufacturing, or other commercialization of the involved technology, or where its relevant evidence or witnesses are located. For example, although the language of Section 8 allows patent-owning individuals, universities and nonprofit organizations to file suit where they reside, corporate defendants are denied such rights, and must bring suit in a district permitted under one of the preceding subsections specifying where defendants may be sued. Not only is this dichotomy unfair to corporate patent owners, but it is unduly overreaching to address the real root of the perceived venue problem that has spurred the calls for reform – cases being brought in purportedly pro-plaintiff venues that lack any substantive connection to any party’s activities or to the evidence relating to the case.

The rationale for recognizing a plaintiff’s home district as an appropriate venue for bringing a patent infringement action exists for corporate plaintiffs as well as individuals, universities and nonprofit organizations. Given the high costs and burdens associated with patent litigation, for many corporate plaintiffs, geographic convenience is

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22 *See In re Volkswagen of America, Inc.*, 545 F.3d 304 (5th Cir. 2008).

23 *In re TS Tech Corp.*, 551 F.3d 1315 (Fed. Cir. 2008) (granting a writ of mandamus holding that Eastern District of Texas clearly abused its discretion in denying a motion to transfer patent infringement case to Southern District of Ohio)
a primary concern. They prefer to bring suit in their home districts, where their witnesses, documents and other information typically are located. Moreover, for many corporate patent owners, their home forum typically is the place where they often have invested in research, development and commercialization of the patented technology. Their interests in protecting those investments in their home districts should not be ignored in favor of an accused infringer’s interests in litigating in its home court. Nearly every patent infringement action presents geographical inconvenience to one party or the other; and in our view, a venue rule that imposes that inconvenience on a corporate patent owner in all cases is neither fair nor justifiable.

**IX. Conclusion**

Johnson & Johnson and the Coalition for 21st Century Patent Reform appreciate the invitation to provide our views to the Committee on these and other patent reform proposals, and look forward to working with the Committee on this bill to bring it to successful passage.
TESTIMONY OF David J. Kappos  
Vice President and Assistant General Counsel  
Intellectual Property Law and Strategy  
IBM Corporation  
Before the  
United States Senate Committee on the Judiciary  
March 10, 2009

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 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”.

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

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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.

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

![Chart showing rise in patent litigation between 1991 and 2007.](chart.png)


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. There were 2,830 cases filed in 2006. Patent litigation has remained at this elevated level with some fluctuations. 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. 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. From 2006 to 2007, the number

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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

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8 Id. at 64.
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 inventions\(^4\) 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.\(^5\)

\(^4\) 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.

\(^5\) 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.\(^5\) 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.\(^5\) 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,\(^\text{16}\) 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.”\(^\text{17}\) In other words, the patentee received full compensation when the product was sold, and is not entitled to collect an additional royalty.\(^\text{18}\) 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.


\(^{18}\) 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

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\(^{19}\) 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.
component\textsuperscript{22} 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.\textsuperscript{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.\textsuperscript{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.

\textsuperscript{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.)

\textsuperscript{23} Id. at 7.

\textsuperscript{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 (Cl. Ct. 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.

Prepared Testimony of Taraneh Maghamé,
Vice President, Tessera, Inc.
Before the Senate Committee on the Judiciary
Hearing on: “Patent Reform in the 111th Congress: Legislation and Recent Court Decisions”
March 10, 2009

Chairman Leahy, Senator Specter, and Members of the Committee:

My name is Taraneh Maghamé and I am Vice President of Patent Policy and Government Relations Counsel at Tessera, Inc., in San Jose, California. Tessera also has facilities in Charlotte, North Carolina, including a facility for manufacturing a variety of optics products and components. I deeply appreciate this opportunity to speak before you regarding the importance of the US patent system to my company and our innovation economy.

The Tessera Story

Tessera, a co-founder of the Innovation Alliance, is a small publicly-traded company that was founded in 1990 by three former IBM technologists. We currently have over 900 U.S. patents or patent applications. The company has become a leader in semiconductor packaging with its invention of chip-scale packaging (CSP) technology, now widely adopted by the semiconductor industry. This technology enables the packaging of a chip to be approximately the same size as the chip itself, allowing for electronics devices such as cell phones to become as small as they are today. None of this would have been possible without a strong patent system to protect our inventions and reward our innovators.

Today, Tessera continues to innovate in new areas as a result of strategic acquisitions and investment, particularly in the imaging and optics business. The company has quadrupled the size of its work force in the last three years to over 400 employees, nearly 300 of which are engaged in research and development. In 2008, we spent $61.6 million on research and development.

As a result of our heavy investment in R&D, we provide innovative technologies that are transforming next-generation wireless, consumer and computing products. Our packaging and interconnect solutions offer new levels of semiconductor miniaturization by enabling smaller, more fully featured electronic devices. Our imaging and optics solutions provide low-cost, high-quality camera functionality in electronic products, and include image sensor packaging, wafer-level optics and 'smart' image enhancement technologies.

Tessera has a highly successful licensing program, under which it currently licenses technologies to over 60 companies. These companies manufacture a broad range of products. By choosing to make its technologies broadly available to a large number of
practicing manufacturers, Tessera promotes the rapid and wide dissemination of industry-wide solutions that raise the general level of product performance while promoting interoperable designs and reusable solutions. In a world of proliferating technical complexity and widely distributed innovation, business models like Tessera's, which match highly specialized research and development with open licensing, increase efficiency and reduce transaction costs for multiple industries.

Tessera is in the business of innovation, and its innovations positively impact millions of lives every day. Maintaining a strong patent system is essential to our continuing success.

The distributed innovation model that has made Tessera successful is not unique in our industry. In fact, small companies generate most of America's innovation and employ more than 80% of its workers. Many of these companies would not exist but for a strong patent system, and cannot survive absent a strong patent system.

While this hearing’s focus is on pending legislative proposals and the impact of recent court decisions on our patent system, allow me to provide a brief overview of why we at Tessera believe a strong patent system is so vital to our nation’s economic well-being.

**The Innovation Ecosystem**

The US patent system has fueled economic growth for over two centuries and is now crucial to our country’s economic recovery. A strong and predictable patent system fosters the collaborative development and funding required to transform basic research into commercially viable technologies and stable, high-paying jobs. According to a study by the Federal Reserve Bank of Cleveland, those states with the greatest percentage of patent ownership also enjoy the highest levels of income and economic prosperity.¹

Tessera supports legislative and regulatory improvements to our Nation’s patent system, provided the changes are aimed at strengthening our patent system and do not diminish the value of patents. However, we must oppose legislation that will diminish the value of patents, no matter how well intended.

It is troubling to many small technology companies that, at a time of such grave economic uncertainty, Congress would seek to fundamentally alter the economic structure of our Nation’s patent system. We believe the proposed changes to the law of damages, in particular, would cause a massive and irreversible transfer of wealth from the United States to foreign manufacturers.

In a recent op-ed in the New York Times (February 22, 2009), columnist Thomas L. Friedman wrote:

As we invest taxpayer money, let’s do it with an eye to starting a new generation of biotech, info-tech, nanotech and clean-tech companies, with real innovators, real 21st-century jobs and potentially real profits for taxpayers. Our motto should be, “Start-ups, not bailouts: nurture the next Google, don’t nurse the old G.M.’s.”

A strong patent system that appropriately rewards innovation is needed to “nurture the next Google.”

In a world where innovation and IP are more important and valuable than ever, Congress should champion America’s small innovators and vigorously challenge any legislation that would diminish the value of the patents that help fuel that innovation. Sadly, some business advocates for reform seem to be inverting the truth surrounding innovation and intellectual property, arguing that patents themselves are an obstacle rather than a defender of innovation. However, our foreign competitors – those same countries that would benefit from a weakened U.S. patent system – recognize the importance of intellectual property to their economies. A February 25, 2009 NY Times article entitled “In Innovation, U.S. Said to Be Losing Competitive Edge,” states:

Some countries, including Singapore, Taiwan, Finland and China, are pursuing policies that are explicitly designed to spur innovation. These policies typically try to nurture a broader “ecology of innovation,” which often includes education, training, intellectual property protection and immigration. This is in contrast to the industrial policy of the 1980s in which governments helped pick winners among domestic industries.³

While other countries increasingly recognize the danger of picking winners among their domestic industries and promote stronger intellectual property protections, in many instances looking to the American patent system as the “gold standard” and a model to be duplicated, some members of Congress continue to advance legislation that would diminish intellectual property protection for American small companies and start-ups.

This is not to say the current patent system is perfect. It is not. Our nation’s economic recovery and continued global competitiveness depend upon a strong and predictable PTO. In our effort to provide constructive comment on this issue, we have made proposals to the Committee regarding how the patent office can be improved, including measures that would enhance patent quality by devoting greater examination resources to complex applications and improving the current inter partes reexamination


system. We also believe the PTO should be empowered to forgive educational loans carried
by its examiners in exchange for five years or more of service, to improve retention rates.
Investment in the PTO is an investment in America’s economic future.

**The Economic Case for a Strong Patent System**

The U.S. economy is dependent on patents and other IP assets for stability and
growth. According to the President’s Economic Report, intellectual property accounts for
33 percent of the value of US corporations, with patents representing one-third of this
value. In total, U.S. intellectual property is worth an estimated $5 trillion, which represents
almost a third of our country’s GDP. The IP component of the U.S. economy, which may
be its largest sector, is greater in value than the entire GDP of any other nation.

IP strategy experts Mark Blaxill and Ralph Eckardt note in their recently published
book, *The Invisible Edge*, that thanks to America’s high-performance innovation
economy, protected by our patent system, the lion’s share of the world’s economic value
generated by intellectual property now flows to American companies and workers.
American intellectual property, by itself, provides one of the strongest surpluses in the
country's balance of trade accounts.

For example, in 2007, America's IP exports, that is, royalties and license fees we
receive from overseas, were $62 billion – three times larger than Japan's IP exports, which
came in second at $20 billion. And America's IP surplus was eight times the size of Japan's
and twice the size of the combined surplus of every other country in the world that reported
an IP surplus.

Intellectual property – the legal structure that captures innovation – is our nation’s
“Invisible Edge.” In fact, American inventors have been responsible for half of the greatest
inventions in history, such as steam engines, electricity, and integrated circuits. One of the
factors that have greatly contributed to this inventive spirit is a long legal tradition that
defends both personal and business property rights.

Increasingly, the interests of the U.S. economy are separating from those of world’s
largest global companies. The shift has been noted in policies concerning taxation,
international trade, and now intellectual property protections. The role of these giant
companies in orchestrating global commerce presents a fundamental challenge to
America’s innovation economy. Unlike giant multi-nationals, which can innovate
anywhere in the world, the U.S. economy needs local innovation to thrive. American
innovation, more often than not, occurs at small companies.

So why do we need to maintain a strong patent system?

Strong patent rights drive local job creation and income growth, particularly in
sectors that offer skilled, well-paying jobs. Patent ownership is a key indicator in
determining a state’s income level vis-à-vis other states, followed by education and
industry specialization. States with the highest level of patents per capita tend to have the
highest income levels, while most lower-income states have very low levels of patenting
per capita. A strong patent system is transformative in its ability to fuel local investments in knowledge-based industries and revitalize struggling state and regional economies.

Strong patent rights drive technology transfer and private capital investments in home grown innovative technologies. Strong patent rights facilitate and encourage technology sharing among universities, national laboratories and private firms. Patent-fueled technology transfer and investments are particularly critical to emerging fields such as biotechnology.

Strong patents rights are also critical to the competitiveness and survival of our domestic manufacturing sectors. Patents facilitate “disruptive” innovation within established industries, empowering smaller firms to force technological change within manufacturing and other traditional sectors, and encouraging incumbents to improve existing product lines and business units.

Given the change in policy direction here in Washington, more attention is being given to green technology and the need to invest in that sector. Strong patent rights fuel investments in, and commercialization of, alternative energy and other sustainable green technologies. Patent rights also encourage established manufacturers to invest in green technologies to improve existing product lines and business units.

We all recognize the need to reduce our dependence on foreign oil and make our nation energy independent by adopting the use of renewable energy and energy-efficient technologies – what we call “clean-tech.” Clean-tech is the fastest growing sector of venture investment and the venture capital community that led the way in high-tech and biotech is now poised to lead the way in new clean technologies. The companies that are truly taking the risk in developing the new frontier for innovative ideas are the venture-backed and other small innovators. Thus, we should strive to make sure that our clean-tech future, and the future of American innovation, is not harmed by any unintended consequences of misguided patent reform.

Small innovative firms produce proportionately more, higher quality patents than large firms, and they rely more heavily on patents to protect their innovations. Patents also empower small firm innovators to build new businesses around emerging fields of technology, which might otherwise be ignored by large firms.

Recently, the Chief Judge of the United States Court of Appeals for the Federal Circuit gave the keynote address at a Federal Trade Commission hearing at which he opined on the negative consequences of getting patent reform wrong. He said: “Is it too much to ask that our reforms not only promote innovation, but also promote job creation and avoid job loss and promote stock values going up instead of precipitously down?”

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With this background, permit me to turn to a discussion of the concerns Tessera has with S.515, “The Patent Reform Act of 2009” and, in particular, the sections of the bill dealing with the calculation of damages and post-grant opposition. It should be noted that other industries share Tessera’s concerns with these provisions. These concerned stakeholders include: agriculture, alternative energy, biotechnology, chemical, computer hardware, computer software, computer networking, financial services, food/beverage, green tech, health care, heavy industry, life sciences, manufacturing, medical devices, material science, nanotechnology, optics, security, startup incubation, telecommunications, venture capital, and Internet-based businesses.

**Damages and Post-Grant Opposition**

As the Committee is well aware, Section 4 of the patent bill, which changes how damages for infringement are calculated in reasonable royalty cases, has been the most contentious part of the proposed legislation. Industry advocates for a reformulation of reasonable royalty damages rules assert that it will prevent frivolous assertions. Despite all the anecdotes, no serious data has been provided to date to support this claim. While patent litigation – like any high-stakes commercial litigation – is often expensive, the costs incurred by alleged infringers pale in comparison to the billions of dollars that American companies invest each year to further innovation in reliance on the belief that their hard work and creations will be protected by strong and fair patent laws.

But is there really a damages problem? Damages awards have been largely consistent for more than a decade, according to a PriceWaterhouseCoopers 2008 Patent Litigation Study. Also, University of Houston Law School Professor Paul Janicke’s survey of patent infringement cases filed since 2005 demonstrates that there is no pattern of runaway jury verdicts in patent cases. It also confirms that trial judges routinely review verdicts and set aside awards that are not supported by the evidence. These conclusions are supported by numerous other studies and articles, including those by Harvard Law School Professor Einer Elhauge and patent law expert William C. Rooklidge.

Professor Janicke performed a comprehensive analysis of patent infringement cases filed for the period from January 2005 through January 2009 and verdicts issued in that time period. His analysis shows:

- 86% of the cases settle before trial.
- Taking into account only cases in which an award is issue, the median award is about $5-6 million.
- Taking into account all cases that go through trial, including those that result in no recovery, the median award is less than $2 million.

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Another study by Prof. Janicke in 2007 based on the 93 jury verdicts issued in patent infringement cases between January 2005 and November 2007 shows:

- In 22 of the 93 cases, the jury returned verdicts of no damages.
- In 13 of the 93 cases, the jury found monetary damages of $500,000 or less.
- In 47 of the 93 cases, the jury found damages of $2,000,000 or more.

Of the 47 patent cases where the jury found damages of $2,000,000 or more:

- In 1 case the parties had stipulated to the amount of damages.
- Of the remaining 46 verdicts, in 9 cases the damages were based on a calculation of lost profits.
- Of the remaining 37 verdicts, in 9 cases the damage verdict was set aside by the trial judge or on appeal.
- Of the remaining 28 verdicts, in 3 cases the trial judge found the damages awarded were not supported by the evidence.
- Of the remaining 25 verdicts, in 4 cases the trial judge increased the damage award based on the defendant’s willful infringement.
- The remaining 21 verdicts were still under review, either at the trial court or on appeal.

Prof. Janicke’s data illustrates that despite arguments made by proponents of damages reform, there is no pattern of runaway jury verdicts or exorbitant damages awards. Furthermore, judges review awards where necessary, as with the $1.5 billion jury award in the Lucent Technologies v. Gateway case, and set aside the verdict where appropriate.

In addition, in a pending appeal of Lucent Technologies v. Gateway, the Federal Circuit has been asked to rule on the same damages issues addressed in the proposed legislation. The Federal Circuit is, of course, the expert body created by Congress with exclusive jurisdiction to hear appeals in patent matters. We believe the legislative process will benefit from waiting until the Federal Circuit has rendered a decision in the Lucent case.

The Committee has heard, and will continue to hear, from the large companies pressing for damages legislation about the need for “predictability.” But their desire for predictability needs to be balanced against other values: fairness, flexibility, and maintaining confidence in the ability of innovators to recoup their investments. Dismantling the long-established framework for calculating reasonable royalties at trial will encourage infringers, and perhaps even existing licensees, to reject negotiated, market-
based royalties. It will weaken the value of patents generally and unfairly advantage large companies looking to acquire a smaller innovators property.

“Apportionment” of Reasonable Royalty Damages

Critics of Georgia Pacific (the leading case on reasonable royalty damages) are fond of suggesting that a 40 year old judicial decision must be outdated given the tremendous changes in technology that have since occurred. In reality, however, Georgia Pacific simply restated the basic principles and methodology that have historically guided courts in matters of patent damages. In addition, the court enumerated the types of factors that may be relevant to a patent’s market value when calculating compensatory damages, while emphasizing the non-exhaustive nature of the list and the need for judicial discretion in all cases.

At their core, the rules articulated in Georgia Pacific are rooted in well-established (and arguably incontrovertible) legal and economic principles of compensatory damages generally – i.e., the same principles that govern damages in other contexts. Foremost among these is to restore the injured party, as nearly as possible, to the position he or she would have enjoyed had it not been for the wrong of the other party. The injured party's ex ante position is measured in terms of "market value" – i.e., the established exchange value of the property or, if no established value exists, the amount that would have been negotiated by a willing buyer and seller immediately prior to the trespass.5

Consistent with basic tenets of compensatory damages and market valuation, the court in Georgia Pacific cited three cornerstones of patent damages law:

1. Damages must place the patent holder in at least the same pecuniary position as it would have been in had the patent not been infringed -- i.e., the reasonable royalty that a the patent user would have paid for the use made of the invention;
2. To achieve that result, damages should reflect the royalty a willing licensor and licensee would have negotiated immediately prior to the commencement of the infringement, with both parties assuming the patent to be valid, enforceable and infringed absent a license (i.e., the “willing buyer/willing seller” paradigm used to assess the market value of any asset); and
3. Given the multiplicity of factors that may be relevant to a reasonable royalty, courts and juries must be given the discretion and flexibility to consider any and all evidentiary factors that would have been deemed relevant by the parties in a hypothetical negotiation and to determine the respective weight to be given each such factor.

When taken as a whole, these principles aim to uphold the property rights embodied in a patent and to ensure that reasonable royalty damages are sufficient to safeguard those rights. These rules are not, as some would suggest, unique to patent law or easily

susceptible to radical change. Indeed, the tried and true principles that underlie Georgia Pacific and patent damages law generally are so firmly grounded in our legal system that it would be difficult to justify any significant departure without acknowledging an effort to transform patent rights into something far different, and far less valuable, than the nation’s founders intended.

The so-called “apportionment” proposals would unquestionably diminish the value of U.S. patents — indeed, reducing patent value is the principal goal of apportionment. Although there are marginal differences between the various versions of apportionment introduced in this and previous congresses, each proposal (including the damages amendment included in S.515) has aimed to reduce reasonable royalty damages according to novel rules of patent valuation. The proposed apportionment test would assess damages according to the patent’s incremental benefit to the patent user, as measured by the invention’s “specific contribution over the prior art”. As a result, reasonable royalty damages would no longer compensate the patent holder for the full extent of its losses (as historically measured by the market value of lost royalties), let alone discourage infringement. Without the prospect of meaningful damages, a patent would confer something less than a property right and cease to function as an effective incentive to invest in and commercialize disruptive technologies.

The distinction between our system of compensatory patent damages and the proposed apportionment rule is more than theoretical. As a historical matter, apportionment of profits was a form of equitable remedy that gained acceptance in the 19th century due to the then-existing division between courts at equity and law. The concept of mandatory apportionment was abandoned by Congress in 1946 because of the gross inefficiencies and inequities that it had caused. Were mandatory apportionment to be resurrected in the form proposed in previous patent bills, the impact on patent holders and the U.S. economy would be significant and indefensible.

According to a recent study conducted by Dr. Scott Shane of Case Western Reserve University, the proposed apportionment amendment would reduce the value of U.S. patents by as much as $85.3 billion; reduce R&D expenditures by up to $66 billion per year; and potentially cost the U.S. economy 298,000 manufacturing jobs.\(^9\) Beyond these effects, an apportionment-based damages regime would inject tremendous uncertainty and instability into our patent system, at a time when U.S. firms can ill afford further upheaval. Uncertainty and instability are forces that unquestionably discourage investments in the commercialization of new technologies, decreasing competition across new and old industries alike.

Advocates of apportionment have yet to substantiate allegations of excessive royalties or unfair damages awards. To the contrary, patent litigation studies reveal that median damages awards have, year after year, remained fairly stable.\(^10\) Although jury trials are more likely to result in large damage awards than bench trials, federal judges do not


hesitate to overturn or reduce excessive jury verdicts. With few exceptions, the largest jury verdicts awarded each year are typically reduced or overturned on appeal, as in the *Lucent* case.\footnote{Innovation Alliance, *Moving beyond the Rhetoric, Jury Damage Verdicts in Patent Infringement Cases* (2005-2007).}

In several public statements, including in a letter to this Committee dated June 13, 2007, Chief Judge Paul R. Michel of the Federal Circuit expresses his surprise at the perceived need for reforms implementing the “apportionment” methodology:

Under current practice, apportionment of damages is infrequently invoked. Present law requires the accused infringer to establish a basis for such apportionment. It is attempted in only a limited number of cases and successful in still a smaller number of cases.

In his letter, Chief Judge Michel proceeds to outline the innumerable problems and delays that would result from the proposed changes to damages calculations. Clearly, such a risk is not worth taking in this difficult economic climate, simply in response to anecdotal evidence presented by the proponents of damages reform – companies that will benefit from a weakened patent system.

Furthermore, there is no credible evidence to suggest that existing damages rules are forcing large manufacturers to submit to the frivolous settlement demands of non-practicing entities. Patent damages rules are based on the same principles that underlie compensatory damages generally; thus, the risks of inflated settlements are no greater in patent negotiations than in the context of any other commercial dispute. Such claims seem particularly implausible in the wake of *eBay, KSR, Bilski* and other cases that have significantly undermined the ability of non-practicing entities to enforce “trivial” or otherwise questionable process patents.

*Post-Grant Opposition*

*KSR* and *Bilski* are expected to produce a wave of validity challenges in the courts and at the USPTO. These decisions have also engendered confusion and uncertainty as to the statutory standards that govern patentability, a situation that will further increase litigation costs, whether judicial or administrative.

The proposed post-grant opposition (“PGO”) system would further exacerbate this upsurge in the prevalence and costs of litigation, particularly when combined with an expanded *inter partes* reexamination process that lacks existing safeguards against abuse. The proposed hybrid PGO/inter partes system would (i) unleash a wave of administrative litigation with many of the costs and complexities of judicial litigation, (ii) invite serial and harassing validity challenges throughout the life of a patent, and (iii) effectively eliminate the statutory presumption of validity essential to a patent’s enforceability. Such a system, when combined with recent judicial patent decisions, would further weaken and destabilize patent rights and increase dramatically the risks and costs of patent ownership. As a
practical matter, small innovators would, as a result, find it increasingly difficult to attract the capital investments necessary to fund R&D and commercialization efforts, and to bring patent users to the negotiating table.

Beyond these ill effects, PGO would further strain the resources of an already overburdened and under-funded USPTO. Even the USPTO has acknowledged that PGO in the form proposed last Congress would overwhelm its offices with a wave of opposition challenges. Until the effects of *KSR, Bilski* and other cases are fully known, it would be far more prudent to focus on improvements to existing *inter partes* reexamination procedures without creating an extremely costly opposition system.

**Ongoing Litigation & Recent Patent Decisions**

When the patent legislation of today was first being discussed in 2005, advocates for far-reaching changes to patent law argued that the patent system was out of balance, with lax standards that yielded weak or overly broad patents and harsh remedies that gave so-called patent speculators too much bargaining power. Since that time, a series of U.S. Supreme Court and Federal Circuit decisions have unquestionably changed major areas of the law and shifted the balance of power between patent holders and users, tightening standards of patentability and narrowing patent rights and remedies. Tessera urges Congress and the Administration to consider carefully the impact of these decisions, once sufficient time has passed for their full effect to be known, before enacting any legislation that will further decrease the value or enforceability of patents.

Due to recent court decisions, it is now more difficult for innovators to obtain and enforce patent rights (particularly in the case of software and business methods), and even after winning at trial, to secure injunctive relief and enhanced damages. At the same time, recent Supreme Court and Federal Circuit decisions have considerably improved the litigation landscape for patent users. Not only is it easier for patent users to defend against infringement claims and remedies, users are better able to avoid venue in the Eastern District of Texas and other districts that lack a meaningful connection to the case.

Collectively, these judicial decisions have addressed virtually all of the substantive issues that originally led Congress to consider patent legislation, including injunctions, willfulness, venue and patentability standards. When viewed as a whole, the decisions represent the most comprehensive line of court-led patent reforms in decades.

Permit me to briefly summarize each of the key decisions in recent years and then turn to the question facing policy-makers: do these decisions remove or substantially diminish the policy rationale for legislative reform.

**Supreme Court Cases**

*eBay v. MercExchange (2006): Injunctive Relief*
The Supreme Court’s decision in eBay v. MercExchange\(^\text{12}\) marked the beginning of a period of judicial attention to patent law that has altered many of the substantive standards that underlie patent rights and remedies, in each case shifting the legal balance against patent holders. In eBay the Court decided that, despite the patent holder’s unquestioned statutory right to exclude, a permanent injunction should not issue as a matter of course following a final finding of infringement liability. The Court held that a permanent injunction is an equitable remedy and thus, before a patent holder can obtain such remedy, it must satisfy the same four part test for equitable relief that applies in other areas of the law. This test requires a plaintiff to demonstrate that (i) it has suffered an irreparable injury, (ii) remedies available at law are inadequate to compensate for that injury, (iii) considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted, and (iv) the public interest would not be disserved by a permanent injunction.

The Supreme Court rejected the Federal Circuit’s “categorical rule” favoring a grant of permanent injunctive relief following a verdict of infringement because such a rule failed to recognize the lower court’s equitable discretion to deny relief on the basis of the four-part test. Notably, the Court was equally hostile to categorical rules disfavoring injunctive relief based on broad classifications, including a patent holder’s decision to license its patents. But despite the clear admonition of the Supreme Court, some lower courts have interpreted eBay in a manner that arguably replaces one categorical rule, favoring the grant of permanent injunctive relief against infringers, with another, namely, one that has made it far more difficult for non-manufacturing patent holders to obtain injunctive relief of any nature.

In the process, eBay threatens to increase significantly the prevalence of court-imposed and -administered compulsory licenses that force patent holders to permit ongoing use of an invention by a proven infringer. Because Congress and the courts have long recognized the innovation-chilling effects of compulsory licenses, our patent laws have historically disfavored market distorting measures of this type. Following eBay, however, courts that deny permanent injunctive relief to certain categories of patent holders may be tempted to impose compulsory licenses. (Moreover, even if a court does not affirmatively grant a compulsory license, its refusal to enjoin ongoing infringement arguably has the same effect.) Should such a trend emerge, it would greatly diminish the value of U.S. patent rights for broad sectors of the innovation economy and encourage foreign governments to “break” U.S. patents through even more expansive compulsory licensing mandates.


In MedImmune, Inc. v. Genentech, Inc.\(^\text{13}\), the Supreme Court held that a licensed patent user's declaratory judgment action challenging the validity and enforceability of a licensed patent satisfies the case-or-controversy requirement for subject matter jurisdiction under the U.S. Constitution, even though the patent user has continued to make royalty


\(^{13}\) 549 U.S. 118 (2007).
payments. Under previous Federal Circuit precedent, the licensed patent user was required to stop royalty payments and breach the license agreement to meet the case-or-controversy requirement. This again is a major change in the law and tips the scales considerably in favor of the patent user. Additionally, it reduces the stability normally associated with arm’s length negotiated license agreements and provides incentive to licensed patent users to litigate without risk. Uncertainty will now prevail over the life of the license agreement, and more lawsuits will be filed.

The Federal Circuit further diminished legal incentives to negotiate a voluntary license in lieu of litigation when it subsequently applied MedImmune to licensing negotiations. In SanDisk Corporation v. STMicroelectronics Inc.\textsuperscript{14} the court held that when a patent holder notifies a patent user that certain planned or ongoing activity will infringe the patent holder’s rights absent a license, and the patent user disputes the need for a license, an actual case or controversy will arise sufficient to support a declaratory judgment action. Thus, a prospective licensee need not risk an infringement suit by engaging in the accused activity before initiating a declaratory judgment suit.


In \textit{KSR International Co. v. Teleflex Inc.}\textsuperscript{15} the Supreme Court altered the objective patentability test of obviousness which had been used by the USPTO and federal courts for two decades. The test was, and is still believed by many to be, necessary to avoid the inappropriate application of 20/20 hindsight to obviate non-obvious, and otherwise patentable inventions. Prior to this decision, in order for an invention to be considered obvious over prior art documents, the so called “teaching, suggestion, or motivation (“TSM”)” test had to be met. In order to meet this test, one of the prior art documents had to expressly state or suggest that the technical content of the other documents could be combined to make the invention for which a patent was being sought.

Characterizing this objective test of obviousness as too rigid, the Court held that a more flexible “functional approach” to resolution of an obviousness issue was more appropriate. This new approach generally requires a deeper analysis of what the qualifications of a person of ordinary skill in the art are, and then a more subjective inquiry as to whether or not such a person would consider the invention a predictable variation of the prior art solutions. Other additional and more subjective factors required to be considered are effects of demands known to the design community or present in the market factors, and whether the combination of elements constituting the invention was “obvious to try” by such a person.

Experts have predicted that KSR will lead to a sharp increase in validity challenges by patent users, as well as significant uncertainty as to the fate of patents granted under the previous obviousness test.

\textit{Microsoft v. AT&T (2007): Section 271(f) of the Patent Act}

\textsuperscript{14} 480 F.3d 1372 (Fed. Cir. 2007).
\textsuperscript{15} 550 U.S. 398 (2007).
In *Microsoft Corp. v. AT&T Corp.* the Supreme Court held that the exportation of a master disk with embedded software, which is subsequently copied onto computers in a foreign country, does not constitute the infringing supply of components for a patented invention, in violation of Section 271(f) of the Patent Act. Section 271(f) imposes infringement liability for supplying from the United States components of a patented invention to be assembled abroad, if such a combination in the United States would infringe the patent. The Federal Circuit had adopted an expansive view of Section 271(f), holding that the exportation of a software master disk satisfied both the “components” and “supply” prongs of the statute. The Supreme Court reversed, ruling that software *per se* cannot be considered a component. Moreover, because the copies of Windows software that were actually installed on the computers were made overseas, they were not supplied “from the United States” as required for liability under Section 271(f). Thus, Microsoft could not be held liable for damages based on the making and selling of foreign-assembled computers.

A narrow interpretation of Section 271(f) will have the greatest impact on patent holders that lack the financial resources to secure foreign patents, namely independent inventors, small firms and universities, among others. A significant foreign patent portfolio will now be required to realize full recovery of investments in innovation.


The Court’s decision in *Quanta Computer, Inc., et al. v. LG Electronics, Inc.* is notable in two respects: (i) it extended the patent exhaustion doctrine to method patents, and (ii) it held that the authorized sale of a patented product triggers exhaustion, notwithstanding contractual provisions by sophisticated parties to the contrary, even as to patents covering the combination of that product with other components, when the authorized product substantially embodies the “essential” or “inventive” features of the patented invention. LGE had licensed several of its process patents to Intel for the purpose of making, using and selling microprocessors and chip sets. Intel subsequently sold the products to Quanta, which then combined them with non-Intel parts in order to make computers. LGE sued Quanta for patent infringement, citing a stipulation in the Intel license agreement that that no license was granted to any third party to combine non-Intel parts with Intel products made under the license.

The Supreme Court held that because Intel was authorized to sell its products to Quanta, the doctrine of patent exhaustion prevented LGE from further asserting its patent rights with respect to the patents substantially embodied by those products. The Intel products embodied the essential features of the LGE patents because they carried out all of the inventive processes when combined, according to their design, with standard components. The Court further reversed the Federal Circuit’s holding that exhaustion does not apply to method patents. The Court observed that while a patented method may not be sold in the same way as an article or device, methods nonetheless may be embodied in a

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product, the sale of which exhausts patent rights. Significantly, the LGE license agreement did not preclude exhaustion because it merely denied a license to third parties that combine non-Intel parts with Intel products. As a result, the stipulation did not affect the legality of Intel sales, which effectively exhausted LGE’s rights to prevent downstream sales.

By expanding the patent exhaustion doctrine, Quanta further restricts a patent holder’s ability to enforce its rights against downstream users. More broadly, Quanta is now being cited in some quarters as justification for amended damages rules that would value reasonable royalties according to a patent’s “essential” or “inventive” features, comparable to the “prior art subtraction” test proposed in previous legislation. This argument has no merit and reflects a fundamental misunderstanding and misapplication of the Quanta decision. Neither Quanta nor the Court’s discussion of a patent’s essential features has any bearing on reasonable royalty valuation rules. Instead, Quanta addresses a completely different inquiry, namely the point at which downstream patent users should be free to engage in commercial transactions involving patented products without any liability to the patentee. The patent exhaustion doctrine ensures that once a patent holder has authorized the sale of a patented product (and presumably received a negotiated royalty), subsequent patent users in the value chain are exempt from further payment obligations. The doctrine has nothing to do with infringement remedies generally or rules for calculating damages when product sales are unauthorized and a royalty has not been paid.

**Federal Circuit Cases**

**In re Seagate Technology (2007): Enhanced Damages for Willful Infringement**

In *In re Seagate Technology* the Federal Circuit overruled its much-criticized decision in *Underwater Devices Inc. v. Morrison-Knudsen Co.*, which held that an alleged patent user has an affirmative duty of care to determine whether or not he is infringing, including an obligation to obtain opinion of counsel. In lieu of this negligence-based standard, the court adopted a heightened willfulness standard based on an objective recklessness test. Under the Seagate standard, a patent holder must show by clear and convincing evidence that the patent user acted despite an objectively high likelihood that its actions constituted infringement of a valid patent. The patent holder must also show that this objectively-defined risk was either known or so obvious that it should have been known to the patent user. Asserting the advice-of-counsel defense and disclosing opinions of opinion counsel do not constitute waiver of the attorney-client privilege for communications with trial counsel. Relying on opinion counsel’s work product does not waive work product immunity with respect to trial counsel.

By significantly elevating the standard for proving willful infringement and reemphasizing that there is no affirmative obligation to obtain an opinion of counsel, Seagate obviates any need to legislate in this area. The decision makes it more difficult for patent holders to successfully obtain enhanced damages for willful infringement; any

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18 497 F.3d 1360 (Fed. Cir. 2007).
19 717 F.2d 1380 (Fed. Cir. 1983).
further restrictions could undermine the legitimate deterrent effect of the willfulness
doctrine.

**In re Bilski (2008): Subject Matter Eligibility**

The Federal Circuit’s much-anticipated decision in *In re Bilski*\(^\text{20}\) narrowed the scope of patent-eligible process claims and, in particular, the business methods that many critics view as the principal culprit behind abusive litigation practices. Although *Bilski* falls short of resurrecting a categorical exclusion for business methods and software-related inventions (as critics of the *State Street Bank* case\(^\text{21}\) hoped that it would), it casts a cloud over the continued validity of issued patents of these types and erects a much higher bar for new and pending applications.

*Bilski* involved a claimed method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price. The patent examiner had rejected all claims in the application as not being directed to patent-eligible subject matter under Section 101 of the Patent Act, and the Board of Patent Appeals and Interferences had sustained that rejection. In an en banc hearing, the Federal Circuit affirmed the Board’s decision, holding that the claims failed to satisfy either prong of the “machine-or-transformation” test, which it deemed to be the governing test for determining patent eligibility.

The court held that a process is patent-eligible subject matter only if (i) it is tied to a particular machine or apparatus, or (ii) it transforms a particular article into a different state or thing. The “useful, concrete and tangible result” inquiry was deemed to be an inadequate test for determining eligibility. Moreover, even if a claim recites a specific machine or a particular transformation of a specific article, the recited machine or transformation must not constitute mere insignificant post-solution activity. Thus, *Bilski* throws into doubt the validity of claims to business methods that are implemented by a general purpose computer.

**In re TS Tech (2008): Venue**

In *In re TS Tech*\(^\text{22}\), patent holder Lear Corporation had filed a patent infringement suit in the Eastern District of Texas against the TS Tech entities, even though neither it nor any of the defendants were incorporated in Texas or had offices there. Nevertheless, Lear claimed venue on the grounds that the patent user’s products were sold in the Eastern District of Texas. Consistent with past decisions in which product sales were deemed sufficient to honor patent holder’s choice of venue in the Texas “rocket docket,” the district court denied defendants’ motion to transfer venue.

The Federal Circuit reversed and directed the lower court to transfer venue to Ohio, where two of the TS Tech entities were incorporated and based. The court held that the

\(^{20}\) 545 F.3d 943 (Fed. Cir. 2008).
\(^{21}\) 149 F.3d 1368 (Fed. Cir. 1998).
\(^{22}\) Misc. No. 888 (Fed. Cir. 2008).
lower court had erred in giving inordinate weight to the patent holder’s choice of venue. Among other considerations favoring venue in Ohio, including the fact that all physical evidence was located there, the court noted that there is no relevant connection between the actions giving rise to the case and the Eastern District of Texas, except that certain accused products of the patent user were sold in the venue. The court observed that such products are sold throughout the U.S.; thus, citizens of the Eastern District of Texas have no more or less of a meaningful connection to the case than citizens of any other venue.

*TS Tech* establishes a more conservative approach to patent venue rules, in which less deference will be given to patent holders’ venue choices when there is an absence of any meaningful connection to an infringement case. As such, the case addresses the criticism that the venue rules fail to provide a meaningful check against forum shopping by patent holders. Of particular significance is the Federal Circuit’s decision that products sales are, in the absence of other relevant connections, insufficient to support venue in the patent holder’s chosen venue. Because many (if not virtually all) patent infringement cases are filed in the Eastern District of Texas on that basis alone, *TS Tech* could facilitate the transfer of actions from this controversial rocket docket and discourage new suits from being filed in the first place.

**SHIFTING FOCUS IN THE WAKE OF JUDICIAL PATENT REFORM**

It is imperative that each of these cases be further analyzed to assess its individual impact, as well as the aggregate effect when considered as a whole or in conjunction with proposed legislation. Individually, these decisions, each of which shifted the balance of rights and remedies in favor of patent users to the detriment of patent holders, have addressed virtually all of the substantive issues that originally prompted calls for patent legislation, including injunctions, willfulness, venue, and standards relevant to the patent-eligibility of claims and validity of issued patents.

As for remaining priorities, the courts are obviously not positioned to address the USPTO’s resource constraints and operational deficiencies, which have diminished the overall quality, predictability and efficiency of pre-grant patent examination processes. These problems merit urgent attention and should be the focus of current patent reform efforts.

**Is Legislation Needed?**

The impact of *eBay* was quickly felt by non-manufacturing entities that concentrate on R&D and technology transfer. In the post-*eBay* world, patent holders of this type, which are among our most prolific and productive innovators, have had little success in securing injunctive relief. As a result, the value of their patents has already diminished, as has their ability to secure capital investments and negotiate voluntary licenses.

In a case where permanent injunctive relief is denied, reasonable royalty damages are typically the patent holder’s only viable remedy against infringement, and its only opportunity to secure downstream value in exchange for the upfront investments made by
investors and inventors alike. For these and other patent holders to remain viable and competitive, it is imperative that patent damages rules aim to achieve (as they currently do) the overarching goal of compensatory damages generally, namely to make the patent holder whole based on a market valuation of its losses. Any lesser measure of damages would devalue patents and deprive patent holders (and their investors) of the incentives needed to make risky bets on innovative technologies and products.

Critics will counter that despite the above decisions, legislation is still needed to address “inflated” damage awards and expand administrative opportunities to challenge issued patents. However, advocates of “apportionment” have never provided any hard evidence to justify such a radical departure from deeply rooted principles of compensatory damages, let alone the wholesale devaluation of patent rights. Similarly, proponents of a new post-grant opposition system have yet to explain how the USPTO will effectively manage a European-style system of administrative litigation on top of an already crushing backlog. As discussed in greater detail above, the clear intent behind the legislative proposals on damages and post grant is to diminish the value and enforceability of patent rights, to further shift the legal balance in favor of the patent user, and against the patent holder. The prospect of fundamentally weakening the U.S. patent system – formerly the envy of the world – would be problematic and unprecedented at any time in our history. However, at a time when the United States is in the grip of an ever-deepening recession, such legislation would be a disastrous blow to our innovation economy.

In conclusion, much has changed since patent legislation was first introduced in 2005. The Supreme Court and Federal Circuit have reshaped the patent landscape in a manner that has both strengthened the bargaining position of patent users and, in the process, created a far less predictable terrain for patent holders. The marketplace must be given an opportunity to adjust and apply these decisions. Beyond the legal changes, the current economic crisis has imposed an additional layer of uncertainty that threatens to chill investments in innovation. As in other sectors of the economy, what is urgently needed is a patent stimulus plan, one that preserves the fundamental strength of patent rights and remedies while improving the fairness and efficiency of pre-grant examination processes.
Statement of

HERBERT C. WAMSLEY

EXECUTIVE DIRECTOR

INTELLECTUAL PROPERTY OWNERS ASSOCIATION

Before the

SENATE JUDICIARY COMMITTEE

on

“PATENT REFORM IN THE 111TH CONGRESS: LEGISLATION AND RECENT COURT DECISIONS”

Tuesday, March 10, 2009
10:00 a.m.
Mr. Chairman and Members of the Committee:

My name is Herbert C. Wamsley. I appreciate the opportunity to be here today to speak on behalf of Intellectual Property Owners Association (IPO). I am the Executive Director of the association.

IPO is a trade association representing companies and individuals in all industries and fields of technology who own or are interested in intellectual property rights. Our members include a broad spectrum of more than 150 large and mid-size companies in industries ranging from information technology to consumer products to pharmaceuticals and biotechnology. We also have small business and independent inventor members. Our members file about 30 percent of the patent applications filed in the U.S. Patent and Trademark Office (USPTO) by U.S. residents. We are proud to say that all four of the companies on the panel today – Micron Technology, Inc., Johnson & Johnson, IBM Corp. and Tessera, Inc. – are IPO members.

We congratulate Chairman Leahy on introducing S. 515 to continue a difficult but critically important effort to improve America’s patent laws. We strongly support patent reform and a majority of the provisions in S. 515.

INTRODUCTION

I will comment on several sections of S. 515 and several recent court decisions affecting the patent system. My comments are based on positions adopted by the IPO Board of Directors on similar legislation in the last Congress and in previous Congresses. We are continuing to study the impact of patent reform proposals as well as recent court
decisions and look forward to working with the committee as the legislation moves forward.

Two major developments have occurred since Congress began working on comprehensive patent reform in 2005, following the reports by the Federal Trade Commission (FTC)\(^1\) and the National Academies.\(^2\)

First, the U.S. Supreme Court and the U.S. Court of Appeals for the Federal Circuit have rendered decisions that have altered the patent system significantly. Cases have been decided involving injunctions in patent cases, the obviousness standard for obtaining a patent, the test for willful infringement and treble damages, the standard for declaratory judgment actions, transfers of patent suits to more convenient venues, and patent-eligibility of certain methods, including business methods. A controversial patent damages verdict was overturned by a district court. These decisions may have eliminated or mitigated the need for some legislation that was proposed in the past two Congresses.

Second, the severe worldwide economic recession is having a dramatic effect on the resources available to patent and trademark departments in U.S. companies. We know of no comprehensive survey of U.S. industry, but IPO has received numerous reports of sharp cuts in the budgets of company patent departments and lower projections for the number of patent applications that will be filed in the U.S. and abroad in 2009 and

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subsequent years. The effects of corporate budget cuts on patent litigation are unknown at this time.

USPTO officials report that the agency’s patent user fee income is lower than had been projected. Patent applications filed in January 2009 were slightly lower than in January 2008 after years of steady increases. USPTO trademark processing fee income was 7.5 percent lower for the first five months of the fiscal year than for the same period a year earlier. Further decreases in USPTO patent application filings and user fee income -- perhaps large decreases -- seem inevitable. Comparisons with the Great Depression may bealarmist, but patent applications in the United States fell by more than 10 percent a year in each of the years 1931, 1932, and 1933, and filings did not return to pre-depression levels until after World War II.

In the depressed economic environment, the cost of the patent system to innovative companies, individuals and universities becomes critical. If patent reform raises the cost of obtaining and enforcing patents too much, the incentives provided by the system – the incentives to invent, to disclose new technology, to develop and commercialize new products and services, and to improve and design around patented inventions of competitors – will be weakened.

Patent reform is a jobs issue. The best hope for restoring America’s manufacturing base and creating new jobs in this country lies in American workers and American companies innovating new products and services that the people in this country and the rest of the world want to buy. The patent system, properly operating, is a huge stimulus to U.S. innovation and jobs. If the cost of obtaining and enforcing patents increases, the value of patents decreases, so the cost of each patent reform proposal must
be reviewed for its effect on the affordability of patent rights. IPO continues to support establishing new post grant review proceedings in the USPTO, for example, but the cost of such proceedings to the USPTO and to patent stakeholders must be contained. The goal of patent reform should be to stimulate more invention and investment by improving patent quality at reasonable cost and reducing litigation costs and legal uncertainty without decreasing the value of patents.

PATENT REFORM PROVISIONS IN S. 515

First-Inventor-to-File

Section 2 of the bill adopts a first-inventor-to-file rule for U.S. patent law, replacing the first-to-invent rule for determining which of two inventors may obtain a patent for inventing the same thing. IPO has long supported this change, which will simplify U.S. patent law and avoid expensive and time consuming patent interference proceedings for determining who came up with a specific innovation first. It would also provide more certainty about patent rights. We believe the first-inventor-to-file system is in the best interest of U.S. inventors large and small. Former USPTO head Gerald Mossinghoff conducted a study of the effect of first-inventor-to-file on small inventors by investigating actual cases. The study revealed that small inventors would fare as well under a first-inventor-to-file rule as under the existing first-to-invent rule.³

We favor implementation of the first-inventor-to-file rule as soon as legislation can be passed. While all other countries already follow first-inventor-to-file, and

adoption of the rule in the U.S. would further the long range goal of international patent law harmonization, implementation of first-inventor-to-file legislation should not be held up in hopes of an international agreement on harmonization. Adoption of a first-inventor-to-file system is a cost saving measure that benefits U.S. inventors and companies. We do not favor a provision in the House counterpart bill that makes first-inventor-to-file contingent on “major patenting authorities” adopting a 1-year grace period for filing patent applications. Such a provision could delay the adoption of the first-inventor-to-file rule in the U.S. for years if not indefinitely.

**Willful Patent Infringement**

Section 4 of the bill reforms the law of willful infringement and treble damage liability. IPO has supported legislation along the lines of this proposal. When Congress began considering patent reform legislation in 2005, willful infringement was being asserted in nearly every patent litigation case. The FTC and the National Academies reports recommended that treble damages be assessed against infringers only in limited situations. At the time, some companies said they were wary of even permitting their employees to read competitors’ patent documents, fearing that the company would be found to be on notice of infringement for purposes of treble damage liability.\(^4\) IPO believes treble damages should be limited to specific situations, such as where the defendant has received a detailed written notice from the patent owner charging infringement that identifies the specific patents and claims and the allegedly infringing products or processes, or where intentional copying occurred.

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\(^4\) FTC Report, Chapter 5, page 29 (Fn. 203).
The courts have attempted to address this particular defect in patent law. In 2007, the Federal Circuit decided *In re Seagate Technologies, LLC.*\(^5\) The Seagate court abolished the “duty of due care” standard for willfulness and replaced it with an “objective recklessness” standard. The Seagate decision was well received by IPO members, but it is too early to say whether the case, which has been applied by courts in several recent cases, has reduced litigation costs and unwarranted suits. Section 4 of the bill grafts the “objective recklessness” standard of Seagate on the language in the bill from the last Congress. While we continue to support requiring more specific notice of infringement for willfulness, we are studying whether legislation on this issue is needed in light of the Seagate decision and, in addition, whether the objective recklessness language is compatible with the remainder of section 4 of the bill.

**USPTO Opposition and Reexamination Proceedings**

Section 5 of S. 515 is directed to post grant procedures and other quality enhancements. We generally support establishing a new procedure for a post grant review that can be requested within 12 months after the date of patent grant. The 12-month period, a so-called “first window,” would afford an additional review of the patent examination process in the USPTO and an opportunity for members of the public to submit information and present arguments that may not have been available to the Office during examination. Such a proceeding should increase the quality of patents. Limiting the time to request a post grant review to 12 months after grant will lessen opportunities to harass patent owners and resolve uncertainty over legal rights early in the life of the patent.

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\(^5\) 497 F.3d 1360 (Fed. Cir. 2007).
Our support for this entirely new 12-month first window proceeding is contingent on keeping the cost of the proceeding reasonable and enabling the USPTO to meet the requirement in S. 515 for making a final determination in every proceeding within 12 to 18 months after the proceeding is instituted. It should be understood by all concerned that this will require more administrative law judges and a significant budget increase for the USPTO, and may require budget increases for patent owners during a severe economic recession.

Any opposition or reexamination proceeding must be carefully balanced to protect the interests of patent owners and competitors in resolving disputes without opening opportunities for abuse. Section 5 moves in the right direction by eliminating a “second window” post grant proceeding and relying instead on an expanded version of the existing patent reexamination statute as the mechanism for reviewing a patent in the USPTO at any time during the life of the patent. We support expanding the existing *inter partes* reexamination proceeding by striking the “or could have raised” phrase from the estoppel provision that prevents a reexamination requester from subsequently litigating the same patent in court in grounds the party raised or could have raised in the USPTO. This change will encourage parties to use the PTO proceeding at an early date to resolve issues of patent invalidity relatively inexpensively without fear of being prevented from raising other grounds in court later. We also support having *inter partes* reexamination proceedings handled by administrative patent judges and guaranteeing an opportunity for an oral hearing.

We are concerned about the addition of language that permits challenges to patents in a reexamination proceeding on the basis of evidence that the invention was “in
public use or on sale in the United States” more than a year before patent filing. Existing reexamination proceedings are conducted only to reexamine in light of patents and printed publications – documentary evidence that usually speaks for itself. Evidence of public use or on sale could be fabricated fraudulently by patent challengers. It would be difficult for patent owners to verify or challenge the legitimacy of such evidence, years later, and in a proceeding where discovery and cross examination of live witnesses would be unavailable. Further, the USPTO is relatively inexperienced in evaluating such evidence. In addition, limiting the public use and on sale clause to activities in the U.S. raises a question of whether nationals of the U.S. and other countries are treated equally as required by international agreements.6 We are reviewing the public use or on sale clause, but tend to believe it makes inter partes reexamination the equivalent of a second window post grant review, which we oppose.

**Venue for Patent Infringement Suits**

Section 8 of S. 515 makes extensive changes in the venue statute that governs where patent infringement suits can be filed. IPO has supported a simple activity-based approach to venue to define a location that has a logical connection to the activity at issue and prevent forum shopping and the filing of suits in districts that are not convenient to either party. Section 8 of the bill, however, is more complex and includes unwarranted exemptions for certain classes of plaintiffs.

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6 Compare the definition of prior art in 35 U.S.C. 102(a) as amended by section 2 of S. 515. That section permits public use and on sale activities occurring outside the U.S. to be used to invalidate patents in court. A patent-barring public use or on sale more than a year before patent filing can be either the inventor’s own public use or on sale or another party’s public use or on sale.
Very recently, the Fifth Circuit Court of Appeals in *In re Volkswagen*,\(^7\) and the Federal Circuit, applying Fifth Circuit law in *In re TS Tech USA Corp.*,\(^8\) ordered the transfer of cases from the popular Eastern District of Texas to districts more convenient for the parties. The U.S. Supreme Court denied a petition for review of the Volkswagen case on Feb. 23, 2009. Several commentators view these as watershed decisions that will make it easier to obtain transfers of cases filed in inappropriate districts for forum shopping or harassment purposes. We suggest a review of whether venue legislation should be enacted at this time or whether the courts should be given an opportunity to deal with transfer motions in patent cases on a case by case basis in light of the recent decisions.

**Interlocutory Appeals of Patent Claim Interpretations**

Section 8 of the bill also creates a right for litigants to take an interlocutory appeal of a patent claim interpretation decision by a district court to the Federal Circuit whenever the district court approves the interlocutory appeal. Supporters believe this provision will reduce costs and speed up patent litigation. IPO opposes this provision because we believe it will have the opposite effect – more expense and delay and more work for the Federal Circuit. It has been a basic tenet of federal judicial procedure for generations that interlocutory appeals usually are unavailable because they would result in piecemeal litigation.\(^9\) This general rule of jurisprudence should continue to apply to patent cases. Judges revise their claim interpretations with some frequency. Immediate review of claim interpretation already is available when a summary judgment motion is

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\(^7\) 545 F.3d 304 (5th Cir. 2008).
granted based on a claim interpretation that is dispositive of the case. The Federal Circuit has accepted interlocutory appeals of claim interpretations in a few cases.\textsuperscript{10} Interlocutory appeals of claim interpretation as a matter of right, however, would cause cases to be batted back and forth between the district court and the Federal Circuit, delaying the litigation process and increasing the cost of patent infringement trials.

This is not to say that the law of claim interpretation is without problems. A majority of the current judges of the Federal Circuit have said publicly that they would consider an \textit{en banc} decision to change the law to give more deference to district court claim interpretations when the Federal Circuit is presented with a case where claim interpretation is based on district court fact-based findings and giving deference would make a difference in the outcome. Also, it has been suggested that judicial or USPTO clarification of claim interpretation rules and heightened attention by the USPTO to the statutory requirement for claim definiteness would reduce litigation over the meaning of claims. Some jurisdictions now are adopting local patent rules that might improve claim interpretation hearings.\textsuperscript{11} We believe improvements can and should be made, but interlocutory appeals to the Federal Circuit as a matter of right are not the solution.

**Authority for the USPTO to Set Its Own Fees**

Section 9 of the bill authorizes the USPTO Director to set or adjust by rule any of the user fees established by statute for patent and trademark cases. IPO opposes this

\textsuperscript{10}Regents of the University of California v. Dako North America, Inc. 477 F.3d 1335 (Fed. Cir. 2007) (Interlocutory Appeal Accepted When Claim Construction Intertwined With Other Issues); Regents of the University of California v. Dakocytomation California, Inc. 517 F.3d 1364 (Fed. Cir. 2008) (Interlocutory Appeal of Claim Construction Issues Accepted When Issues Overlapped With Other Issues on Appeal).

\textsuperscript{11}IPO is drafting model local patent rules that it plans to publish this year.
section and urges its deletion. The dollar amounts of most patent and trademark fees are fixed by statute, except that the Director has authority to make annual cost-of-living adjustments in the statutory fees commensurate with changes in the Consumer Price Index. For three reasons, we believe Congress should retain its authority to set and adjust patent and trademark fees whenever changes other than cost-of-living adjustments are needed:

(1) Congressional control of USPTO spending is critically important to ensure efficiency and prevent waste. An agency that is charged with providing incentives for innovation, not merely selling patents and trademark registrations as commodities, should be subject to strict oversight over the prices it charges.

(2) The relative levels of individual fees such as the patent filing fee, the patent issue fee, and the “maintenance” fees for keeping a patent in force after grant reflect policy decisions that have been made by Congress on how the system should operate. For example, Congress has intentionally kept the filing fee (a “front end” fee) relatively low and obtained more revenue for the USPTO through maintenance fees (a “back end” fee), in order to help patent applicants large and small afford the cost of applying for a patent.

(3) The easy adjustment of USPTO fees through regulation would invite diversion of fees to unrelated government programs, a practice that cost three-fourths of a billion dollars of USPTO fee revenue between 1992 and 2004. Government officials under pressure to find new sources of revenue would be more likely to siphon off USPTO revenues if the agency could simply double or triple fees to make up for the loss.
Apportionment of Damages

In addition to willful infringement, section 4 of the bill also covers the hotly-debated issue of patent damages, an issue on which IPO members are divided. The 50-member IPO Board of Directors in 2007 by majority vote passed a resolution supporting legislation that would codify the existing law on damages for calculating a reasonable royalty. Unfortunately we have been unable to develop any consensus language to recommend. The dispute involves the analysis used by courts to determine a reasonable royalty for patented inventions that are elements in combinations. In the often-relied-upon Georgia-Pacific opinion, a 1970 district court opinion that lists 15 factors for determining a reasonable royalty, factor 13 is the “portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements, the manufacturing process, business risks, or significant features or improvements added by the infringer.” Many of our members believe that patent code section 284(c)(1)(C) in S. 515, which was the language used in S. 1145 in the last Congress, is a substantial departure from factor 13 of Georgia Pacific. S. 515 limits a reasonable royalty to “the portion of the economic value of the infringing product or process properly attributable to the claimed invention’s specific contribution over the prior art,” which is interpreted to incorporate a concept of “prior art subtraction.” We will be happy to work with the Committee in its effort to find consensus language on patent damages.

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PROVISIONS OMITTED FROM S. 515

Applicant Quality Submissions

We are pleased that S. 515 does not contain the requirement for “Applicant Quality Submissions” recommended by the Bush Administration that was in section 11 of S.1145. That requirement for patent applicants to submit a search report and other information and analysis relevant to patentability was strongly opposed by IPO members and many others. It would have unnecessarily increased the cost of patent applications and would have further increased unwarranted charges of inequitable conduct against patent owners.

Inequitable Conduct Before the USPTO

S. 515 does not include any provision on inequitable conduct, but we understand from the Chairman’s remarks on introduction of the bill that this topic will receive further consideration. IPO supports adding a provision to S.515 to address inequitable conduct. We believe the requirements for establishing the defense of inequitable conduct in patent infringement litigation should be raised by appropriately defining the standards for materiality and intent. Such a provision should be carefully balanced. It should continue to aggressively guard against those who might commit fraud before the USPTO, but it should eliminate fears of patent applicants that they will be charged with inequitable conduct for innocent mistakes in citing or characterizing prior art in communications with the USPTO. Applicants need to feel it is safe to single out the most relevant prior art.
documents and other information known to them. Such a change would cause applicants to stop flooding the USPTO with unnecessary references. It would improve communications between applicants and examiners and improve patent quality. We also favor elimination of the statutory requirement for disclosing the best mode of carrying out an invention as recommended in the 2004 National Academies Report, which would remove a subjective issue that has caused unnecessary litigation.

**Diversion of USPTO Fees to Unrelated Government Programs**

We are disappointed that S. 515 omits the USPTO funding proposal that was included in the bill during the last Congress as reported out of the committee. That section was designed to prohibit permanently the diversion of USPTO user fees to unrelated government programs. The section established a revolving fund called the “United States Patent and Trademark Office Enterprise Fund.” All user fees collected by the USPTO would have been deposited in the fund. Funds deposited would have been available only for paying the expenses of operating the USPTO, which currently are about $2 billion a year. This section also included extensive annual reporting and notification requirements to the Appropriations Committees, in order to assure fiscal discipline, responsibility and accountability by the USPTO.

User fees paid to the USPTO by patent and trademark applicants and owners are paid with the expectation that the money will be used to examine their applications and provide other services to them. The $750 million diverted to unrelated government programs between 1992 and 2004 was one of the major causes of the large backlog of unexamined patent applications that the USPTO is still struggling with today, according
to a report of the National Academy of Public Administration. While no money has been intentionally diverted since 2004, diversion will be a continuing threat to the agency until legislation is enacted to secure the funds paid to it by the public. We urge reinsertion of the revolving fund proposal into the patent reform legislation. This would achieve the goal of permanently ending the diversion of USPTO user fees while preserving the jurisdiction and prerogatives of the Appropriations Committees.

CONCLUSION

IPO strongly supports enactment of patent reform legislation, which we believe will help provide higher patent quality and reduce litigation costs. Patent reform legislation is a critical step toward improving the operation of the U.S. patent system. To be successful, it must be coupled with improvements in USPTO administration to increase the quality of patent examination and speed up the processing of patent applications. We look forward to making suggestions to the Committee and the next USPTO Director for administrative improvements.

Patent reform is not just for information technology, pharmaceuticals, and biotechnology, important as they are. Patent reform is extremely important for innovation in traditional manufacturing industries such as automobiles, aircraft, and consumer products. According to a statement by the AFL-CIO Executive Council last week:

Today, the automobile industry accounts for fully one-quarter of all American manufacturing jobs and output. The industry represents a complex integration of

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advanced manufacturing processes, technologies and materials, and is a critical
driver of innovation across every manufacturing subsector.

It is vital that we maintain the strength of our intellectual property protections to
ensure that innovation, production and jobs can be maintained and increased here
at home. Patent protection is a manufacturing and a jobs issue.\(^{15}\)

The key to renewing America’s world leadership in traditional manufacturing is a
leap forward in innovation. A more effective patent system can make enormous
contributions to U.S innovation, leading to more jobs in U.S. industry and new strength in
the economy.

I will be happy to answer any questions.

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\(^{15}\) “America Needs a Program to Maintain and Grow Good Jobs,” March 03, 2009,
http://www.aflcio.org/aboutus/thisistheafcio/ecouncil/ec03032009a.cfm (Last visited
March 9, 2009).
Patent Reform in the Courts and Congress

Testimony of Mark A. Lemley, Stanford Law School before the Senate Committee on the Judiciary
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Introduction and Executive Summary

Reforming the patent system is important. Patents are critical to innovation, and the patent system generally works well in encouraging invention. But the system also has problems, and has been the subject of abuse in recent years. As data from the Stanford IP Litigation Clearinghouse shows, patent owners sued more defendants in 2007 and 2008 than ever before, even though the total number of suits remained roughly constant. Further, research using clearinghouse data demonstrates that the majority of the most-litigated patents are owned by entities that do not make any product, but simply enforce patents. See John R. Allison et al., Extreme Value or Trolls on Top: Evidence from the Most-Litigated Patents, forthcoming U. Penn. L. Rev.

There is nothing inherently wrong with either the growth in patent lawsuits or in patent enforcement by non-practicing entities. But a number of patent rules have given those plaintiffs unfair advantages in litigation, allowing them to enforce dubious patents in favorable jurisdictions, and to use the rules of patent remedies to obtain more money than their inventions were actually worth. Many of those problems resulted from troublesome judicial interpretations of the Patent Act, rather than from the Act itself.

Since Congress began debating patent reform four years ago, the courts have acted to fix a number of the most significant problems that were the focus of initial Congressional interest:

- The Supreme Court decision in eBay v. MercExchange ended the Federal Circuit’s practice of automatically granting injunctions in patent cases, replacing it with a case-
by-case determination that (despite occasional aberrations such as Voda v. Cordis) has worked quite well in ensuring that patent owners who need injunctions can get them, but that patent owners who want an injunction merely to increase their settlement leverage by threatening to shut down unpatented components cannot.

- The Supreme Court decision in KSR v. Teleflex revamped the standard of obviousness to focus it more directly on what scientists working in the field would actually know and do, rather than on a fruitless search for documents stating the obvious. While the jury is still out on the application of KSR in the Federal Circuit, there is good reason to believe that it has helped weed out bad patents by giving district courts the power to grant summary judgment of obviousness in appropriate cases.

- The Supreme Court decision in MedImmune v. Genentech rejected in a footnote the Federal Circuit’s “reasonable apprehension of imminent suit” test for declaratory judgment jurisdiction. Since that time, the Federal Circuit has adopted a much more generous standard for declaratory judgment jurisdiction in cases like SanDisk v. STMicroelectronics and Teva v. Novartis. That more generous standard permits accused but not-yet-sued infringers to file a declaratory judgment when the continuing possibility of infringement litigation, avoiding the “patents of Damocles” problem and giving patent defendants, not just plaintiffs, a say in where patent lawsuits are filed.

- The Fifth Circuit en banc decision in Volkswagen, coupled with the Federal Circuit decision in In re TS Tech USA Corp., have made it significantly harder for patent plaintiffs to choose any forum in the country on the basis of its perceived friendliness to patent owners. While these cases are quite recent, they may ultimately go a long way towards solving the problem of forum shopping by considering the convenience of different districts in deciding whether to transfer venue in a patent case.

- The Federal Circuit en banc decision in In re Seagate Technology significantly reduced problems with the doctrine of willfulness by creating a new test for willful infringement ("objective recklessness") and by creating rules designed to preserve the attorney-client privilege in cases involving willfulness.
• Federal Circuit decisions in the last year or two, notably *Star Scientific v. R.J. Reynolds Tobacco*, have drawn an increasingly careful line on inequitable conduct, finding it where there was egregious conduct but emphasizing and strengthening the need to prove that the patentee intended to deceive the PTO. While there may have been excesses with inequitable conduct in the past, the doctrine itself serves a valuable purpose in preventing some very real cases of deception by attorneys or patent owners.

The combined result of these cases is to simplify the task of legislative patent reform considerably. There remains one significant judicially-created problem with litigation abuse of the patent system that Congress should address: the problem of damages calculation in reasonable royalty cases. And it is possible that the Federal Circuit will address that problem in a pending case, *Alcatel v. Gateway*. In addition, a new Federal Circuit en banc decision (*In re Bilski*) creates a potential new problem that deserves attention by restricting the scope of patentable subject matter. In particular, the effect of *Bilski* on patents for medical diagnostic processes is uncertain but potentially worrisome.

Apart from reasonable royalty damages, and possibly venue and patentable subject matter, patent reform in 2009 can focus on issues that clearly require statutory change rather than correction of judicial decisions. The most important of these changes are the institution of some form of post-grant opposition, the move to a first-inventor-to-file system, and the establishment of rule-making authority at the Patent and Trademark Office.

In the sections that follow I discuss each of these issues in more detail.
Publication and Post-Grant Opposition

Summary: Requiring publication of all patent applications and creating a post-grant opposition system are important changes that will improve the patent system.

The first goal of patent reform should be to ensure that the procedures in the Patent and Trademark Office are adequate to identify and weed out bad patents when it is cost-effective to do so. Two proposed changes will help.

First, it is important that the patent system require prompt publication of all U.S. patent applications. Section 122(b) currently permits some patent applications to avoid publication, with the result that some applicants can conceal their invention from the public for years. Those applicants can then take a mature industry by surprise when the patent issues. Requiring publication of all applications 18 months after they are filed will put the public on notice of who claims to own particular inventions, allowing companies to make informed research, development and investment decisions. Unfortunately, S. 515, unlike prior efforts at patent reform, does not appear to contain such a provision.

Second, the patent system should provide low-cost mechanisms for resolving the validity of disputed patents without litigation. Properly-designed administrative systems are a valuable addition to the patent system that will help identify and weed out bad patents without the cost and uncertainty of litigation. S. 515 would permit the submission of prior art by third parties, and would improve the inter partes reexamination system by permitting competitors to initiate reexaminations without foregoing their day in court. These changes are desirable and will improve the patent system.

S. 515 also provides for a post-grant opposition system. Post-grant opposition in general is desirable, since it provides a level of scrutiny somewhere between reexamination and litigation. The best approach is one that permits a post-grant opposition to be filed either
within 12 months after a patent issues or within 6 months after the opposer is notified of infringement, whichever comes later. The addition of the second, 6-month window has been controversial in some circumstances, but it is critical to the success of the post-grant opposition procedure. Because of the long timelines associated with many patents, and the fact that those engaged in patent holdup often wait for years after patents issue before asserting them, limiting opposers to a 9-month window after the patent issued would render post-grant opposition ineffective for the majority of patents. An example is pharmaceutical patents. Because of the long FDA approval process, potential generic manufacturers will likely have no idea at the time a patent issues whether the drug it covers will survive clinical trials and be approved for sale. By the time they know which patents are actually important, it would be too late to oppose them. This problem extends to other industries as well. Submarine patentees and other trolls often sit on patent rights for many years before asserting them against manufacturers. In order to take advantage of the nine-month window, those manufacturers would have to guess which of the millions of patents in force might become important a decade from now. Since only 1% of patents are ever litigated, forcing them to make such a guess would make the system worthless to most of the people who might want to use it.

Including a second window for defendants who were not on notice of the patent when it issued seems an appropriate way to solve this problem. This gives a short period in which to oppose patents once they are brought to a company’s attention, without permitting undue delay. To minimize the harm to patent owners whose rights are subject to later challenge, a second window for post-grant review should be useable only by those parties who could not reasonably have used the first window, either because they were not in business, not making a relevant product at the time, or could not reasonably have found the patent and known that it applied to their product during the first window. It may also be appropriate to raise the burden of proof on challengers during the second window. Unfortunately, S. 515 as currently drafted includes only a first window. As a result, while the template for post-grant opposition is quite good, it is unlikely that post-grant opposition as currently configured will get much use.
Damages: Reasonable Royalty and Willfulness

Summary: Changes to the entire market value rule and royalty stacking in reasonable royalty damages are important steps that will help deal with serious problems in the patent system.

The reasonable royalty provisions in existing law create significant problems in those industries in which patented inventions relate not to an entire product, but to a small component of a larger product. Because courts have interpreted the reasonable royalty provision to require the award of royalties based on the “entire market value,” juries tend to award royalty rates that don’t take into account all of the other, unpatented components of the defendant’s product. This in turn encourages patent owners in those component industries to seek and obtain damages or settlements that far exceed the actual contribution of the patent. There are numerous cases of just this problem occurring. Most notably, there are hundreds of “essential” patents covering proposed new standards for third-generation wireless telephones. Carl Shapiro and I have published an empirical study of this “royalty stacking problem.” Mark A. Lemley & Carl Shapiro, Patent Holdup and Royalty Stacking, 85 Tex. L. Rev. 1991 (2007). And as that study demonstrates, the royalties awarded in court far exceed what most licensing experts would consider a reasonable royalty, particularly for inventions that represent only one small component of a larger product.

The broad outlines of how to solve this problem are clear. Congress should require the courts to consider the contribution of other elements of the defendant’s product, not just the patented invention. Reasonable royalty damages should be limited to the share of a product’s value that comes from the invention, and that patentees should not be able to capture value they did not in fact contribute. This is the “apportionment principle,” and it is critical in preventing patentees from holding up defendants, trying to capture as damages value actually contributed by the defendant or by other inventors. At the same time, patentees should be entitled to capture the value they actually contribute, whether that value resides in a specific component, in a general improvement to the functionality of the product, or in a reduction in
the cost of manufacturing that product. The apportionment principle has been well-established in Supreme Court jurisprudence for over a century, but unfortunately Federal Circuit decisions have departed from that principle.

The only question is how to get there. Congress should implement the apportionment principle in a way that prevents patentees from manipulating their damages by changing the way they claim their invention. For example, the inventor of the intermittent windshield wiper could claim the wiper alone, or alternatively could choose to claim a car including an intermittent windshield wiper. The invention is the same, and the patentee shouldn’t be able to capture more money by phrasing the claim in the second way than the first. But the current damages rules may produce just such an effect, since the “claimed invention” is literally the whole car and not just the windshield wiper.

The straightforward way is to require courts to determine the value of the “inventive contribution” of the product in reasonable royalty cases. Damages reform should also make it clear that the “entire market value rule” has no place in reasonable royalty as opposed to lost profits analysis. A patentee who sells products can use the entire market value rule to prove that they would have made the sale but for the defendant’s infringement. A patentee who does not sell products can make no such showing, however. Awarding a non-practicing patentee the entire market value of a defendant’s product based on their invention of just one component by definition overcompensates that patentee, and requires the defendant to pay everything it makes to one patentee, and then to pay additional money to other patentees. I elaborate on this problem, and on the proper analysis of reasonable royalties and lost profits in the attached paper, “Distinguishing Between Lost Profits and Reasonable Royalties in Patent Cases.”

S. 515 makes some steps in the right direction, but also includes a provision that would lock the entire market value rule into the reasonable royalty damages calculus. That would be unfortunate, particularly since it is possible (though by no means certain) that the Federal
Circuit will address this problem later this year in the *Lucent v. Gateway* case. Subsection (a) dealing with the entire market value rule should be removed from the bill, or at a minimum should be amended to make it clear that a patentee is entitled to damages based on the entire market value rule only if the patentee can show that it would have made the sale of the entire product but for the infringement.

Senator Specter has suggested that Congress might be well-advised to wait in resolving the damages issue until the Federal Circuit has had a chance to act. There is logic to this, given that the courts have solved many of the other problems their prior decisions had created. But apportionment is the most important part of any patent reform legislation, and Congress should make sure that any such delay will not jeopardize the passage of damages reform legislation. As long as the bill does not lock in the entire market value rule, any judicial reform of reasonable royalty damages would be in line with the rest of what S. 515 proposes. In short, Congress should take care not to change damages law in a way that prevents effective Federal Circuit or Supreme Court reform, but changes that restore apportionment should not create an interference problem.
First Inventor to File

**Summary:** This is an important change, but should be accompanied by provisions requiring publication of all patent applications and expansion of prior user rights.

The move to a first-inventor-to-file system is an important step for several reasons. First, it simplifies the complex of rules for deciding whether a patent applicant is the first inventor. One way a focus on the filing date simplifies things is to eliminate the need to determine when an invention occurred in the vast majority of cases, an inquiry that has proven difficult. But the move to first to file also gives Congress an opportunity to get rid of confusing rules that add uncertainty to the patent system: the “secret prior art” rules governing commercial but nonpublic use, and that differ depending on whether the user is the patentee or not. These rules have created inconsistent judicial guidance and made it hard to know when an inventor was entitled to a patent.

Second, first inventor to file recognizes the international nature of today’s markets. The current statute defines prior art differently depending on whether a sale or a conference occurs in the U.S., Canada or Europe. Eliminating this distinction makes sense in the modern world. Because the rest of the world already uses filing rather than invention date to measure priority, first inventor to file will take an important step towards global harmonization, permitting U.S. inventors to more easily seek patent protection not just in the U.S. but in other countries as well. S. 515 also recognizes the global nature of commerce by getting rid of the old-fashioned prior art rules limited to conduct in a particular country.

In the past, small inventors have expressed concern that a first to file system will disadvantage them because large companies have the resources to file patents more quickly. More recent evidence demonstrates that that is not true. It is large inventors, not small inventors, who most benefit from the complex and expensive interference system that determines who was first to invent. And large inventors challenge the patents of small
inventors in an interference proceeding more often than the reverse. Eliminating interferences will help, not hurt, small inventors.

The best approach – and the one adopted by S. 515 would deviate from a pure first-to-file system by giving inventors who sell, use or publish their invention a year to get a patent application on file. This is a reasonable grace period. A small inventor concerned about losing a race to the patent office can publish the invention on a Web site. Doing so will prevent anyone else from getting a patent, while giving the inventor a year to find a patent attorney and file a patent application. Given the existence of simple provisional applications, that is a reasonable accommodation. S. 515 expands this grace period compared to prior versions of the bill by providing what is in effect a “first inventor to publish or file” rule. If an inventor publishes first, he or she has a year to file the patent application and claim priority even over those who independently invent but file after that publication date. That provision protects inventors against those who would steal their ideas and seek to file first.

If Congress is to move to first inventor to file, it should also provide prior user rights for those who engage in non-public use before the patentee files his application. S. 515 eliminates many existing categories of non-public prior art. Doing so risks permitting more, not fewer, patents to issue to people who were not truly the first inventor. Granting prior user rights to those who were already using the invention is a reasonable counterweight, because it gives the owners of such secret prior art at least the right to continue using technology they invented. Modifying 35 U.S.C. § 273 can address this concern by expanding a limited right that has been in the law for six years without creating any problems.
Venue and Interlocutory Appeal

Summary: Forum shopping has been a significant concern for the last several years. While court decisions may well solve the problem, proper legislative reform can assist in that effort. Interlocutory appeals, by contrast, are likely to prolong patent litigation and its uncertainty.

Plaintiffs in patent cases can file suit in any district in the country. Data from the Stanford IP Litigation Clearinghouse makes it clear that patentees have engaged in significant forum shopping, taking advantage of the high percentage of pro-patentee verdicts in the Eastern District of Texas and the high percentage of cases that survive summary judgment in the District of Delaware. See http://lexmachina.stanford.edu. Similarly, declaratory judgment plaintiffs choose for a known for lower patentee win rates and longer times to trial, such as the Northern District of California. The Eastern District of Texas in particular has proven unwilling to transfer cases to other districts in the interest of convenience.

Recent decisions by the Fifth Circuit en banc and the Federal Circuit require the Eastern District of Texas to transfer cases to more appropriate fora when they exist. Those decisions may well solve the forum shopping problem, if they are implemented fully at the district court. But the law provides that plaintiffs can file in any district, and district courts still have substantial discretion in deciding whether to keep cases. Further, the Volkswagen and TS Tech cases apply only to cases filed in the Fifth Circuit, not in other jurisdictions. As a result, it may be appropriate to restrict venue.

How to do so is more problematic. S. 515 rightly limits venue to places where the plaintiff or the defendant reside or have a significant place of business. And the provision preventing the artificial manufacture of venue is helpful. It seems problematic, however, to try to deny venue to certain types of patent plaintiffs while maintaining it for others. It is preferable to rely on transfer rules in cases where the plaintiffs file in inconvenient jurisdictions.
Such an approach will not eliminate all forum shopping by patentees or accused infringers. But it should reduce the problem to manageable proportions.

I am more troubled by giving district courts the power to approve interlocutory appeals of claim construction orders. Most claim construction orders result in summary judgment for one side or the other on infringement. While interlocutory appeal would prevent some unnecessary jury trials, the number of such trials every year is small, and there is a risk that district courts will permit interlocutory appeal and stay in virtually every case, adding a year or two to each case, burdening the Federal Circuit with new cases, and delaying the patentee’s ultimate relief. Further, because parties often settle after a Markman ruling, the prospect of interlocutory appeal may increase the cost of litigation by delaying settlement pending that appeal. If the provision remains in the bill, it would be helpful to limit it to extraordinary circumstances, such as ones in which the district court identifies particular close claim construction questions that would ultimately resolve the case.
Distinguishing Lost Profits From Reasonable Royalties

Mark A. Lemley

Patent damages are designed to compensate patentees for their losses, not to punish accused infringers or require them to disgorge their profits. The statute provides for damages "adequate to compensate for the infringement, but in no event less than a reasonable royalty." Courts interpreting this provision have divided patent damages into two groups – lost profits, available to patent owners who would have made sales in the absence of infringement, and reasonable royalties, available to everyone else. Traditionally, patentees want to prove lost profits, because only that measure captures the monopoly value of exclusion of competitors from the market. As the statutory language suggests, reasonable royalties exist as a floor or backstop for those who cannot prove that they have lost profits as a result of infringement. The rationale is that an infringed patent is valuable, and could be licensed for a fee even by patent owners who don’t employ the patent in the marketplace.

In practice, however, the lines between lost profits and reasonable royalties are blurring. In significant part this is because courts have insisted on strict standards of proof for entitlement to lost profits. Specifically, patentees must prove demand for the patented product, the absence of noninfringing substitutes, the ability to meet additional demand in the absence of

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1 © 2009 Mark A. Lemley.

2 William H. Neukom Professor, Stanford Law School; partner, Durie Tangri LLP. Thanks to Rose Hagan for comments on a prior draft.

3 Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1223 (Fed. Cir. 1995).


5 See Panduit Corp. v. Stahlin Bros. Fibre Works, Inc., 575 F.2d 1152 (6th Cir. 1978) ("When actual damages, e.g., lost profits, cannot be proved, the patent owner is entitled to a reasonable royalty.").
infringement, and the proportion of those sales that represent profits.\textsuperscript{6} This in turn means that many patent owners who have in fact probably lost sales to infringement cannot prove lost profits damages, and turn to the reasonable royalty measure. The result is that courts have distorted the reasonable royalty measure in various ways, adding “kickers” to increase damages, artificially raising the reasonable royalty rate, or importing inapposite concepts like the “entire market value rule” in an effort to compensate patent owners whose real remedy probably should have been in the lost profits category. Unfortunately, Congress now seems poised to lock one of those distortions – the entire market value rule – into reasonable royalty law.

In Part I, I explain the strict requirements for proving lost profits, and give examples of patentees who have failed to meet these requirements. In Part II, I explain how relegating these patentees to reasonable royalties has led to problematic changes in reasonable royalty law. Finally, I suggest in Part III that courts should draw a sharp division between the injury suffered by patentees who compete with infringers and those who do not. Patentees who compete should be entitled to the best estimate of lost profits, even if not all elements of proof are available. Doing so will avoid overcompensating patent owners in reasonable royalty cases.

I. Losing Entitlement to Lost Profits

The traditional conception of patent protection is to give patent owners a means of excluding competitors from selling the patented product in order to increase their profits, and therefore the incentive of putative patent owners to invent. This traditional conception requires exclusivity. It explains why the normal remedy for infringement of a patent is an injunction against continued infringement.

\textsuperscript{6} Id. at __.
Lost profits fit logically with this traditional conception. Giving patentees the profits they would have made absent the infringement effectively puts them in the same position as if they had had an injunction in place all along.\(^7\) To the extent that it doesn’t – when a patentee lost market traction early in a growing market and never built market share, for example – the law of lost profits has expanded over time to try to compensate the patent owner for those uses.\(^8\)

Proving lost profits has not been easy, however. Federal Circuit law requires that the prevailing patentee prove (1) the extent of demand for the patented product, (2) the absence of non-infringing substitutes for that product, (3) the patentee’s ability to meet the additional demand by expanding manufacturing capacity, and (4) the extent of profits the patentee would have made.\(^9\) Further, the cases require sophisticated economic analysis of the interrelationship between price and demand, so that claims of price erosion must be discounted to the extent that the higher prices a patentee could have charged absent competition would have driven away some consumers.\(^10\) And they require inquiry into how the patentee would divide sales with other companies in the market that were either licensed or were selling non-infringing goods.\(^11\)

\(^7\) The Supreme Court has described this as the purpose of patent damages. Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 507 (1964) ("that question is primarily: had the Infringer not infringed, what would Patent Holder-Licensee have made?"); Yale Lock Mfg. Co. v. Sargent, 117 U.S. 536, 552 (1886) (a patentee’s damages are “the difference between his pecuniary condition after the infringement, and what his condition would have been if the infringement had not occurred.”); John Schlicher, Measuring Patent Damages by the Market Value of Inventions – the Grain Processing, Rite-Hite, and Aro Rules, 82 J. Pat. & Trademark Ofc. Soc’y 503, 503 (2000).

\(^8\) See, e.g., Lam, Inc. v. Johns-Manville Corp., 718 F.2d 1056, 1065 (Fed. Cir. 1983) (awarding lost profits damages based on the patentee’s lost ability to grow, and therefore to sell other, unpatented products).


\(^11\) There are a number of ways courts assess this, including expert testimony, the testimony of the infringer’s customers as to what they would have done absent infringement, and a presumption that where
Courts take these requirements seriously, and quite often reject claims for lost profits. To begin, it should be obvious from these requirements that patentees cannot possibly meet them unless they participate in the market in direct competition with the infringer.\textsuperscript{12} Even competitors often have trouble demonstrating entitlement to lost profits, however. Sometimes this is because they really didn’t lose any profits, for example because purchasers didn’t value the patented technology at all and would happily have switched to non-infringing substitutes.\textsuperscript{13} Other times it is because the patentee itself couldn’t have manufactured the products, and therefore lost the sales.\textsuperscript{14} But still other cases involve more technical failures of proof, for example a failure to the patentee competes with non-infringing alternatives, the patentee and the competitors would split the infringer’s sales. \textit{See} State Indus. v. Mor-Flo Indus., 883 F.2d 1573 (Fed. Cir. 1989) (applying this “market share rule”).

\textsuperscript{12} BIC Leisure Prods. v. Windsurfing Int’l, 1 F.3d 1214 (Fed. Cir. 1993) (reversing an award of lost profits because the patentee and the infringer did not compete); \textit{Cf.} Del Mar Avionics, Inc. v. Quiniton Instrument Co., 836 F.2d 1320 (Fed. Cir. 1987) (describing it as a “general rule” that patentees producing the patented item are entitled to lost profits damages); John E. Dubiansky, \textit{An Analysis for the Valuation of Venture Capital-Funded Startup Firm Patents}, 12 \textit{B.U. J. Sci. \\& Tech. L.}, 170, 177 (2006) (“In the licensing context, however, the patent owner is not engaged in an enterprise which utilizes the patent. Consequently, the owner has no profits to have lost, and is only eligible to receive a reasonable royalty.”).

\textsuperscript{13} For examples, see Grain Processing Corp. v. American Maize Prods. Co., 185 F.3d 1341 (Fed. Cir. 1999) (rejecting lost profits claim because evidence showed that patentee would not have made sales; infringers would have switched almost immediately to an equally-good non-infringing alternative); Slimfold Mfg. Co. v. Kinkead Indus., Inc., 932 F.2d 1453 (Fed. Cir. 1991); but see Zygo Corp. v. Wyko Corp., 79 F.3d 1563, 1571 (Fed. Cir. 1996) (seeming to set a flat rule preventing consideration of non-infringing substitutes not actually on the market at the time of infringement); \textit{compare} Micro Chemical Inc. v. Lextron, Inc., 318 F.3d 1119, 1123 (Fed. Cir. 2003) (rejecting a claim for the availability of easy design-arounds where the evidence suggested the design-around would not have been straightforward at the time of infringement).

Hausman et al suggest that considering non-infringing substitutes unfairly gives the infringer the benefit of a free option to infringe or not. Hausman et al., \textit{supra} note \_, at 845-46. To the contrary, the option comes at a price — the greater of the greater of lost profits, if proven, or a reasonable royalty. Cases like \textit{Grain Processing} eliminate what would otherwise have been an overcharge — the ability of the patentee to recover in damages profits it would not have made in fact — rendering lost profits damages more consistent with their compensatory purpose.

\textsuperscript{14} \textit{See}, \textit{e.g.}, Datoscope Corp. v. SMEC, Inc., 879 F.2d 820 (Fed. Cir. 1989) (rejecting lost profits claim because there was no evidence that the patentee would in fact have devoted resources to meeting the demand for the infringer’s product). A strict application of this rule would overlook the ability of the patentee to license others to meet that demand. \textit{Cf.} Yarway Corp. v. Eur-Control USA, 775 F.2d 268, 276
adequately segregate profits from costs or a lack of economic sophistication in analyzing market demand and its elasticity.\footnote{See, e.g., Panduit, 575 F.2d at ___ (refusing to award lost profits because of a failure by the patentee to account properly for fixed costs to be deducted from profits); Slimfold Mfg. Co. v. Kinkead Indus., 932 F.2d 1453, 1458 (Fed. Cir. 1991) (affirming refusal to award lost profits on estimated on a market share basis despite evidence that the patentee competed with others in the market in which the infringer participated); Kaufman Co. v. Lantech, Inc., 926 F.2d 1136 (Fed. Cir. 1991) (rejecting claim for convoyed sales, in part because the patentee did not prevent evidence of projected profits from those sales).}

A dramatic example is the foundational case on patent damages, Panduit v. Stahlin.\footnote{575 F.2d at 1152.} In that case, authored by Judge Markey, later Chief Judge of the Federal Circuit, the court found that the patentee had proven demand for the patented product, an absence of non-infringing substitutes, and the ability to exploit the demand and therefore to make the sales. Nonetheless, the court held that the patentee was not entitled to lost profits because it did not adequately separate profits from costs. There was no dispute that Panduit accounted for variable costs, and that it tried to exclude fixed costs as well. But expert witnesses testified to contradictory views of the correct way to account for such fixed costs, and the court concluded that because it couldn’t be sure what fixed costs to include, it had to reject the lost profits claim altogether in favor of a reasonable royalty.

Once a patentee proves entitlement to lost profits, the scope of the resulting award can be quite expansive. Patentees can recoup losses on sales they in fact made if they can prove that they were forced to lower their prices to meet infringing competition.\footnote{Brooktree Corp. v. Advanced Micro Devices, Inc., 977 F.2d 1555, 1580 (Fed. Cir. 1992) (affirming award of price erosion damages); Paper Converting Mach. Corp. v. Magna-Graphics Corp., 745 F.2d 11, 22 (Fed. Cir. 1984) (award of losses based on projected declining marginal cost of producing goods as scale increased).} They can capture sales
on unpatented goods that compete with the patented invention.\textsuperscript{18} They are entitled to capture the value of sales of entire products based on a patent on only a single component, if they can prove that the patented feature is what caused the sale, so that the defendant's infringement garnered a sale that would otherwise have gone to the patentee.\textsuperscript{19} This is known as the entire market value rule. They are entitled to capture profits based on the sale of "conveyed goods" - goods that are not part of the patented product at all, but which are sold in connection with the patented good, and would therefore likely have been sold by the patentee if the patentee rather than the infringer had made the sale of the infringing good.\textsuperscript{20} And they are even entitled to capture sales by the defendant after the patent has expired, if those sales were made possible by infringing preparatory activity by the defendant during the term of the patent.\textsuperscript{21}

The effect of these rules is generally salutary: lost profits doctrine aims to put patentees in the position they would have been in but for the infringement, and the tools the law uses to accomplish this end are economically quite sophisticated. But the high standard of proof means that there are a number of patentees that do not in fact get made whole for the acts of infringement under the lost profits rule.

II. Are Reasonable Royalties Reasonable?

\textsuperscript{18} King Instruments Corp. v. Perego, 65 F.3d 941, 953 (Fed. Cir. 1995).


\textsuperscript{20} See, e.g., Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538 (Fed. Cir. 1995) (en banc).

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Patentees who cannot prove lost profits, whether because they didn’t have any lost profits or because they failed to meet the standards of proof, are relegated to a “reasonable royalty" remedy. Reasonable royalties are like lost profits in that both are designed to compensate patentees for their losses. But there the similarity ends. Reasonable royalty law is designed with the non-manufacturing patentee in mind. And what it takes to “make the patentee whole” is very different if the patentee’s only interest is in licensing the patent than if the patentee’s interest is in excluding competition and maintaining a monopoly price. Thus, reasonable royalty case law inquires into what the marketplace would actually pay for rights to the technology, bearing in mind that the licensee has to make a profit as well. By contrast, it is not only possible but common that lost profits will exceed the defendant’s gains from infringement.22

The idea that patent damages will tend to be greater in lost profits cases than in reasonable royalty cases makes policy sense so long as the patentees being awarded reasonable royalties are those who are not in fact selling products in the market. But if the recipients of reasonable royalty damages are in fact competitors who failed to meet the rigorous requirements of proof of lost profits, the result may be that those patentees are undercompensated by a traditional reasonable royalty approach.

Courts have responded to the perceived unfairness of this result23 by expanding reasonable royalty damages in a variety of ways. First, courts have applied control-of-sales

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22 The economic logic of this is straightforward: a patentee with market power will charge a profit-maximizing price. By contrast, two companies in competition will charge a price lower than the monopoly price, generating less profit to share between them and more consumer surplus. Putting the patentee who faced competition back into the position of receiving a monopoly price requires the infringer to compensate the patentee for the money it has lost to consumer surplus as well as the money it lost to the infringer. Thus, the infringer will regularly have to pay as damages more than it made in profits.

23 See, e.g., Robert P. Merges & John F. Duffy, Patent Law and Policy 980 (4th ed. 2007) (suggesting that artificially high reasonable royalties may be justified as a way of “dispensing with” proof of lost profits while adequately compensating patentees that have lost profits). One might question whether this
concepts from lost profits to reasonable royalty cases. In its most extreme form, this includes the application of the "entire market value rule" to reasonable royalty cases.\textsuperscript{24} It is worth beginning by noting that the term "entire market value rule" is a misnomer. As Brian Love has observed, it is effectively \textit{never} the case that the patent is responsible for all of the value of a product.\textsuperscript{25} Most commonly, other patents also contribute to the defendant's product. Even if that isn't true, the defendant's know-how, materials, and marketing efforts almost always contribute some value, and usually the most significant part of the value of an infringing product. The entire market

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\textit{Accord} Schlicher, \textit{supra} note __, at 532 (approving of \textit{Grain Processing}).
\end{flushright}

It is worth noting that the patentee in \textit{Grain Processing} might have been able to make the infringing sales by cutting the price on all its goods so that its profit margin was less than the 3\% cost differential between the patented invention and the non-infringing substitute. See Jerry A. Hausman et al., \textit{Patent Damages and Real Options: How Judicial Characterization of Noninfringing Alternatives Reduces Incentives to Innovate}, 22 \textit{Berkeley Tech. L.J.} 825, 847 (2007). Given the small difference there, it seems doubtful that doing so would have been net profitable for the patentee. But patentees should certainly have the opportunity to prove that they would have cut their price across the board to price a less-efficient competitor out of the market, and to recover any lost profits (net of the reduced profits on sales they made anyway).

\textsuperscript{24} The Federal Circuit endorsed this expansion in \textit{Rite-Hite v. Kelley Co.}, 56 F.3d 1538 (Fed. Cir. 1995) (en banc) ("courts have applied a formula known as the 'entire market value rule' to determine whether such components should be included in the damage computation, whether for reasonable royalty purposes . . . or for lost profits purposes."); though the reference to reasonable royalties was dictum there, since \textit{Rite-Hite} itself involved lost profits. Ironically, it is not clear that the Federal Circuit had applied the entire market value rule to decide a reasonable royalty case before this statement in \textit{Rite-Hite}. But courts have since relied on that language to import the concept into reasonable royalty cases. \textit{See}, e.g., Fonar Corp. v. General Electric Co., 107 F.3d 1543 (Fed. Cir. 1997); Tec Air, Inc. v. Denso Mfg. Michigan, Inc., 192 F.3d 1353 (Fed. Cir. 1999); Bose Corp. v. JBL, Inc., 274 F.3d 1354 (Fed. Cir. 2001). On the entire market value rule in lost profits cases, see 7 \textit{Donald S. Chisum, Patent Law} sec. 20.03[1][c][iii].

value rule nonetheless makes a certain amount of sense in lost profits cases, because if most of the value of the defendant’s product is attributable to the patentee’s technology, it is reasonable to conclude that but for the infringement the defendant’s customers would have bought the product from the plaintiff instead. In such a case, while the defendant almost certainly contributed some value to the ultimate product, it would not have made the sale of that product at all but for the infringement. Instead, the plaintiff would have made the sale, and so the plaintiff would have captured whatever incidental value was due to non-infringing attributes. So the entire market value rule is really a presumption that if most of the market value comes from the patent, a practicing patentee would have been able to capture the entire value by making the sale.

The logic of the entire market value rule breaks down in reasonable royalty cases, however, because we’re no longer talking about the defendant taking a sale away from the plaintiff. Instead, the question is how to compensate the non-practicing patentee for the value of the patented technology. But since there is always at least some value to the defendant’s product not attributable to the patent, any application of the entire market value rule in a reasonable royalty setting necessarily overcompensates the patent owner by giving it value not in fact attributable to the patent.26 One way to see this is to recognize that if the patentee has truly contributed the entire market value of the technology, no other contribution to the product should be valued at all. On this theory, if a patentee wins an entire market value rule case, no other patentee should be able to recover any damages at all based on the sale of the same product. But

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26 See id.; Lemley & Shapiro, Royalty Stacking, supra note __. The Supreme Court stated the issue a century ago in terms that seem to foreclose application of the entire market value rule in reasonable royalty cases: “In so far as the profits from the infringing sales were attributable to the patented improvements they belonged to the plaintiff, and in so far as they were due to other parts or features they belonged to the defendants.” Dowagiac Mfg. Co. v. Minnesota Moline Plow Co., 235 U.S. 641, 646 (); accord Yale Lock Mfg. Co. v. Sargent, 117 U.S. 536, 552-53 (1886).
of course that is not the law. It seems probable that the doctrinal creep of the entire market value rule into reasonable royalty cases came about because of patent plaintiffs who really had unsuccessful lost profits cases.

Even in cases that don’t apply the entire market value rule, courts have applied the reasonable royalty statute with insufficient sensitivity to the importance of non-infringing components to the value of the overall product. Indeed, the Federal Circuit has even imported the concept of “convoyed sales” of non-infringing goods to the reasonable royalty context, suggesting that a reasonable royalty must include some compensation to the patentee for the value the defendant obtained from sales of unpatented goods that would likely have been sold alongside the patented ones. This suffers from the same flaw as the application of the entire market value rule – it attributes the value of unpatented technologies to the patent owner in circumstances in which the patent owner would not have made sales of those technologies, and

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27 To be sure, this problem affects application of the entire market value rule in lost profits cases as well. But it is one thing to impose this disadvantage on a defendant in order to adequately compensate a plaintiff who has in fact lost profits; it is quite another to make a defendant pay too much in the aggregate in order to provide an unearned windfall to a reasonable royalty plaintiff.

Doug Lichtman has suggested that the royalty stacking problem will be a self-limiting one, because companies can’t afford to pay more than the entire value of their product, and if aggregate royalties get too high they will simply stop making the product. Douglas Lichtman, Patent Holdouts and the Standard-Setting Process, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=902646 (working paper 2007). But even if this were true in a hypothetical world of immediate, perfect information, it is unlikely to be of much help in the real world, where damages awards are calculated years or decades later, and where juries do not learn of the other contributions to the success of the product – or worse, are prohibited by the entire market value rule from taking them into account.

28 The first explicit reference to the use of the entire market value rule in reasonable royalty cases came in Rite-Hite, a lost profits case. Rite-Hite relied in turn on State Industries, which did not in fact apply the entire market value rule, and which was in any event also a lost profits case. The Federal Circuit did not in fact apply the doctrine in a reasonable royalty case until after dictum in Rite-Hite suggested that the doctrine already applied in those cases. For a discussion of the evolution of the reasonable royalty cases in the Supreme Court before the creation of the Federal Circuit, see Bensen & White, supra note ___, [Part I]. For a history of the apportionment principle in patent cases, see Eric E. Bensen, Apportionment of Lost Profits in Contemporary Patent Damages Cases, 10 Va. J. L. & Tech. 8 (2005).

therefore in which the infringer would have had to pay to develop or acquire the technology from somewhere else.

While the *Georgia-Pacific* factors\(^{30}\) include several that require the consideration of the value of those non-infringing components, in fact for a variety of reasons those components are undervalued.\(^{31}\) Most notably, in *Fromson v. Western Litho Plate & Supply* the Federal Circuit simply rejected the very idea that a patentee’s remedy should be apportioned based on the share of the value of the overall product the patentee contributed.\(^{32}\) The district court there had quite reasonably concluded that the parties would have set a royalty rate based on the proportion of the value of the defendant’s product that was “attributable to the invention.” The Federal Circuit reversed, requiring that the award take the form of a percentage of the defendant’s entire product sales, even if that exceeded the total profit the defendant made on the product.\(^{33}\) Ignoring the other components that contribute to defendant’s sales, as *Fromson* appears to require, is intellectually indefensible.\(^{34}\) Not surprisingly, this approach has led to reasonable royalty rates that are decidedly unreasonable, and indeed that often exceed the defendant’s total profit on a product even when that product was composed primarily of non-infringing components.\(^{35}\)

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\(^{32}\) 853 F.2d 1568 (Fed. Cir. 1988).

\(^{33}\) *Id.* at __.

\(^{34}\) It is also historically indefensible, as Bensen and White have demonstrated. See Bensen & White, *supra* note __, at [20-27].

\(^{35}\) See Lemley & Shapiro, *supra* note __ (studying reasonable royalty determinations and finding an average royalty rate of 13.1%).

By contrast, some cases suggest that *Fromson* is wrong and that apportionment is permissible. See, e.g., *Riles v. Shell Exploration & Prod.*, 298 F.3d 1302 (Fed. Cir. 2002).
Finally, and most dramatically, courts have occasionally simply increased the reasonable royalty award because they fear that it undercompensates a plaintiff that should in fact have been compensated with lost profits. *Panduit* is the most notable example.\(^{36}\) In that case, discussed in Part I, the court affirmed the district court's rejection of plaintiff's lost-profits theory for hyper-technical reasons. Having done so, it proceeded to excoriate the district court for applying the normal reasonable royalty rules, and instead re-imported many of the concepts of lost profits, reasoning that the defendant would not have been able to make the sales at all but for the infringement, and therefore that the plaintiff was entitled to damages that far exceeded the 60% of the defendant's profit that the district court has awarded as a reasonable royalty.\(^{37}\) While the Federal Circuit has rejected the express use of "kickers" to compensate patentees for attorney's fees,\(^{38}\) the court has also approved of discretionary increases in the reasonable royalty designed to avoid undercompensation,\(^{39}\) and there is reason to believe that courts continue to award relatively high reasonable royalties and to distort the concept of a hypothetical negotiation between willing buyers and willing sellers, in part to compensate plaintiffs who in a perfect world would have been able to prove entitlement to lost profits.

These distortions to reasonable royalty case law are problematic. While in theory a reasonable-royalty approach could achieve the goal of properly compensating non-practicing patent owners, Carl Shapiro and I have offered both reasons and evidence that in practice it

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\(^{36}\) 575 F.2d at 1152.

\(^{37}\) *Id.* at __.

\(^{38}\) Mahurkar v. C.R. Bard co., 79 F.3d 1572, 1580 (Fed. Cir. 1996) (no "kicker" is permissible on top of the reasonable royalty to compensate for attorney's fees or litigation expenses; patentee must prove case is exceptional to recover such expenses).

\(^{39}\) See, e.g., King Instruments Corp. v. Perego, 65 F.3d 941, 951 n.6 (Fed. Cir. 1995) ("discretionary increases"); Stickle v. Heublein, Inc., 716 F.2d 1550, 1563 (Fed. Cir. 1983) (allowing for "an increase in the reasonable royalty determined by the court").
systematically overcompensates patent owners in component industries.\(^{40}\) Indeed, the situation has gotten so bad that some patentees who can prove lost profits elect instead to seek a "reasonable" royalty that is far in excess both of what the parties would have negotiated and of the actual losses the patentee suffered.\(^{41}\) By importing compensation concepts from lost profits into the reasonable royalty context without importing the strict elements of proof, these courts have turned the reasonable royalty from a floor on patent damages designed to avoid undercompensation into a windfall that overcompensates patentees.

At least some, perhaps most, of that overcompensation can be traced to efforts in cases like *Panduit* to compensate practicing patent owners who should be entitled to lost-profits damages. There is no other possible explanation for giving a patentee a royalty based on convoyed sales, for example. And the problem threatens to get worse, not better: Legislation that nearly passed Congress in 2008 would have solved one of the problems I have identified – the fact that modern courts ignore the contributions of non-patented technologies and refuse to apportion damages – while cementing into the statute an equally serious problem – the misapplication of the entire market value rule in reasonable royalty cases. If non-manufacturing patent owners can capture the entire market value of a technology based on their invention of a single component, that overcompensation will encourage too much patent litigation by non-

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\(^{40}\) Lemley & Shapiro, *supra* note __, at __.

\(^{41}\) See, e.g., Monsanto Co. v. McFarling, 488 F.3d 973 (Fed. Cir. 2007) (awarding "reasonable royalty" damages of more than six times Monsanto’s lost profits); Monsanto Co. v. Ralph, 382 F.3d 1374, 1384 (Fed. Cir. 2004) (approving a royalty which far exceeded the defendant’s profit from infringement); Golight, Inc. v. Wal-Mart Stores, 355 F.3d 1327, 1338 (Fed. Cir. 2004) (the court upheld a reasonable royalty that exceeded the infringer’s profits from the product). For a discussion of this issue, see, e.g., Amy Landers, *Let the Games Begin: Incentives to Innovation in the New Economy of Intellectual Property Law*, 46 *Santa Clara L. Rev.* 307 (2006). The reader should be aware that I represent McFarling in *Monsanto Co. v. McFarling*.  

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practicing entities, exacerbate the already-serious problem of royalty stacking, and discourage the sale of products that incorporate many components.

III. The Two Domains of Patent Damages

The purpose of both patent damages rules is ultimately the same – to compensate the inventor for losses attributable to the infringement – but they are directed at fundamentally different types of losses. Lost profits damages compensate patent owners who would have had partial or complete market exclusivity in the absence of infringement. To make those patent owners whole, defendants must be made to pay in many cases more than they made by infringing, since it is elementary economics that competition results in lower producer surplus than monopoly.\textsuperscript{42} By contrast, reasonable royalty damages are designed to mimic the result that patentees not interested in or able to take advantage of market exclusivity would have achieved if they had been able to bargain with the infringers beforehand. To avoid encouraging infringement, the reasonable royalty calculus skews the damages award upward by making the counterfactual assumption that the bargainers would have known that the patent was both valid and infringed.\textsuperscript{43} But the ultimate aim is not to mimic exclusivity, or to give patentees the full social value of their technology, but instead to set a rate that would have both compensated patentees and allowed users of the technology to make a reasonable profit, taking into account the other patents they must license and the other costs they must pay to sell the product.

Unlike market exclusivity claims, patentees whose injury is in lost licensing revenue have no legitimate claim that they would have made or controlled the sale of unpatented components

\textsuperscript{42} See supra note ___.

\textsuperscript{43} Cf. Mark A. Lemley & Carl Shapiro, Probabilistic Patents, 19 J. Econ. Persp. 75 (2005) (noting the probabilistic nature of patent rights in practice); Janicke & Ren, supra note ___, at ___ (finding that patentees lose ¾ of patent cases).
of the defendant's product or of "conveyed sales" of related products. Their compensation should be based on the value the patented invention actually contributes as a proportion of the defendant's product, taking into account the other patents, know-how, raw materials, and labor that also contribute to the value of that product and the existence of possible alternatives to the patented technology. Thus, a truly reasonable royalty is one that bases the patentee's damages on the merits of the incremental technical contribution of the patent.\textsuperscript{44} The distortions I described in the last part occur because courts want to give patentees in the first category damages adequate to compensate for the loss of market exclusivity, and if lost profits are not available they import those market exclusivity concepts into reasonable royalty case law.

Congress has been considering reforming the damages statute in ways that would mandate application of this logical apportionment principle in reasonable royalty cases. Unfortunately – and surprisingly – that proposed reform has proven controversial, raising objections not just from patent trolls who want to lay claim to a disproportionate share of the defendant's product but also from industry groups (such as pharmaceutical companies) that in fact have nothing to fear from this reform. As a result, the bill actually passed in the House in 2007 blends the salutary apportionment ideas with a rule that would compel application of the

\textsuperscript{44} Theoretically, that contribution could be zero if the patent is no better than available non-infringing alternatives. See John W. Schlicher, Measuring Patent Damages by the Market Value of Inventions-The Grain Processing, Rite-Hite, and Aro Rules, 82 J. Pat. & Trademark Off. Soc'y 503, 527-29 (2000). Cf. Roger D. Blair & Thomas M. Cotter, Rethinking Patent Damages, 10 Tex. Intell. Prop. L.J. 1, 74 (2001) (suggesting achieving the same result by creating a "patent injury" doctrine analogous to the "antitrust injury doctrine that requires a showing of causation before entitlement to relief); Julie Turner, Note, The Nonmanufacturing Patent Owner: Toward a Theory of Efficient Infringement, 86 Cal. L. Rev. 179, 186-93 (1998) (arguing that patent owners who are not injured should not be able to sue, and contending that those who do not practice or license their patents have not been injured). In practice, however, courts almost always award some royalty.
entire market value rule in reasonable royalty cases.\textsuperscript{45} That outcome might actually have been worse than no change at all, because it would have given patentees whose only injury is lost licensing revenue an incentive to argue for the value of components they had no hand in inventing or implementing.

Assuming Congress does not act to enshrine the entire market value rule in reasonable royalty cases, the courts have the power to fix the problem with reasonable royalty damages. To do so, courts (or Congress, should it decide to act) should expressly distinguish between damage theories appropriate in lost profits cases and those appropriate in reasonable royalty cases. Patentees whose harm is based on a lost of market exclusivity – those who could reasonably have expected to make additional sales, or sales at a higher price, absent infringement – should be entitled to lost profits damages. Patentees whose harm is lost licensing revenue, but who could not plausibly claim to have lost sales as a result of the infringement, should be entitled to reasonable royalties, but those reasonable royalties should be calculated based on what the market would actually have borne assuming infringement of a valid patent, and should not include kickers or the allocation of the entire market value to a patentee that only contributed part of that value.\textsuperscript{46} Enforcing a strict divide between these groups should help to end the distortions of reasonable royalty damages that have contributed to the royalty stacking and patent holdup problems.

To make this strict divide work, courts will need to be more lenient than they have been in requiring proof of lost profits. It makes sense to require evidence that the patentee would in fact have made sales absent the infringement, if for no other reason than to deter undeserving

\textsuperscript{45} H.R. 1908, 110\textsuperscript{th} Cong., 1\textsuperscript{st} Sess. (2007).

\textsuperscript{46} A return to this approach would be consistent with Supreme Court precedent on the question. See Seymour v. McCormick, 57 U.S. (16 How.) 480, 490-91 (1853) (rejecting the idea that a patentee on a component is entitled to royalties equivalent to the inventor of an entire product).
claimants from alleging that, but for the infringement, their failed company would in fact have become a market leader. But courts have too often been willing to allow technical failures of proof— a lack of detail in separating profits from costs, or insufficiently specifying market demand—to doom a claim for lost profits. They have also required proof that the patentee itself could have met the market demand, ignoring the prospect that a patentee could grant a territorially or product-limited exclusive license to another firm to pick up the slack. They have imposed these requirements secure in the knowledge that the patentee would still be compensated by reasonable royalties. But under a strict divide approach, a patentee who can show that it is more likely than not that an infringer’s sales cut into its own should be entitled to the court’s best estimate of the patentee’s lost profits. That estimate may not be perfect, but it is likely to be at least as accurate as the alternative reasonable royalty measure, and will avoid distorting the reasonable royalty cases that are not brought by patentees claiming market exclusivity. Fortunately, this need not reflect a big change in Federal Circuit jurisprudence. There are a number of pre-Rite Hite Federal Circuit cases that find lost profits despite the difficulty of calculating profits or the uncertainty of a counterfactual world.

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48 Indeed, it is somewhat ironic that courts have insisted on strict compliance with the elements of proof of a lost-profits claim, given that the reasonable royalty alternative involves at least as much uncertainty and approximation. Cf. Riles v. Shell Exploration Co., 298 F.3d 1302, 1311 (Fed. Cir. 2002) (reasonable royalty calculus “necessarily involves some approximation of the market as it would have hypothetically developed absent infringement”).

49 See, e.g., Standard Havens Prods. v. Gencor Indus., 953 F.3d 1360 (Fed. Cir. 1991) (“Evidence that shows a reasonable probability that the patent owner would have made the infringing sales made by the infringer will suffice . . . . Thus, the patent owner need not prove causation as an absolute certainty.”); Del Mar Avionics, Inc. v. Quinton Instr. Co., 836 F.3d 1320 (Fed. Cir. 1987) (the district court erred because it “gave controlling weight to the difficulty of the calculation, and in so doing adopted a measure of damages that was not designed to make whole the injured party.”).
With manufacturing patent owners (and those that have granted exclusive licenses to manufacturing firms) more clearly protected under the lost profits prong, the reasonable royalty measure of damages can return to its original role – as a means of ensuring that patentees aren’t denied fair compensation for the value they could have demanded in a fair market for a nonexclusive license to their patent. It will also render largely irrelevant the question of whether reasonable royalties can exceed proven lost profits, and therefore end the growing practice of patentees opting for a distorted measure of royalties that is greater than the profits they actually lost.

IV. Conclusion

Patent damages are supposed to compensate patent owners for their losses, putting them back in the world they would have inhabited but for infringement. The lost profits analysis contains sophisticated economic tools to help courts calculate that but-for world. Unfortunately, the perfect has too often been the enemy of the good, relegating a number of lost profits cases to the rather less economically-sophisticated analysis of reasonable royalties. Worse, the importation of concepts from lost profits into reasonable royalty analysis, and the fear of undercompensating deserving patent owners that should have been able to prove reasonable royalties, has led to systematic distortions in the reasonable royalty structure that overcompensate non-manufacturing patent owners. Enforcing a strict separation between the two, and easing the burden of proof on lost profits, will enable both types of patent damages to serve the compensatory purpose for which they were intended.