



Patent Reform:

Addressing Patent Trolling in the IT Industry while Balancing Innovation and Intellectual Property Rights

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August 3, 2006

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The Institute of Electrical and Electronics Engineers

EXECUTIVE SUMMARY

Patent trolling is a recently emerged practice primarily within the IT patent industry. Participants are patent holders who use broad patent claims to collect disproportionate damages and royalties from other developers. This practice diverts resources from innovation, discourages competitive development, and passes significant litigation costs on to businesses and consumers in the form of higher product prices.

Three particular problem areas contribute to patent trolling's negative impact on innovation: insufficient patent clearances, forum shopping, and disproportionate damages. Because both the United States and world economies rely substantially on intellectual property, it is essential that each of the three areas is addressed through legislation that carefully balances the protection of intellectual property rights and the promotion of innovation.

The U.S. House of Representatives is currently debating H.R. 2795, the most substantial patent legislation since *The Patent Act of 1952*. Several portions of H.R. 2795 combined with additional changes would effectively address the contributing problems listed above.

Policy Recommendations:

- Limit circumstances in which plaintiffs can claim willful infringement
- Allow a post-grant period for third-party requests for reevaluation of patent validity
- Restrict forum selection to the plaintiff's district
- Encourage courts to employ neutral experts to offer technical guidance or assist in claims construction
- Require courts to consider "inventive contribution" to determine royalty damages
- Require courts to consider "inventive contribution" to determine lost profit damages

Preface

About the Author

Emily Van Vliet is a rising senior at Cedarville University. She is pursuing a dual degree in Electrical Engineering and Communication Arts and plans to continue her education by attending law school in the fall of 2007. At Cedarville, Emily currently serves as captain of their nationally ranked parliamentary debate team and Society of Women Engineers Vice-President. Her interests also include reading, baking gourmet desserts, sewing, and piano. Emily has worked for the Mayo Clinic Special Purpose Processor Development Group and Northrop Grumman in the areas of electromagnetics, simulation, and analog circuitry. While at Cedarville, Emily has received numerous scholarship awards recognizing academic excellence in both engineering and communications.

About WISE

Founded in 1980 through the collaborative efforts of several professional engineering societies, the Washington Internships for Students of Engineering has become one of the premier Washington internship programs. Its goal is to groom future leaders of the engineering profession who are aware of and can contribute to the important intersections of technology and public policy. Please see <http://www.wise-intern.org> for more information.

Acknowledgements

The author would like to acknowledge individuals and organizations that played vital roles in facilitating this research. In particular, she would like to thank the Institute of Electrical and Electronic Engineers (IEEE) for their commitment to the WISE program and sponsorship, which truly facilitated this research and exposure to public policy.

This research would not have been possible without assistance and contributions of Dr. Bjong Yeigh, Erica Wissolik, Lee Hollaar, and other members of the IEEE Intellectual Property Committee.

Paper Citation

Van Vliet, Emily M. "Patent Reform: Addressing Patent Trolling in the IT Industry while Balancing Innovation and Intellectual Property Rights." *Journal of Engineering and Public Policy*, vol. 10, (2006) available at <http://www.wise-intern.org>.

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1 INTRODUCTION

Intellectual property plays an important role in today's world and United States economies. Every time consumers purchase music, software, video games, medicine, books, or even some computer hardware, they are paying more for the intellectual property than for any physical material. Fifty years ago, only about 10 percent of U.S. exports depended on intellectual property. That number can be compared to more than 50 percent today.¹ According to the World Bank, "across the range of income levels, intellectual property rights (IPR) are associated with greater trade and foreign direct investment flows, which in turn translate into faster economic rates of growth."² Because such a large percentage of our exports depend on intellectual property (IP), protecting IP protects a vital part of our economy.

There are four types of intellectual property. Of the four types, patents play a unique role in protecting intellectual property by giving the innovator a time-limited monopoly as they develop, produce, and market their invention. In exchange for this, the invention becomes public knowledge through the patent process, allowing others to be aware of recent technology and create improved competing technology. Patents are often preferred to their primary alternative, trade secrecy, in cases when infringement can be detected. Trade secrecy guards against the distribution of confidential information and often requires costly security measures. Also, when a company employs trade secrecy, the public does not benefit from knowledge of the innovation. Because patents play a unique role in protecting and promoting innovation, "there can be no serious question that a vibrant patent system is a key ingredient to a thriving technology sector."³

Four Types of Intellectual Property:

Copyright: used to protect artistic and literary works, giving the creator of the work the sole right to publicly perform or distribute the work.

Trademarks: "commercial source indicators"¹ that identify the goods or services provided by a specific enterprise. Trademarks grant exclusive use of the indicator to the owning company.

Patents: a 20 year monopoly granted to an innovator for the exclusive use of their invention.

Trade secrecy: the practice of not seeking legal protection for an invention, but keeping it in the realm of proprietary information.

1. Thomas G. Field Jr., "Focus on Intellectual Property Rights," January 2006, <<http://usinfo.state.gov/products/pubs/intelprp/>> (12 June 2006).

2. "Global Economic Prospects," *World Bank*, 2002.

3. Edward R. Reines, "Patent Trolls: Fact or Fiction?" Testimony before the United States House of Representatives Committee on the Judiciary, Subcommittee on Intellectual Property, 15 June 2006, <<http://judiciary.house.gov/OverSight.aspx?ID=245>> (19 June 2006).

The three major industries that seek patent protection are the biotechnology, pharmaceutical and information technology (IT) industries. The biotech industry largely feels that patents serve their purpose by stimulating “innovation and R&D.”⁴ Patents are similarly effective in the pharmaceutical industry. According to a study conducted by Richard Levin and associates, drug companies indicated that patents were the most effective way of recovering their investment in new drugs.⁵ In contrast, the IT industry often views patents as inefficient and a hassle because “products often have hundreds of patented or patentable features contained within them.”⁶

This makes the industry incapable of performing patent clearances and susceptible to patent infringement claims and lawsuits. This has the end result of significantly increasing the cost of business, and without intervention, the situation will only escalate.

A new practice has emerged from this situation in which companies seek strong patents over ideas for products that they don't intend to develop or market. These non-manufacturing patent holders maximize upon this situation by identifying patent infringers and collecting exorbitant royalties or damages - this practice is commonly known as “patent trolling.” While patent trolling is an entirely legal practice under current patent law, it can serve to deter the innovation that patent law seeks to discourage. According to some, patent trolling has led to an “innovation tax”⁷ where inventors are routinely encumbered by legal fees and extortionate settlements. These costs divert resources and decrease a company's ability to invest in R&D. They can result in inflated consumer costs as a multi-million dollar lawsuit or settlement increases the development costs for a

Coca-Cola Trade Secrets

On July 6, 2006, three people were charged with stealing a new Coca-Cola product and attempting to sell it to PepsiCo. The Coke incident has spurred discussions about methods for protecting trade secrets.

BlackBerry Settlement

In 2006, NTP Inc., a small patent holding firm successfully sued RIM, the makers of the BlackBerry, for using technology that NTP had patented. The suit was resolved when RIM agreed to pay NTP a \$612.5 million settlement.

4. Robert B. Chess, “Statement of Robert B. Chess, Executive Chairman, Nektar Therapeutics,” Testimony before the House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property, 15 September 2005, <<http://a257.g.akamaitech.net/7/257/2422/01nov20051130/www.access.gpo.gov/congress/house/pdf/109hrg/23434.pdf>> (14 June 2006).

5. Richard C. Levin, Alvin K. Klevorick, Richard R. Nelson, and Sidney G. Winter, “Appropriating the Returns for Industrial Research and Development, *Brookings Papers on Economic Activity*, 1987. Cited in: Wendy H. Schacht, “Patent Reform: Issues in the Biomedical and Software Industries,” *CRS Report for Congress*, 7 April 2006, <<http://www.fas.org/sgp/crs/misc/RL33367.pdf>> (9 June 2006).

6. Emery Simon, “Statement of Emery Simon, Counsel, The Small Business Software Alliance (BSA),” Testimony before the House Judiciary Subcommittee on Courts, the Internet, and Intellectual Property, 15 September 2005, <<http://a257.g.akamaitech.net/7/257/2422/01nov20051130/www.access.gpo.gov/congress/house/pdf/109hrg/23434.pdf>> (14 June 2006).

7. Mark Chandler, “Perspectives on Patents: Post-Grant Review Procedures and Other Litigation Reforms,” Testimony before the United States Senate Committee on the Judiciary, 23 May 2006, <http://judiciary.senate.gov/testimony.cfm?id=1911&wit_id=5366> (9 June 2006).

given product (e.g., *BlackBerry Settlement*).

The threat of patent litigation resulting from innovation is also a sufficient factor to deter innovators from introducing new technology to the market. While “no reliable statistics”⁸ on the extent of this problem are available, it is a widespread and largely discussed issue among the IT and legal communities. Patent trolling is a problem predominantly within the IT industry because the cumulative nature of new IT products makes them particularly vulnerable to patent infringement lawsuits.

The rise in Supreme Court activity over patent issues, most notably the eBay (May 2006) case demonstrates that this issue is crucial and current for the IT industry. As one patent litigator said, “...for its own health, the patent system deserves reform now.”⁹ In seeking a policy solution, it is also necessary to keep balance in the forefront. An effort to stop what can be seen as abusive patent lawsuits and litigation must not undermine the necessity of protecting intellectual property in an economy based on intellectual property. As Dean Kamen, a successful inventor of devices including the Segway and a portable dialysis machine said, “We must be careful not to destroy the patent system that has been the driving force behind innovation over the past two centuries.”¹⁰

Ensuring a balance between protecting intellectual property and promoting innovation has been the subject of debate among policy makers in recent months. This paper explores the need for patent reform and presents policy solutions to address the issue of patent trolling in the IT industry while maintaining a balance between protecting intellectual property and encouraging innovation.

2 BACKGROUND

2.1 Patent History

Our current patent system is codified in United States Code Title 35, which states, “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore...”¹¹ The Constitution rationalizes this right by saying patents promote the

8. Mark A. Lemley, “Patent Reform Legislation: Public Comments on Substitute H.R. 2795 and the Role of the Antitrust Modernization Commission,” Testimony before the United States Senate Committee on the Judiciary, 14 June 2005, <http://judiciary.senate.gov/testimony.cfm?id=1535&wit_id=4352> (9 June 2006).

9. Reines

10. Dean Kamen, “Patent Trolls: Fact or Fiction?” Testimony before the United States House of Representatives Committee on the Judiciary, Subcommittee on Intellectual Property, 15 June 2006, <<http://judiciary.house.gov/OverSight.aspx?ID=245>> (19 June 2006).

11. Ben Klemens, “The Computer-Shaped Hole in the Patent Reform Act,” *The Brookings Institution*, 28 July 2005, <<http://www.brookings.edu/printme.wbs?page=/pagedefs/06a42664253eff3f3c76b48d0a1415cb.xml>> (7 June 2006).

progress of “useful arts.”¹² Because it encourages practical innovation, patent law also fosters economic growth, attracts investment, and creates jobs and opportunities.

2.2 The Need for Patents

In addition to achieving economic growth, disseminated patent information often results in competitive inventions, more developed products, and greater consumer choice. Patented technology also enters the public domain when the patent expires, allowing inventors to build upon each others work without paying licensing fees. Without a patent system, many companies would preserve their rights to ideas by keeping them as trade secrets. In contrast to the patent system, which ultimately releases information and spurs technological development, trade secrets are often costly and don't provide the benefit of increased common knowledge about an innovation, thus hindering further development.

2.3 Patent Criteria

The criteria for a patentable product have remained unchanged throughout patent policy history. Patented inventions must be useful, novel, and non-obvious. Additionally, a patent application must be filed within one year of the publication of the invention, must refer to patentable subject matter,¹³ and the description of the invention contained on the patent application must be sufficiently detailed and clear to allow a person averagely skilled in the field to practice or recreate the invention.

Criteria for a Patented Invention:

Useful: serve a disclosed purpose

Novel: not invented first by another, used by others in this country, or published anywhere

Non-Obvious: the differences between the invention and public knowledge in the field must significant enough that an averagely skilled person in the field would not find it obvious

When inventors file for and are granted a patent, they have the right to a 20-year monopoly on the innovation, beginning the day the patent is granted and measured from the day the patent application was filed. Patents are not self-enforcing — the patent holder who wishes to enforce her rights, or prevent others from using her patented technology, must do so via litigation in the federal courts.

2.4 Patent Industries

The same patent process applies to all industries pursuing patents. The three primary groups of patent holders are pharmaceutical, biotech, and IT companies. Each of these

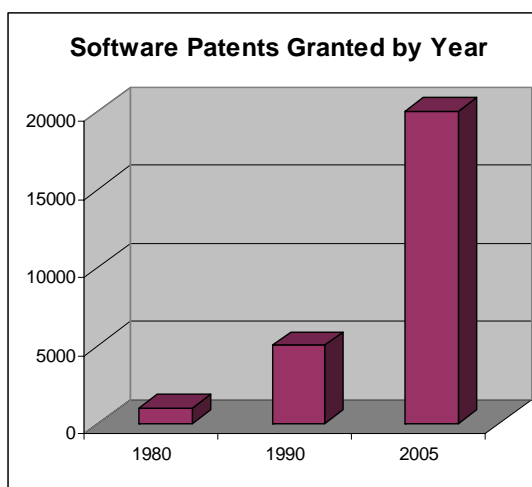
12. Kamen

13. Patentable subject matter, “in the words of the Congress and the U.S. Supreme Courtm ‘anything under the sun that is made by man.’ Specifically included is any product, process, apparatus, or composition, including living matter such as genetically engineered bacteria, plants, or animals.” American Bar Association, Intellectual Property: A Guide for Engineers (New York: ASME Press, 2001).

sectors produces very different products and thus views and uses patents very differently. For instance, a pharmaceutical drug will generally have only one or two patents covering it. Because drugs are chemical compounds, they tend to be unique and don't typically contain other patented mixtures. On the other hand, because IT patents are inherently cumulative, producing a DVD requires utilizing information from over 400 patents.¹⁴ One of the challenges that patent law faces is creating legislation that considers the effects on all three industries. Of the three industries, the largest amount of debate over patent law occurs within the IT sector. This is in large part due to its extreme growth, the cumulative nature of IT patents, and the facilitated practice of patent trolling.

2.5 IT Patents

In the early 1980s, an average of 1,000 software patents was granted annually. That number increased to 5,000 by 1990, and today more than 20,000 software patents are granted every year.¹⁵ This is about 13 percent of the 151,079 utility patents granted in 2005.¹⁶ Additionally, the number of patents granted to companies or individuals who don't intend to develop the patented product has also dramatically increased.¹⁷



Instead of a patent being granted for a product that is wholly revolutionary, most patents are granted for products that offer incremental improvements over other products while encompassing numerous patents. This abundance of patents in the high-tech community has resulted in a thicket of patents granting overlapping rights. For instance, 65 separate entities claim using that information contained in their patent is necessary for a new project to meet Wi-Fi standards.¹⁸

14. Chuck Fish, "Patent Trolls: Fact or Fiction?" Testimony before the United States House of Representatives Committee on the Judiciary, Subcommittee on Intellectual Property, 15 June 2006, <<http://judiciary.house.gov/OverSight.aspx?ID=245>> (19 June 2006).

15. Wendy H. Schacht, "Patent Reform: Issues in the Biomedical and Software Industries," *CRS Report for Congress*, 7 April 2006, <<http://www.fas.org/sgp/crs/misc/RL33367.pdf>> (9 June 2006).

16. *Ibid.*

17. Fish

18. Chandler

“...these ‘behaviors associated with patent litigation abuse are harming consumers and both small and large innovative companies.’”

It is relatively easy for non-manufacturing patent holders to take advantage of this situation by finding patent infringers and threatening a lawsuit or settling for disproportionately high licensing fees. This practice is commonly referred to as “patent trolling.” According to some, these “behaviors associated with patent litigation abuse are harming consumers and both small and large innovative companies.”¹⁹

Patent litigation has responded accordingly. The number of patent cases doubled between the years 1991 and 2001.²⁰ The number of these suits with large awards is also growing. Before 1990 there had been only one patent suit with a damage award higher than \$100 million; between 2000 and 2005 there were 21 such awards, including one award for \$1.35 billion.²¹

2.6 Patent Trolling

While the patent trolling practice cannot be attributed to the permissive nature of a single law, the open nature of patent laws as a whole facilitate patent trolling. Problems resulting from patent trolling that impact the entire IT community and its consumers include:

- Technological innovation being discouraged,
- Difficulty in performing reasonable patent clearances,
- Trial locations that disadvantage the defendant being chosen, and
- Disproportionate licensing fees and lost profit damages.

These widely discussed areas of contention in the patent world have inspired a flurry of activity on the judicial and legislative levels. In 2006, the United States Supreme Court will decide on *three* patent cases. This is an unprecedented number; since the 1980’s when the Court of Appeals for the Federal Circuit (CAFC) “was founded to hear patent appeals from all districts,”²² the Supreme Court has primarily left patent cases to the CAFC.

19. Fish

20. Ibid.

21. Mark Lemley, “Time for Congress to innovate, reform abused patent system,” *San Jose Mercury*, June 15, 2006.

22. Ben Klemens, “The Supreme Court’s Patent Trilogy: An Analysis,” *The Brookings Institution*, 30 May 2006, <<http://www.brook.edu/printme.wbs?page=/pagedefs/6b6a71641504ff4061c63a750a1415cb.xml>> (7 June 2006).

2.7 Patent Reform Proposals

Numerous legislative solutions to the patent troll issue have been discussed. Two such solutions are to restrict software to copyright protection and to offer an alternative, intermediate form of IP protection.

2.7.1 Software and Copyrights

In examining the first option, copyrights for software, it is essential to recognize that this situation formerly existed in the United States. However, this protection was found to be insufficient because it “protects [only] the expression of a technique, and not the technique itself.”²³ In an effort to protect software under copyright, the courts began to interpret copyright protection more liberally. In *Whelan v. Jaslow* (1986), the Third Circuit expanded copyright protection for software to protect against non-literal competition that had the same “structure, sequence, and organization”²⁴ of a computer program. At this point it became apparent that software could not be adequately protected under copyright law without expanding or redefining copyright protection.

Limiting software to copyright protection does offer the advantage of harmonization with the European system, which primarily uses copyright to protect software.²⁵ However, the transition to copyright, a more limited form of IP protection for software would be impractical to implement and would meet significant opposition from the software industry, a formidable force when judged by the number of software patents issued every year.²⁶

2.7.2 Limited Patents

A second proposal suggests developing an intermediate, more limited, form of patent protection. The limited patent would have a life of three to five years, would be available for a fee less than the normal patent fee, and would be registered without examination. In the instance that the limited patent holder decides to enforce the patent against an infringer, the patent would then be examined for validity and the only question remaining for court proceedings would be whether or not the patent had been infringed. If the patent proves to be profitable, it could be submitted for full examination to be expanded to the status and 20 year time length of a normal patent. The fees for a normal patent would be substantially increased and the examination procedure intensified to ensure higher quality full length patents. As proposed by Professor Lee

23. Lee A. Hollaar, “A New Look at Patent Reform,” *Journal of the Patent and Trademark Office Society*, 20 April 2006. <<http://digital-law-online.info/papers/lah/mini-patent.htm>> (8 June 2006).

24. *Ibid.*

25. Ingrid Marson, “Europe: No Patents for Software,” *CNET News.com*, 24 May 2006, <http://news.com.com/2100-1014_3-6076418.html> (14 June 2006).

26. Over 20,000 software patents are granted annually in the United States. Schacht

Hollaar of the University of Utah, this alternate form of patent protection would not be enforced against simultaneous developers, only clear infringers.²⁷

While this alternate form of patent protection would offer a time length more appropriate for the current rapid moving technology in the IT industry, it would increase difficulty in obtaining patents and recovering research investments in the pharmaceutical and biotech industries where innovation is better suited to a 20 year patent period. Limited patents would also move the United States away from harmonization because such a large number of inventors in the IT industry would opt for the limited patents, resulting in a patented technology having a radically short protection period in the United States when compared to other nations.

2.8 Patent Legislation

Two major bills currently in the U.S. House of Representatives address patent trolling and other areas of concern in the IT process: H.R. 2795 and H.R. 5096. Representative Lamar Smith (R - Tex.) proposed H.R. 2795, *The Patent Reform Act of 2005*, on June 8, 2005. Since then, it has been the object of much testimony and debate in the House. H.R. 2795, the most significant patent legislation since *The Patent Act of 1952*, attempts to address the problems listed above and several others by proposing a number of significant changes to patent law. They include:

- Changing the United States patent system from a “first to invent” to a “first to file” system,
- Creating a multi-tiered system for opposing the validity of a patent, giving third parties the opportunity to challenge a patent without the patent holder first bringing them to court for violating the patent,
- Limiting the circumstances in which the claimant can accuse the defendant of willful infringement, and limiting a patentee’s access to injunctions by requiring a prerequisite of a likelihood of irreparable harm, and
- Requiring the court to limit damages based upon reasonable royalties by viewing the infringed patent as separate from the rest of the invention.

H.R. 5096 proposes a smaller set of reforms, the majority of which are also contained in H.R. 2795. While H.R. 2795 is generally well supported by diverse institutions, including the Federal Trade Commission, National Academies, economists, attorneys, industry representatives, and academics,²⁸ the bill could be expanded to better balance the playing field in the IT patent industry.

27. Hollaar

28. Wendy H. Schacht and John R. Thomas, “Patent Reform: Innovation Issues,” *CRS Report for Congress*, 15 July 2006.

3 KEY CONCERNS

While numerous within the U.S. patent system could be improved, three key problem areas help facilitate patent trolling and result in deterring innovation.

3.1 *Inspiring Innovation*

The purpose of patents is to inspire innovation. Innovation benefits society on many levels. Consumers benefit through “the development of new and approved goods, services, and processes.”²⁹ The economy grows, increasing prosperity, and raising our standard of living. Consequently, effective patents play a vital role in the world of inventors. On the other hand, when patent policy fails to create an appropriate balance between competition and protecting rights, innovation can be stunted. Each of the problems listed in the text box contribute to the end impact of deterring innovation. Many contend that the status quo deters innovation. This “innovation tax,” in the form of disproportionate settlements and high legal fees afflicts inventive American firms and, in turn, their customers.³⁰

<p><u>Problems Contributing to Decreased Innovation:</u></p> <ol style="list-style-type: none">1. Patent clearances not performed2. Forum shopping3. Disproportionate royalty and lost profit awards

Research and innovation, instead of creating an asset, can be a source of liability for the innovator. Patents can inhibit enhancements to products because the patent holder does not have incentive to improve the existing product and competitors don't have the ability to advance the product without infringing on the original patent.

The actual expense of litigation also diverts resources that may otherwise be invested in innovation. Litigation for a typical patent lawsuit can cost several million dollars. This cost is especially problematic for smaller companies.

In an effort to avoid litigation, many companies begin investing in defensive patents, patents filed on technology which the company has no intention of developing. Rather, defensive patents can be used as a bargaining chip if the company is faced with the threat of a suit over technology they have developed. For example, when company A threatens to sue company B for infringing on their patent, company B will search their patent portfolio to find a patent that company A might be infringing. The two companies can then call a truce and company B's defensive patent has served its purpose. Investments made in defensive patents, patents acquired for the purpose of threatening a counter-suit when a company is faced with a patent infringement lawsuit, also serve to divert resources from developing technology. Defensive patents are foundational to the common practice of patent trolling.

29. The Federal Trade Commission, “To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy,” October 2003, <http://www.amc.gov/commission_hearings/pdf/Statement_DeSanti.pdf> (14 June 2006).

30. Chandler

In spite of these deterrents, according to one study, research in the software industry has remained stable in recent years.³¹ However, the industry still loses potential growth due to the expense of patent lawsuits and settlements.

The problem of deterring innovation is caused by three contributing factors: patent clearances not being performed, forum shopping, and disproportionate damages.

3.2 Patent Clearance

One of the most fundamental issues contributing to patent trolling within the IT industry is the infrequency with which companies perform patent clearances. Before commencing on significant research for a new drug, a pharmaceutical company can reasonably search prior art to identify any existing similar treatments because of the relatively distinct and independent nature of drugs. On the other hand, the sheer quantity of software and IT patents and the cumulative nature of much recent technology makes a thorough search of prior art practically impossible. Patent clearance is particularly difficult in the software industry because a single piece of software often contains hundreds of patented ideas.

There appears to be wide agreement across the IT industry that performing patent clearances is excessively impractical and is not done.³² This contributes to the problem of patent trolling because it makes innovators particularly vulnerable to patent infringement lawsuits.

3.2.1 Patent Clearance and Liability

Beyond the impractical nature of performing patent clearances, companies also have significant disincentive to perform clearances because of the liability that reading patents can create. In today's patent system, when a patent holder accuses another company of infringing on a patent, approximately 90 percent of plaintiffs claim that the defendant willfully infringed the patent even though most companies simultaneously developed similar technology.³³ It costs the plaintiff nothing to claim willfulness, and it can triple their award if they win the suit. As a result, no clear distinction between willful infringers and simultaneous developers is apparent in the current law — all can be punished punitively.

3.2.2 Patent Clearance and Patent Quality

Finally, the task of performing clearances is difficult and muddled not only because of the quantity of patents, but also because of the quality of patents granted in today's system. Numerous groups have expressed concern about the quality of patents because they are often vague or unduly broad. However, when any patent holder files

31. Schacht

32. Ronald J. Mann, "Do Patents Facilitate Financing in the Software Industry?," *Texas Law Review*, March 2005, p. 1004.

33. Lemley, "Time for Congress"

a lawsuit, the patent is presumed valid, and validity can be challenged if the party accused of infringing chooses to challenge it or through ex parte or inter partes re-examination. Ex parte requires new prior art and does not allow the challenger to participate beyond initial filings. Inter partes allows the challenger to participate, but also allows the patent holder to amend the claims. Because of the limited nature and minimal return of inter partes, fewer than 100 requests for inter partes have ever been filed.³⁴ This situation results in significant risk taking for innovators. If they are aware of a patent that they believe to be invalid, but that they could be accused of infringing, they can do very little about it but choose to develop the product and hope that the patent will be invalidated if they are faced with a lawsuit.³⁵ Broad, poor quality patents increase the difficulty of performing patent clearances and aid patent trolls who seek to take advantage of the patent system.

3.3 Forum Shopping

Another significant area of concern in patent litigation is the ability of plaintiffs to “forum shop.” Current patent law allows the patent holder to bring a suit against the accused patent infringer in nearly³⁶ any of the 94 federal district courts. This gives the patentee an advantage because they can choose a court where their lawyer may have developed a positive reputation with the judge, or perhaps the court has a reputation for awarding liberal damages. This has contributed to cases being concentrated in particular courts. One frequent example is that of Marshall, Texas, where the number of patent litigation cases increased from 7 in 2003 to over 100 in 2005.³⁷

Some contend that forum shopping is not a significant issue — that forums in patent litigation are chosen because of the expertise of the judge, not to give one side an advantage.³⁸

On the other hand, the significant latitude allowed by the law often makes the defendant feel at a disadvantage, whether or not that is actually the case.³⁹

Forum shopping is a policy that is undoubtedly seen to, once again, favor patent holders and punish competing innovators. By disadvantaging innovators, it too plays a role in facilitating patent trolling in the U.S. patent system.

34. Chandler

35. Federal Trade Commission

36. A case cannot be tried in a district where the judge does not have personal jurisdiction over the involved parties; however, in cases involving widely marketed products there are practically no limitations on jurisdiction.

37. Chandler

38. John R. Thomas, “Perspectives on Patents: Post-Grant Review Procedures and Other Litigation Reforms,” Testimony before the United States Senate Committee on the Judiciary, 23 May 2006, <http://judiciary.senate.gov/testimony.cfm?id=1911&wit_id=5369> (9 June 2006).

39. Reines

3.4 Royalties and Lost Profits

A specific deterrent to innovation in the IT community is the threat of disproportionately high royalties and/or lost profit compensation. When a company is presented with the threat of a patent infringement lawsuit during or after their product development, the company faces the choice of abandoning the product, paying for expensive court proceedings (\$4.5 million per case average for cases taken to final judgment⁴⁰) which, if lost, can result in high royalties or lost profit damages, or settling for very high licensing fees. This is commonly termed “patent hold-up.”

While no reliable, authoritative statistics on the extent of the problem are available, it is widely recognized and discussed.⁴¹ Patent litigation frequently results in substantial awards that do not reflect the real value of the patent or the inventive contribution of the patented technology. For example, “if a product sells for \$100,000, the patentee will often seek 5% or more of the overall price of the product for a \$5,000 royalty per product, even if the patent relates only to a minor and rarely used option.”⁴² At this rate,

Disproportionate settlements are what make patent trolling a profitable business, and what make it such a distinct threat to innovation.

licenses for a mere five patents could consume all profit from a new product. When a company loses all profit, it also loses all incentive to innovate. Small companies without a significant patent portfolio are particularly susceptible to this situation because they don't have the option of threatening a “counter-suit” when faced with patent infringement claims. Disproportionate settlements are what make patent trolling a profitable business, and what make it such a distinct threat to innovation.

The patent hold-up situation is not without consequence. Linus Torvalds, the developer of Linux, a well known open-source operating system said, “The things that tend to worry me are software patents. When nontechnical issues can be used to stop software development — that, for me, is the scariest part.”⁴³ The Federal Trade Commission expanded on this problem by saying, “a questionable patent that claims a single routine in a software program may be asserted to hold up production of the entire software program. This process can deter follow-on innovation and unjustifiably raise costs to businesses and, ultimately, to consumers.”⁴⁴

When this practice can have negative implications for innovation, businesses, consumers, and in turn the entire economy, it seems reasonable to ask why litigation like this continues. Regardless of the overall impact, this practice remains highly profitable for the businesses who engage in it, and for the lawyers who facilitate it.⁴⁵

40. Fish

41. Lemley, “Patent Reform Legislation”

42. Reines

43. Andrew Donoghue, “Patents ‘biggest threat’ to Linux – Torvalds,” *ZDNet UK*, 23 March, 2004, <<http://www.zdnet.co.uk/news/software/linuxunix/0,39020390,39149799,00.htm>> (14 June 2006).

44. Federal Trade Commission

45. Fish

Raymond Niro, often termed the original patent troll, is a classic example. Niro made his fortune by sending hundreds of nearly identical letters to potential patent infringers on behalf of clients and collecting about 30 percent of their settlements. As a result, he is the proud owner of six Ferraris, a Falcon 10 jet, and acres of land in Chicago, Boca Raton, and Aspen.⁴⁶ Because of its potential for immense profit, patent hold-up will continue as long as the law allows it.

4 POLICY RECOMMENDATIONS

It is impossible to instantly and completely solve the patent reform issues raised above in the context of such a diverse and highly utilized system. However, several significant policy changes, some included in H.R. 2795 and some not, would restore balance in the system, discouraging the patent troll and encouraging innovation.

4.1 Policy Recommendation 1: Decrease Willful Infringement Claims

Addressing willful infringement law is an effective way to encourage IT patent clearances because the liability created by willfulness claims discourages patent searches.

H.R. 2795 contains language to change willful infringement law that would limit the circumstances in which a plaintiff could plead willfulness to instances where the patent “is not invalid, enforceable and has been infringed by the infringer.” This eliminates a plaintiff’s ability to plead willfulness as a matter of course.

This legislation would direct courts not to declare willful infringement in the instances where the infringer unknowingly infringed the patent. This protects simultaneous developers from punitive damages that can result in when a plaintiff claims willful infringement, a frequent occurrence in the IT industry

4.2 Policy Recommendation 2: Allow Third-party Request for Reevaluation of Patents

Because patent validity cannot easily be challenged until a patent holder files a suit against an infringer, and even then the patent has the presumption of validity,⁴⁷ many contend that there is a plethora of poor quality patents in the system. While it is not practical to attempt to “sort” existing patents, the quality of new patents can be monitored to a greater extent. H.R. 2795 includes language to allow third parties to contest the validity of patents in two separate time periods: nine months after the patent is granted and six months after receiving notice of alleged infringement.

⁴⁶ Lisa Lerer, “Meet the Original Patent Troll, *Law.com*, 20 July 2006, <<http://www.law.com/jsp/article.jsp?id=1153299926232>> (28 July 2006).

⁴⁷ Though validity, in the legal sense, means that the challenger has the burden to present evidence, many courts treat validity as a presumption of court competence, raising the bar for evidence to invalidate the patent.

These two review periods would allow a patent to be challenged both shortly after it is granted and after the patent holder provides a notice of alleged infringement. While this will create an additional level of quality assurance for patents, it still is reasonable for those seeking to protect intellectual property rights through acquiring a patent because of the limited nature of the time in which an opposition request can be filed. This review period will provide the IT industry with the ability to better monitor the quality of a patent and the extent of its claims, which will in turn make the patent clearance process more feasible over time.

4.3 Policy Recommendation 3: Limit Forum Selection

While a plaintiff's ability to choose any district court for trial is much discussed, no current legislation addresses this issue. Congress should include venue reform in H.R. 2795. One such option would be to limit the trial to the plaintiff's district, with a provision to allow a change of location in the occasion of an excessive number of cases in one district. Limiting forum selection would provide a uniform practice, not giving either the plaintiff or defendant any advantage. Preventing forum shopping would help balance the playing field in the IT industry, discouraging the patent trolling practice.

4.4 Policy Recommendation 4: Court Employed Neutral Experts

Though the defendant and the plaintiff each have a technical expert, that expert presents technical information supporting their own side's legal arguments. A neutral, court employed expert that offers specific knowledge, advice, and recommendations regarding an IT case would save time, resources, and assist the court in making a more informed and judicious decision in both deciding whether infringement actually occurred and determining appropriate royalties and lost profit damages.⁴⁸ Such an expert could serve in different capacities dependent upon the preferences of the court. In one situation, he could resolve technical disagreements in the court, and in another, he could serve as a "special master," making recommendations to the court on claims construction.

A neutral court expert would be an invaluable asset in IT patent litigation where, in order to make a properly informed decision, a court must both know patent law and understand the technology at the center of the trial. Additionally, employing neutral experts limits incentives for forum shopping. Because neutral experts for any case would be chosen from a national pool of candidates, a case could be assigned the same neutral expert regardless of the district in which the case is tried – this eliminates incentives to choose a court that would be more favorable to a given case.

48. IEEE-USA, "The Use of Neutral Experts in Intellectual Property Litigation," 24 June 2006, <<http://www.ieeeusa.org/policy/positions/neutralexperts.asp>> (6 July 6, 2006).

4.5 Policy Recommendation 5: Limit Royalty Damages

Royalties or licensing fees and damages determined by the court in IT cases are often disproportionate, not recognizing the contribution of the infringed patent as a portion of the overall product. In many IT cases, if every patented portion of an invention was licensed at the same rate as the infringed patent, the inventor would face a net loss. H.R. 2795 contains legislation to require courts to consider the “inventive contribution” of the patented invention as distinguished from the entire invention when determining damages.

“...if every patented portion of an invention was licensed at the same rate as the infringed patent, the inventor would face a net loss.”

The bill reasonably allows for court judgment while requiring that certain considerations be made. It allows the court to determine an award that is fair for the plaintiff, is reasonable for the defendant, and recognizes the nature of technology in the IT realm. It would also serve to discourage the patent trolling practice by decreasing monetary incentives.

4.6 Policy Recommendation 6: Limit Lost Profit Damages

While the language above requires the court to take the entire product into perspective when calculating royalties, it does not make similar requirements for calculating lost profit damages. Courts often require an infringer to pay damages to the patent holder for lost profits during the infringement period. H.R. 2795 should be altered to include lost profit damages.

The table below gives an overview of how each of the policy recommendations can be achieved. Three are already contained in H.R. 2795; three additional changes should be added.

Problem	Recommendation	In H.R. 2795?
Patent clearances not performed	Decrease willful infringement claims	Yes
	Allow third-party requests for reevaluation of patents	Yes
Forum shopping	Limit forum selection	No
	Court employed neutral experts	No
Disproportionate royalty and lost profit awards	Limit royalty damages	Yes
	Limit lost profit damages	No

5 CONCLUSIONS

The rapidly increasing number of patents in the IT industry and the cumulative nature of those patents, coupled with legislative permissiveness, have facilitated the practice of patent trolling in today's IT sectors. This practice diverts resources from innovation, posing a risk to business and economic growth.

While promoting innovation and protecting intellectual property rights have been goals of the U.S. patent system since its birth, current patent law policy does not adequately meet these goals.

The recommended policy changes that address the problems of patent clearances, forum shopping, and disproportionate damages, can be implemented to effectively discourage the trolling practice while still protecting the rights of innovators to license patents and protect their intellectual property.

Six Policy Recommendations

1. Limit circumstances in which plaintiffs can claim willful infringement
2. Allow a post-grant period for third-party requests for reevaluation of patent validity
3. Restrict forum selection to the plaintiff's district
4. Encourage courts to employ neutral experts to offer technical guidance or assist in claims construction
5. Require courts to consider "inventive contribution" to determine royalty damages
6. Require courts to consider "inventive contribution" to determine lost profit damages