LEGAL POLICY

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Patent Trolls Erode the Foundation of the U.S. Patent System

By Daniel P. McCurdy

CLIMBING OUT OF THE DEEP economic recession the United States is facing will require multiple remedies, but there is no doubt that ongoing innovation will be critical to restoring the long-term economic health and prosperity of our country. Innovation is so key to our nation's prosperity that our founders enshrined the general principle of intellectual property as an essential element of economic development in Article 1, Section 8 of our Constitution. The basis for this constitutional provision establishing a patent system was not the protection of individual rights to inventions *per se*, but rather the promotion of economic development in a young and ambitious country.

As originally conceived, the patent system would catalyze economic development by providing individuals (and those investing in the inventive process) the prospect of a return on that investment should the invention achieve market success, while ensuring the public had the ability to learn from the invention to enable follow-on research and development. The fundamental policy intent of the patent system still holds true nearly 220 years later. Patents are created for a single purpose—as an incentive to encourage innovation and, through such innovation, to increase the general economic well-being and prosperity of the nation. In recent years, however, much in the practice of intellectual property management has changed in ways that are inconsistent with the public policy objectives that were the foundation for the patent system. Left unchecked, some of these new approaches threaten to undermine this patent system and our prospects for renewed economic growth.

By far, the most significant and destabilizing change in the patent environment since 2003 has been the dramatic increase in the growth, financing, and patent acquisitions of so called non-practicing entities. NPEs in legal parlance—more commonly referred to as "patent trolls"—derive or plan to derive all or most of their revenue from the enforcement of patents. Patent trolls are clearly distinguishable from major research institutions, universities, and businesses that derive their revenue, respectively, from funded research, tuition and grants, and the sale of products and services. Some 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.

Many factors have come together to foster this phenomenon. These include the cheap cost of capital until the financial crisis of mid-2008, an openness to new investment vehicles among institutional investors, and a large number of patents available for sale. Many of these patents are of questionable validity at the individual level, but in the aggregate become more valuable because of the cost to a potential licensee of separating the rare grains of wheat from the chaff.

The jump in patent troll-related lawsuits is truly alarming. From October 1, 1994 through September 30, 2002, 527 patent lawsuits were filed by or against the 219 NPEs currently identified and tracked by PatentFreedom. This represented 2.7 percent of patent lawsuits filed in the United States during that 8-year period. From October 1, 2003 through September 30, 2007, there were 1,210 lawsuits filed by or against these entities, representing approximately 8.4 percent of all patent lawsuits filed in that period, and exceeding 10 percent in 2006 and 2007 (see Figure 1).

Over the past year—from October 1, 2007 through September 30, 2008—389 litigations were filed involving the PatentFreedom-tracked NPEs, compared with 297 in the prior year. Today, 219 patent trolls boast more than 800 subsidiaries or perhaps as many as 1,500 if all of the subsidiaries of the largest NPE, Intellectual Ventures, were known. Combined, all of these subsidiaries have more than 12,500 active and pending U.S. patents in their holdings. And in all likelihood, these numbers dramatically understate the magnitude of the problem.

For instance, these figures include only 3,167 U.S. patents and applications held by Intellectual Ventures, a mere fraction of the more than 23,000 worldwide patent assets they claim to own, most procured with a portion of the $5 billion in private capital they have raised to date. Intellectual Ventures is unique by virtue of its capital structure, its collection of signatory operating companies, its public relations capabilities, its leadership, and its patent portfolio. But it shares a probable requirement with other NPEs—it will likely have to follow the path of litigation.

The reason: Whether a large private equity fund like Intellectual Ventures or a more focused patent aggregator with less available capital, investors in patent trolls expect a return on their investment. Persuading a company to pay for a license to patents that the potential licensor may feel are invalid or not infringed is a difficult task. For this reason, as the amount of patent royalties requested increases, the chance that litigation will be required to untangle the debate over validity and infringe-

FIGURE 1

Lawsuits by patent trolls on the rise

Percentage of intellectual property-related lawsuits by non-practicing entities to total IP-related lawsuits

Source: PatentFreedom ©2008. Data Captured as of November 2008.

ment also increases. When NPE funds are very large, the returns they require to satisfy investors are commensurately large. Thus, it is likely that notwithstanding its stated desire to avoid litigation, Intellectual Ventures will ultimately have to follow the litigation path used by other NPE funds.

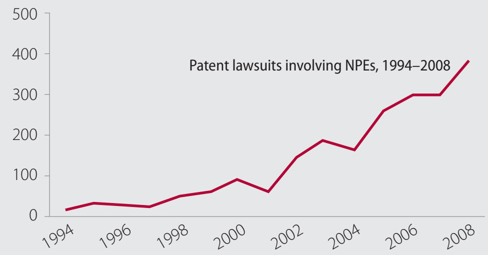
But even with litigation, profits, will be dependent on legal findings of validity of the patents asserted, then infringement of the patents, and then substantial damages. There exists the potential, however, that damages could be seriously limited by new laws or jurisprudence affecting damages calculations, such as those reflected in the on-going "proportional damages" debate. Finally all of these findings would have to stand up to the scrutiny of appeal.

The losers in this process will be businesses, consumers, and an overburdened court system, all made possible by the collection of funds from investors that enable patent trolls to amass new inventions that would spur national economic growth under the assumed but incorrect premise that patents are individual rights with discrete monetary value rather than a government tool of economic development enabled by the conveyance of certain rights to inventors and those that invested in them.

FIGURE 2

Patent trolls clog up the courts

Number of patent lawsuits by non-practicing entities: 1994–2008



Source: PatentFreedom ©2008. Data Captured as of November, 2008.

The Patent Troll Realm

Beyond Intellectual Ventures, the remaining 218 PatentFreedom-tracked NPEs have varied backgrounds. Some, like Acacia Technologies, Alliacense Ltd., and Rembrandt Technologies, are primarily patent enforcement entities that are highly selective in their purchases. They have relatively small and focused patent portfolios. They rely substantially on litigation to demonstrate their commitment to enforce. Acacia, for example, since its inception in January, 1993 through August, 2008 has itself or through companies it has acquired been a plaintiff in 280 patent lawsuits (and a plaintiff or defendant in 308 lawsuits) seeking to enforce at least 121 of the 274 issued patents identified to date by PatentFreedom.

Moreover, those NPEs that are heavily litigation-focused have substantially increased the scope and pace of litigation. This increase takes two forms. The first is the absolute number of litigations filed (see Figure 2) and the second—frequently overlooked—is the number of defendants named in each lawsuit, which if properly reflected, substantially increases the scope and scale of NPE litigation. As an indication of this increase, see Figure 3.

Other NPEs are not so litigious. Firms such as 1st Technology, ArrivalStar, Cygnus Telecommunications Technology LLC, Freedom Wireless, Inc, Millennium LP, and Rates Technology derive or plan to derive the majority of their revenues from patent enforcement, but rather than buying patents created by others they primarily or exclusively license patents created by their employees or owners. A third category involves individual inventors who have chosen to enforce their patents as the primary means to derive revenue from them.

The patent litigation practices of these last two groups of patent trolls at first glance may not seem to be as egregious. After all, they are at least seeking to profit from their own ideas, rather than the ideas of others. Yet they are clearly akin to Intellectual Ventures and other patent aggregators in that they are using a patent system designed to promote the economic development of a nation through the cre-

FIGURE 3

Patent trolls cast wider net

IP court cases involving select non-practicing entities

NPE Name	Total Cases	Cases since 2003	% of Total since 2003
Acacia Technologies	308	239	78%
Rates Technology Inc	130	38	29%
Millennium LP	99	90	91%
Cygnus Telecommunications Technology LLC	69	31	45%
General Patent Corp International	66	36	55%
Plutus IP	59	59	100%
Papst Licensing GmbH	59	31	53%
F&G Research Inc	56	51	91%
Ronald A Katz Technology Licensing	54	48	89%
Catch Curve Inc	53	36	68%

Source: PatentFreedom ©2008. Data Captured as of August 31, 2008.

ation of new products and services to, alternatively extract profits from new products and services developed by other companies, potentially harming both consumers and competition.

All patent trolls share a common attribute: the primary source of their revenue is extracting royalties from companies they believe are using inventions claimed in patents they own. And because these NPEs do not derive any significant portion of their revenue from designing, developing, manufacturing, or selling products, they are essentially immune to counter-assertion claims by the companies from which they seek royalties. This profound disparity in NPE vs. product company assertions, as opposed to product company vs. product company assertions, has destabilized the patent system.

THE DESTABILIZING IMPACT OF PATENT TROLLS

Because these entities and individuals do not produce products, there is some question as to how their enforcement activities contribute to the "first principle" underlying the creation of the patent system—to encourage economic growth made possible by encouraging innovative new technologies that would foster the introduction of valuable new products and services to the market. The creation of an idea is frequently the least costly and least time-consuming aspect of product success.

Development budgets vastly exceed research budgets in research and development-intensive companies. Much more time, and substantially more investment, is required to commercialize a product or service embodying an invention than to create the invention in the first place. When I was director of business development for IBM Research in the early- to mid-1990s, for example, the global development budget exceeded the global research budget by about 20 times. R&D spending and development spending has fallen since then, but the proportional differences remain similar today.

Even if this were not the case, the tremendous financial and tactical advantages NPEs have over their business targets are huge. When one business asserts patents against another, both have the opportunity to reduce or eliminate the assertion by counter-asserting patents of their own against key products of the aggressor. In addition, both have the opportunity—if successful in proving infringement of a valid patent—to obtain an injunction that could severely damage the other's business operations. Neither of these defenses is available to a business when confronted with a patent assertion from a patent troll.

In fact, by choosing to not pursue products or services using their invention (or attempting product sales and failing) an NPE is actually *rewarded* with these tactical advantages. This can actually serve to diminish competition, and increase prices to consumers, by rewarding entities to not put products and services in the market but rather taxing those that do.

To compound the disadvantage faced by businesses, many NPEs operate in a stealth mode, hiding behind tens or even hundreds of subsidiaries, masking their patent holdings, their finances, and their activities so that they can sue for patent infringement only after the market has locked into using the covered technology. The many NPEs that purchase the patents they enforce can develop highly tailored portfolios focused on the most successful products of their intended licensees, with acquisitions sufficiently deep and broad to achieve an overwhelming assault.

This is in stark contrast to their targets, most of which are public companies that must reveal, by regulatory mandate, virtually everything about themselves, their products, their strategies, and their finances. Left unchecked, these tactics will enable NPEs to further enhance the vast amount of capital they have already obtained from pension funds, hedge funds, endowments, and other sources of alternative investments, including even other businesses.

Acacia for example, has a wide array of institutional investors, including fund managers Fidelity Management & Research, Vanguard Group, Oppenheimer Group, and Barclays Global Investors, hedge fund Kingdon Capital, private equity firms Apex Capital and Pequot Capital, and the giant U.S. teachers pension fund TIAA-CREF. Or consider Germany's IPCom GmbH which reportedly is funded by one of the world's largest hedge funds, Fortress Investments.

Armed with private capital, patent trolls are able to purchase large patent portfolios with absolutely no intention of producing meaningful revenues from products or services. Their extraction of royalties from product companies either diverts funds from the research and development needed to fuel continuing innovation that will drive economic development, or raises prices paid by consumers. And to what end?

Patent trolls' hollow market arguments don't ring true

Some NPEs argue that their presence provides needed liquidity to inventors that may otherwise never obtain any return on their investment, spurring those inventors to further innovation. But that argument is hardly credible when most patent trolls offer such trivial rewards to the inventor. Indeed, the principal exception—General Patent Corporation, which has a long history of supplying enforcement services to small- and medium-sized inventors, with a substantial portion of the royalties provided to the inventor—proves the point. More frequently, NPEs with hundreds of millions or billions of dollars in capital seek out patents held by others and pay the actual inventors a small fraction of the money they seek to obtain in subsequent enforcement activities. It is hard to imagine that the prospect of netting so small an amount will, on its own, stimulate further innovation.

In fact, patent trolls could alter their behavior if they truly believed their objective was to be an advocate and defender of the small inventor. They could:

- Attempt to enforce only those patents they could demonstrate were clearly valid and infringed by fully applying Rule 11 of the Federal Rules of Civil Procedure, which prescribes sanctions for the filing of a frivolous lawsuit
- Avoid predatory massing of patents through acquisition that is intended to overwhelm a potential licensee
- Practice full disclosure and transparency in their funding, patent holdings, and practices
- Commit to the return of the majority of royalties to the original investor or inventor who created the technology.

Even with these changes, patent trolls would still remain a dangerous threat with significant advantages over businesses, but the changes would help to level the playing field. These commitments, however, will be difficult for most NPEs to make. Most patent trolls have already made promises to their investors that they will buy low, sell high, and keep the vast majority of the proceeds. The intended winner is not the inventor, but the NPE.

That's why the United States (indeed, the world community) needs a fully functional and transparent Patent Exchange, where every seller could advertise the availability of their patent to every potential buyer in a public forum so that companies potentially threatened by a patent at least would have the opportunity to purchase the asset. A Patent Exchange would help to establish greater competition for the asset at whatever stage the patents were offered for sale, thereby enhancing the reward to the innovator. And it would enable patent-acquisition entities, such as Allied Security Trust, RPX, and Open Invention Network—all of which were created in whole or part to combat NPEs and those wishing to stifle innovation—to participate in patent acquisitions as an alternative to inventors settling for offers from patent trolls that have not been thoroughly exercised in a competitive marketplace.

But not all businesses boast the financial firepower to join patent-acquisition entities or to individually ward off NPE-induced patent litigation by striking royalty deals. Smaller or less successful competitors cannot afford to pay the huge royalties asked by a never-ending stream of litigious patent trolls. Therefore, these smaller players, who can provide meaningful innovation and apply critical competitive pressures on industry leaders, face patent uncertainties (as do their potential customers) that are avoided by the larger, licensed market leaders, thereby potentially solidifying the market leaders' positions.

In short, patent trolls may be a compelling (yet still unproven) business model, but they do nothing to contribute to innovation or the nation's economic prosperity. In fact, they severely complicate the ability of businesses large and small to produce products and services that produce jobs and rebuild our nation's (and workers') economic health. Indeed, the unpredictability that *any* product can be made, used, or sold without the very real risk of a devastating onslaught of patent attacks results in a marketplace in which innovation and competition are stymied. This is no way for our patent system to work as the United States tries to innovate its way out of today's deep economic recession.

ADDRESSING THE TROUBLE WITH PATENT TROLLS

Fortunately, some meaningful actions have already been taken by the Supreme Court and the Court of Appeals for the Federal Circuit to deal with issues that have exacerbated the NPE problem. First, the *eBay* decision by U.S. Supreme Court in 2006 removed the so-called "automatic injunction" remedy for plaintiffs in a patent dispute, replacing it with the established "four factor" test to determine whether an injunction should be granted. This test will be difficult for an NPE to pass. Second, the *MedImmune* decision by the Supreme Court in 2007 permits a licensee to challenge the validity of a patent while still paying royalties. This removed the prior requirement that a licensee must first cease royalty payments, thereby triggering a breach and termination of the license and exposing itself to willful infringement and treble damages.

Third, the Federal Circuit in the *Sandisk* decision in 2007 dramatically lowered the threshold required for a company approached by a patent holder to seek a declaratory judgment from a court selected by the threatened party. Under *Sandisk*, the offer of a license, coupled with the rejection of the offer by the intended licensee, constitutes sufficient controversy to sustain a declaratory judgment action. That said, many operating companies are reluctant to initiate a lawsuit that, on average, will cost $5 million prior to its conclusion.

Fourth, the *KSR* decision by the U.S. Supreme Court in 2007 initiated a vital reassessment of the obviousness standard. A patentable invention must pass three key tests: it must be novel (new, not previously known); it must be useful; and it must not be obvious. Over the past decade in particular, there has been mounting criticism with respect to the quality and validity of patents issued by the U.S. Patent and Trademark Office. In particular, many observers charge that issued patents fail to pass the novelty or obviousness tests and are therefore invalid. The *KSR* decision held that when dealing with a patent that covers improvements over the prior art (as most do), a court must now ask whether the improvements are more than the predictable use of prior art elements according to their established functions.

The final two notable cases of importance to better managing the threat of NPEs are the *Quanta Computer* decision this year by the U.S. Supreme Court and the *Bilski* decision by the Federal Court of Appeals, also earlier this year. *Quanta* clarifies and strengthens the principle of "patent exhaustion," holding that a license to make a product "exhausts" the ability of the licensor to then claim infringement by the products that were actually produced. This ruling will materially limit some of the adventurous practices of NPEs with respect to chasing the entire value chain of a product, from manufacturer through to the consumer. And the *Bilski* decision significantly curtailed the patentability of business methods (a favorite category of patents being amassed by NPEs) that do not rely on an apparatus or do not transform a material to a different state or thing (the so-called "machine-or-transformation" test).

More can be done

The courts, however, have yet to deal with at least three other important issues fueling the attraction of the patent troll business model to institutional investors and financial speculators. Two of the issues—awarding of damages that are reflective only of the economic contribution of an invention to a product and the selection by patent trolls of the court to adjudicate their lawsuits—were highly debated and considered by Congress in the Patent Reform Act, which failed passage in 2008. Let's consider each in turn.

The importance of "proportional damages" revolves around the effort by patent trolls and also operating companies seeking to enforce their own patents—particularly in the high-tech industry—to claim damages against the total price of a finished product, or the totality of revenue for a service, regardless of the economic contribution of the infringing element of that product to the product's total value. So, if a $5 integrated mouse is contained in a $2,000 laptop computer, the licensor would claim that the mouse was essential to the total value of the computer, and seek a multiple percentage royalty against each $2,000 laptop that contained the allegedly infringing mouse, as opposed to a multiple percentage royalty of the $5 mouse.

Congress failed to resolve this damages debate because of differing views between major industries. Broadly, the battle lines pitted primarily some high-tech companies against pharmaceutical companies, which expressed concerns that limiting damages only to the economic contribution of the invention *per* se would weaken their ability to deter competitors seeking to undermine their patent-protected products. Those opposing the language related to proportional damages, in addition to the pharmaceutical industry, included certain high-tech companies and non-practicing entities.

With respect to the "venue" debate, the importance of the selection by plaintiffs of the court in which they choose to file a patent action involves the ability of plaintiffs to "shop" for the most favorable forum to file infringement actions. Basically, patent trolls and businesses trying to enforce their own patents seek out jurisdictions that have demonstrated by their results that they are friendly and generous toward patent holders, and relatively fast. More money as fast as possible is the motivation.

There are few restrictions that preclude a plaintiff from selecting a forum of their choice, even if

FIGURE 4
Court shopping
Patent trolls' choice venues for their lawsuits in the United States

Court	NPE as Plaintiff		NPE as Defendant		Total Cases by NPE
	No. of Cases	% of Total	No. of Cases	% of Total	
Eastern District of Texas	332	94%	20	6%	352
Northern District of California	156	70%	66	30%	222
Central District of California	152	86%	25	14%	177
Souther District of New York	122	92%	10	8%	132
Northern District of Illinois	100	93%	8	7%	108
Northern District of Georgia	76	92%	7	8%	83
Delaware	57	69%	26	31%	83
Eastern District of New York	73	94%	5	6%	78
New Jersey	56	88%	8	13%	64
Southern District of Florida	56	97%	2	3%	58

Source: PatentFreedom © 2008. Data captured as of August 31, 2008.

neither the plaintiff nor defendant has reasonable nexus to the chosen venue. Entities that are generally the defendant in patent litigations (which tend to be businesses, and particularly businesses confronted by NPEs as well as other businesses) were generally supportive of reforms that would limit venue shopping, whereas plaintiffs were generally opposed to such reforms. Figure 4 depicts the jurisdictions of choice.

It would seem reasonable that Congress or the courts will ultimately limit this forum-shopping ability as this wasn't as germane to the failure of patent reform in Congress as was the conflict over the apportionment of damages. All that's required is that the jurisdiction in which the case is heard must be reasonably tied to the dispute at hand. The recent 5th Circuit decision in *In re Volkswagen* AG in October 2008, which ordered Judge Ward in the Eastern District of Texas to transfer a case to Dallas where the events surrounding the case occurred, appears to signal the federal court's willingness to tackle these difficult issues.

A final step that should to be taken is for Congress to adopt a law that requires unsuccessful patent plaintiffs to bear the cost of their adventurous litigation in court. Today, particularly plaintiffs that use contingent law firms (as do many NPEs) incur minimal risks when filing an infringement suit. Only two things can happen—the target settles and pays money to the plaintiff, or the target refuses to settle, goes to trial, and the plaintiff wins or loses. But even if the plaintiff loses, the only cost it has incurred is its legal fees, and therefore the NPE only absorbs out-of-pocket expenses.

Adopting a system where plaintiffs or a successful defendant in a patent-related declaratory judgment action would have to pay the target's costs if the case fails would provide a substantial brake on adventurous litigation. Such a law would force all patent holders—patent trolls and businesses alike—to thoroughly investigate infringement actions prior to approaching a potential licensee with the threat of a lawsuit. It would dramatically curtail the amount of contingent litigation pursuing weak claims of infringement, a mainstay of most patent trolls, and yet it would permit the vigorous enforcement of strong patent rights.

If there were only one action that could be taken, then I believe a law to oblige unsuccessful patent enforcers to bear the costs of their lawsuits would be by far the most important and useful, yet likely the most difficult to achieve, since those that make a living from this practice will lobby extremely hard to avoid enactment of the required legislation.

CONCLUSION

Patent trolls amass fortunes by using purchased patents to reap profits from those who commercialize innovation, raising costs to consumers, and retarding innovation. These effects hardly promote the public policy on which the patent system was created. But for the government's grant of a patent, the sole means of exploiting an invention is to put it in a product and offer it for sale. Fostering the commercialization that spurs economic growth must certainly be at least as important as fostering invention. Patent trolls damage invention and commercialization by exploiting their unfair advantage in the market. They increase barriers to entry for new companies that might otherwise lower prices through competition, while at the same time raising the cost to consumers for the use of the patents that NPEs purchase from others for the primary, if not sole, purpose of pursuing profit.

Fortunately, the courts have already begun to intervene to address this dangerous phenomenon. The Federal Trade Commission's 2003 report on intellectual property, coupled with other studies, such as the National Academies' *A Patent System for the 21st Century*, subsequent studies by academia, industry, and other stakeholders, and numerous congressional hearings, have individually and collectively played a significant role in stimulating the courts to act.

The FTC, the courts, Congress, the U.S. Patent and Trademark Office, and patent applicants and owners can each take further measures to address this aggressive threat. Our nation's prosperity and security will be the beneficiary of prompt and vigorous action.

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