
by Steven Titch *

Introduction

Intellectual property policies and the protections they uphold are critical in a market-based economy. Our Founding Fathers recognized the importance of protecting intellectual property by writing it into the Constitution as a proper role of government. Article 1, Section 8 reads:

The Congress shall have Power To ... 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 ...

The “progress of science and useful arts” requires incentives to encourage innovation and protection of patents to ensure innovators are equitably rewarded for the risks they take and the investments they make. While the basic principles underlying the U.S. patent system are correct, even sound policy can be abused by bad actors.

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The past several years have given rise to an industry of patent stockpiling – often referred to as “aggregation” – and patent assertion, filing either frivolous or mostly baseless lawsuits. These efforts have the effect of thwarting legitimate innovation and discouraging competition, both of which are essential to a thriving economy.

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The potential financial gains of patent stockpiling and assertion have driven some struggling, well-known consumer brands to shutter their manufacturing operations entirely and shift to full-time patent assertion. Internationally, governments are forming their own patent assertion entities (PAEs) and using them as weapons of protectionism and government subsidization of private enterprise.

The White House, United States Patent and Trademark Office (USPTO), courts, and a growing number of state legislatures have taken action against patent abuse. Congress has made a number of reform attempts that have fallen short. With new leadership entering the Senate, legislative action on Capitol Hill is expected.

Part 1 of this paper briefly reviews the economic impact of stockpiling and assertion, and Part 2 describes the several forms such patent abuse can take. Part 3 describes the America Invents Act of 2011 – the most significant overhaul of the patent system in decades – and discusses the likelihood of new action on patent reform in the 114th Congress. Part 4 summarizes policy recommendations.

1. The Economic Impact of Patent Assertion

Patent assertion entities, known pejoratively as “patent trolls,” exist to exploit weaknesses in the U.S. patent system. Patent assertion entities (PAEs), known pejoratively as “patent trolls,” exist to exploit weaknesses in the U.S. patent system. Their business model is built on the fact it is often cheaper for defendants to settle a patent infringement claim than to endure a lengthy court process, risking an unfavorable ruling and incurring significant legal fees. PAEs do not stockpile patents or assert the patents they control for legitimate purposes, such as defending their investment in research or development. The patent itself is usually the primary asset PAEs control with any real revenue-earning potential.

The patent abuse industry takes an enormous toll on U.S. consumers:

- In 2013, almost 6,500 patent lawsuits were filed in the United States. Suits filed by PAEs accounted for 67 percent of them, up from 28 percent five years ago. The median damages award in 2013 was $4.3 million.

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2. Forms of Patent Abuse

Patent stockpiling and assertion as a business model or significant revenue stream is pursued through a variety of very similar methods.

The often-frivolous patent suits, brought by companies often known as “non-practicing entities” (NPEs) because they do not manufacture any product, receive the most attention and are considered standard “patent trolling.”

Success has spawned variations on the theme. Along with NPEs, the patent abuse industry now boasts “transformer” trolls, government-sponsored patent trolls, and abusive patent pooling, all of which seek to exploit weaknesses in the current patent system.

Non-Practicing Entities (NPEs)

Non-practicing entities acquire and stockpile patents, watch the industry for entrepreneurs and start-ups that have developed a similar idea, and then attack with an infringement claim. The similarities between the defendant entrepreneur’s work and the plaintiff NPE’s patented material are often marginal, but the defendant lacks the resources to mount a sustained defense.

To apply further pressure for a settlement, NPEs bring action in jurisdictions with a record of being highly favorable to plaintiffs. These include the U.S. District Court for the Eastern District of Texas, where 1,495 infringement cases were brought in 2013, and the Central District of

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California, which heard 512 cases in 2012.\(^6\)

Melvino, ArrivalStar, Wyncomm, and Thermolife International are among the most notorious NPEs. Each filed more than 100 infringement lawsuits in 2013 alone.\(^7\)

One reason NPEs are successful, especially when it comes to software, is that juries and courts often fail to distinguish between patented code and the end-function of a software product. For example, Soverain Software, an NPE, owned a patent on software that could perform the “shopping cart” function common on e-commerce websites. Although there are several ways to code such a function, Soverain asserted any website shopping cart function was an infringement of its patent.

After winning settlements from smaller operations, Soverain extracted a $40 million settlement from Amazon. That was followed by multimillion-dollar settlements from Victoria’s Secret and Avon. Finally, electronics retailer Newegg stood its ground and won its case on appeal, invalidating Soverain’s claims.\(^8\)

Plaintiffs have been successful enough with frivolous lawsuits that the practice has withstood occasional setbacks in court. Whereas Soverain and Melvino are not household names, better-known brands, such as Nokia, are now practicing this form of trolling.

**Transformer Trolls: Household Brands Shift from Products to Licensing**

Nokia, once the leader in wireless phone sales, formally exited the market in April 2014 when it sold its handset manufacturing operations to Microsoft. Nokia retained its patent portfolio, a decision analysts say points to a future strategy of patent litigation as an alternative means of revenue generation.

As a manufacturer, Nokia participated in cross-licensing agreements that acknowledged the wide range of patents all manufacturers had contributed to every wireless handset. In essence, it was part of a patent ecosystem akin to the “leave a penny, take a penny” trays you see at some convenience stores.

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7 Diane Bartz, *supra* note 5.

Now that it’s out of manufacturing, Nokia has no incentive to “leave a penny” in the form of honoring cross-licensing agreements. On the contrary, it has every incentive to challenge the validity of the patents on all other handsets in the market.

The company made its first move in 2013, filing lawsuits in the United States and Germany against handset manufacturer HTC, claiming infringement on dozens of patents. Nokia’s president and CEO, Rajeev Suri, all but endorsed his company’s trolling activity during its first quarter 2014 conference call and affirmed his intention to flout the patent ecosystem from which his firm had previously benefited, saying:

Now that we no longer have a mobile device business, we no longer need to obtain licensing for mobile devices. ... We will rapidly seize new opportunities for increasing licensing deals, particularly now that the devices and services business is not with us. We will do so both on standard essential patents and implementation patents.

Foreign Government-Sponsored Patent Trolls

In a further wrinkle, the governments of China, France, Japan, South Korea, and Taiwan have formed state-sponsored PAEs bent on acquiring all the patents they can, regardless of where the patent is filed or who the filer is, in order to extract settlements from alleged infringers.

Intellectual Discovery, the Korean government PAE, has bought more than 200 patents, including one for retinal eye scan technology from Singaporean chipmaker Avago Technologies Ltd, according to U.S. government records. The Chinese government reportedly has backed Ruichuan IPR Funds with $50 billion to acquire patents that will be used in actions against U.S. companies.

Government-sponsored PAEs are a new form of protectionism and subsidization of private enterprise. In today’s intellectual-property-fueled global economy, instead of slapping tariffs on imported products that compete with homegrown industries, governments are dubiously applying patent law to extract a “tax” on any product that threatens the nation’s commercial interests. The European Centre for International Political Economy (ECIPE), a research group advocating

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Some [sovereign patent funds], like France Brevets, even admit to being retaliatory or discriminatory instruments against foreign actors regardless of whether the original claim is legitimate or not.\textsuperscript{12}

As an international trade issue, this form of patent abuse might be addressable only in free-trade agreements. ECIPE encourages countries that value free trade to include protections against government-sponsored PAEs in the Transatlantic Trade and Investment Partnership and the Trans-Pacific Partnership,\textsuperscript{13} two major international trade agreements currently being negotiated. These trade agreements will set new rules for global trade between the United States and Europe and the United States and Asia, respectively, for years to come.

\textit{Abusive and Anticompetitive Patent Pools}

Properly employed, patent pooling is a legitimate practice that reduces product design and manufacturing costs. A manufacturer pays a patent pool for a single license covering all patents associated with the product it wants to market. This is especially beneficial in today’s high-tech environment, where a particular product – such as a personal computer, smartphone, gaming console, or television – can incorporate dozens or even hundreds of patented products or processes.

Bad-acting patent pools abuse and undermine this system by using tactics that closely resemble those of patent trolls, especially when a government grants it exclusivity over a patent group.

The for-profit Denver, Colorado-based MPEG LA, for example, originated as a patent pool for a relatively small group of patents that comprised the MPEG-2 standard for encoding video signals. Today the company manages thousands of patents and, critics say, unfairly leverages


\textsuperscript{13} ibid., p. 7
that power by charging high licensing fees for pools that contain licenses products no longer need and licenses for patents that have expired or are going to expire soon, thus having little or no value if sold individually.

Manufacturers of digital TVs and cable converter boxes say MPEG LA is exploiting its exclusive licensing of a pool of patents that conforms to government-mandated standards, known as the Advanced Television Systems Committee (ATSC) standard. Every television sold in the United States since the completion of the “digital transition” in 2009 is required by the Federal Communications Commission (FCC) to license this technology.\(^{14}\)

The ATSC standard is essentially a government-granted monopoly. MPEG LA, which manages the ATSC patent pool, charges a royalty of $5 per unit. This is quite high compared to licenses for digital TV standards used in Europe, Japan, and China, which cost $1.03, 98 cents, and 16 cents per unit, respectively.

The higher cost has a snowball effect in the supply chain. In 2009, the Coalition United to Terminate Financial Abuses of the Television Transition estimated U.S. consumers pay about $20 to $30 more per digital set than consumers in other countries because manufacturers are being overcharged to use intellectual property.\(^{15}\) Now that consumers are turning to the Internet for programming they once received through a cable connection, it is questionable whether every TV even needs to incorporate the ATSC standard, as a growing number of consumers will never even use it.

3. 2011 Reforms, and More on the Horizon?

Patent abuse continues despite the America Invents Act of 2011 (AIA), the most significant overhaul of the patent system in decades. Among other reforms, AIA moved the United States away from its “first-to-invent” patent awards system to a “first-to-file” system, aligning it with patent law in most other countries.

In reforms aimed at trolling, AIA created two new proceedings for challenging issued patents:

- “inter partes” review, which permits allegations of invalidity over prior art. If drawings, diagrams, and any industrial design work in an asserted patent is the same or very close to artwork or design work that pre-dates the filing of that patent, the patent can be challenged and possibly invalidated.


\(^{15}\) Ibid.
“post-grant” review, which permits allegations of invalidity on any ground in the statute. Requests for post-grant review must be filed with USPTO within nine months of the patent’s issuance.\(^\text{16}\)

With passage of the America Invents Act, Congress began incrementally addressing issues of tremendous consequence to the U.S. intellectual property system and policy framework behind it.

That was followed in 2014 by the U.S. House of Representatives’ approval of the Innovation Act, a bill sponsored by Rep. Bob Goodlatte (R-VA) that would have forced PAEs to be more specific in their patent infringement claims. No further action was taken on that measure in 2014.

A corresponding Senate bill, which had bipartisan support from Sens. John Cornyn (R-TX) and Charles Schumer (D-NY), had been gaining momentum until it was tabled by then-Majority Leader Harry Reid (D-NV), whose decision brought outspoken criticism from fellow Democrat and bill sponsor Sen. Patrick Leahy (D-VT):

> I am furious with what happened. We worked so hard to get a coalition. Harry Reid and a couple of others said, “We won’t let it come to the floor.” I think that’s wrong, but I’m not going to give up.\(^\text{17}\)

Sen. Orrin Hatch (R-UT) shared Leahy’s frustration:

> With so much on the line, how can we afford not to act? Yet, the current Senate did exactly that, and ignored the very real opportunity we had to follow the House of Representatives and pass bipartisan legislation that was supported by the White House.\(^\text{18}\)

Sen. Reid’s obstructionism may finally be coming to an end. The Republican majority has reshaped the Senate leadership and patent reform is rumored to be high on the congressional agenda. Cornyn, who is expected to become the new majority whip, has all but promised passage of a reform bill in 2015.

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From a political perspective, patent reform offers Republicans a chance to illustrate their willingness to work with Democrats. In his 2014 State of the Union address, President Barack Obama called on Congress to “pass a patent reform bill that allows our businesses to stay focused on innovation, not costly and needless litigation,” providing political cover for Democrats who want to vote with Republicans on the matter. Unlike some policy issues, on patent reform there is no distinct right/left split. Along with conservatives such as Cornyn and Hatch, liberal senators such as Schumer, Leahy, and Jay Rockefeller (D-WV) have publicly recognized the need for a solution to the trolling problem.

The new Senate majority can bring Congress into line with the general trend in patent reform in the judicial and executive branches. In 2014 the U.S. Supreme Court addressed aspects of the problem in two rulings.

In *Alice Corp. v. CLS Bank*, the Court declared abstract ideas could not be patented. This has particular relevance to the software industry. In short, the Court ruled software that allows a computer to transfer funds between two banks can be patented, but that patent cannot be claimed to cover the *concept* of using a computer to transfer funds between two parties. In a second decision, *Nautilus Inc. v. Biosig Instruments Inc.*, the Court set a higher standard for patent plaintiffs, requiring them to be more specific about points of patent violations and less “insolubly ambiguous.”

In addition to endorsing legislation, Obama in 2013 and 2014 issued a series of executive orders giving USPTO more guidance, tools, and authority during the patent approval process; adding more transparency to the process; providing more training for patent examiners; and creating a patent litigation “toolbox” for small businesses that face infringement lawsuits.

In October 2014, Obama appointed Michele K. Lee, who served as an intellectual property attorney at Google and is an advocate of patent reform, as director of USPTO. Her appointment has not yet been confirmed, so she is currently acting director. The Senate held a confirmation hearing in November 2014 but adjourned before voting. Obama re-nominated Lee in January. Those watching the progress of Lee’s nomination have been quick to point out it signals a presidential nod to Silicon Valley, which has been struggling for more control of USPTO for a number of years.

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State legislatures also have begun to address patent abuse. Knowing this litigation hampers the entrepreneurialism they seek to foster, especially in the technology sector, 18 states, including Georgia, Illinois, North Carolina, and Oregon, have enacted laws against bad-faith patent assertion. Bills have been introduced in another seven states. The laws require plaintiffs to be more specific in their infringement claims, citing actual instances where unique and innovative attributes have been copied. Under these reforms, citing broad similarities is no longer enough to establish infringement. In some states, plaintiffs now have to pay attorneys’ fees if they fail to prove infringement. This serves to balance the large economic advantage patent assertion entities have over small defendants, which they use to leverage out-of-court settlements.

4. Policy Recommendations

Widespread and bipartisan interest in a patent abuse remedy at the state level shows Congress there is public support for fast action.

Patent law in the United States is not broken, but it does need to be reformed to better recognize the way innovation happens in the twenty-first century. The trolling problem stems from bottom-line economics: Current patent law and jurisprudence have made it profitable to assert patent ownership on the thinnest of rationales. For the plaintiff, the likely payoff from high-value monetary settlements exceeds the cost of acquiring and stockpiling patents on nonexistent products and the cost of prosecuting the case. For the defendant, the opposite incentives prevail: A financial settlement, even an expensive one, is often cheaper and less risky than going to trial.

Enterprises should be using the marketplace, not the courtroom, to evaluate investment and return opportunities. Patent reform can help by changing the cost-benefit ratios of litigation so frivolous patents are deterred but plaintiffs with legitimate cases are still able to bring a case.

Specific recommendations for reform include:

- Federal legislation should empower the United States Patent and Trademark Office (USPTO) to better address the changing nature of patents, particularly regarding software. USPTO needs to better understand methodologies and mechanisms in the way software is written. It also needs clearer rules on what end-functions – shopping carts, location mapping, web indexing, and cross referencing, for example – can be deemed proprietary and subject to license.

Courts are important in patent enforcement, but a lack of suitable guidelines from USPTO leaves juries and courts too much leeway in interpreting patent law. The U.S. Supreme Court has provided some guidance for lower courts in calling on plaintiffs to be specific as to their infringement claims. Congress and state legislative bodies should follow the Court’s lead and craft legislation that demands higher and more specific standards for the establishment of infringement.

Congress should confirm Michele K. Lee as director of USPTO. The agency has a poor reputation when it comes to evaluating software patents and other high-technology innovation. Placing Lee, a former Google executive, in charge of the agency will address this perception and help implement a real shift in USPTO’s approach to contemporary patent issues.

The White House, through the U.S. Commerce Department and U.S. Trade Representative’s Office, should use the Transatlantic Trade and Investment Partnership and the Trans-Pacific Partnership negotiations to address the growing problem of state-sponsored patent trolling. If governments persist in using frivolous patent suits to block U.S. entry into their domestic markets, the United States should turn to treaty organizations such as the World Trade Organization for enforcement and redress.

Regulatory bodies such as the Federal Communications Commission that set standards necessary for the interoperability of devices should avoid heavy reliance on patented technology. These decisions result in a government-mandated monopoly that leads to overpricing of licenses, as seen with the ATSC television standard.

Conclusion

Patent abuse is harming the U.S. economy. It interferes with market competition, stymies entrepreneurs and innovators, and ultimately costs consumers in higher prices and decreased availability of products and features.

Much of the debate over patent reform centers on how to make patent defense easier and less onerous for defendants without undermining legitimate patent claimants. The solution must not unfairly classify certain patent holders, such as universities, as trolls simply because they hold patents without manufacturing goods.

A careful balance of interests is achievable, as demonstrated by the cooperation of Republicans and Democrats such as Sens. John Cornyn and Charles Schumer, in addition to White House support and federal judicial action promoting stronger patents and more definite infringement standards.
Properly enforced, sound patent policy protects individual innovators and the overall economy. It gives businesses incentives to create, and it provides consumers with more choices and better value as vibrant competition keeps prices in check. But the potential for financial spoils can motivate individuals, corporations, and even foreign governments to use their substantial resources and regulatory clout to levy baseless or frivolous claims against would-be competitors. The economic consequences of these actions can be catastrophic for small businesses and inflict significant damage on economies of all sizes.

In the courts and the states, incremental progress is being made. This can spark action at the federal level. Patent reform could be one of the first success stories of the new term.

To be sure, the intricacies of patent and intellectual property policy defy a one-size-fits-all solution. But in the courts and the states, incremental progress is being made. This can spark action at the federal level, where there is substantial bipartisan interest in addressing patent abuse. Patent reform could be one of the first success stories of the new term.

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