Patents are a government-granted right that allows individuals or companies to exclude others from making, using, selling or importing inventions for a set amount of time, typically 20 years. By imitating a number of key features of real property, patents have allowed innovators to reap the gains of their effort.[1] The United States has a highly-successful system for issuing patents; indeed observers are now concerned that too many patents are issued and too many activities are protected.

This concern spurred significant changes to patent law in 2011. Despite this recent legislation, Congress is again considering reforms, with the focus on so-called patent trolls. Patent trolls are entities that earn income off their patents from suing others for infringement. These companies then issue letters demanding payments to those others for violating their patents. Because the licensee fee that these firms demand is cheaper than going to trial, which can cost nearly $3 million to complete, most companies opt to pay.[2] The extent and cost of this practice has been widely debated. This primer reviews the current literature on patent trolls, documents changes made to the law in 2011 with the America Invents Act (AIA), explains the current five areas of proposed reform, and finishes with a discussion on software patents.

As Marc Andreessen, co-founder of Netscape Communications, first said, software is eating the world. Getting the contours of patent law right is important for this highly productive industry. However, ensuring that it succeeds must not come at the expense of others, like those in the high tech manufacturing industry and the medical sciences.

**The Trouble With “Trolls”**

Patent trolls fall under the umbrella of patent assertion entities (PAE), which is included under the broader class of non practicing entities (NPE). Because the licensee fee that these firms demand is cheaper than going to trial most companies opt to pay.

Reform proponents point to an explosive increase in these kinds of lawsuits in recent years. According to a number of reports, abusive claims accounted for over half of all patent litigation in 2012, while there was a nearly 40 percent increase in suits by NPEs between 2007 and 2011.[3] Thus, there has been pressure to change some of the aspects of patent laws to stop firms from engaging in this kind of behavior.

At first blush, anecdotal evidence supports the reformers’ case. Famously, Innovatio IP Ventures sent demand letters to a number of small businesses like coffee shops and bakeries for their use of off the shelf Wi-Fi equipment, because they violated patents that Innovatio bought from Broadcom, a semiconductor company. In reality, many of the largest Wifi router manufacturers already retained licenses for those patents, so consumers were protected from any litigation. Because the original demand letters called for those small businesses to pay between $2,500 and $5,000, many in the hardware industry like Cisco, Netgear, and Motorola Solutions intervened. Cisco eventually settled with the company for 3.2 cents per infringement.[4]
Ultimately, the patents that Innovatio IP Ventures were filing claims with were used within an industry standard. To use these patents, the owner typically allows others to obtain a license if it has fair, reasonable, and non-discriminatory terms (FRAND). Under these terms, Innovatio IP Ventures should have gotten at most 9 cents for each of the infringement, which makes their settlement all that more interesting.[5] Broadly speaking, the cost and structure of FRAND agreements has been a serious point of content for those in the software industry, which now encompasses the vast majority of patent cases.

In practice, empirical evidence of the pervasiveness of abuse in sectors other than the software industry needs to be firmly established. For example, one of the most highly cited reports, the NPE Litigation Report, counts not just patent assertion entities, but also every other NPE. This other category includes a number of organizations many would not consider abusive, like universities, research institutions, individual inventors, and non-competing entities, a term to describe companies that assert patents outside their areas of products or services.[6] So, it is unclear how much of this is abusive as compared to a development within the market. Knowledge and innovative ideas are in demand, so firms are likely then to specialize in order to meet this demand, which includes NPEs. Even still, with the decision in Alice v. CLS Bank, an important and recent case detailed later, estimates have charted a decline in patent cases from their high in 2012 with 2014 seeing over 1,000 fewer patent cases over the previous year.[7]

Courts can and have had an impact. Yet, many of the provisions in a recently passed piece of patent legislation have not been worked through the courts. In order to understand current calls for action, it is important to understand those changes as well.

**The America Invents Act**

The 2011 America Invents Act (AIA) was designed to improve patent quality and reduce strain on the judicial system. Among the most notable changes was the move away from a first-to-discover standard towards a first-to-file standard, thus coordinating US law with most international laws. To help reduce abusive claims, the Act provided new ways to challenge questionable patents through the Patent and Trademark Office’s (PTO) newly created Patent Trials and Appeals Board (PTAB). Proponents argued that if dubious patents could be invalidated through new, faster review processes, then trolls could not assert them against vulnerable producers who are unable to fight the patent themselves. The Act thus established a way for anyone to challenge any claim of any patent through a process called *inter partes* review (IPR). In this proceeding, the challenger presents evidence that a patent should be considered invalid. After agreeing to hear the petition, the PTAB must render its decision within twelve months, acting as a cheaper, faster alternative to the courts with a lower burden of proof.

The covered business method review (CMBR) works in a similar way. This process subjects patents on financial “business methods,” a controversial field of patents, to additional scrutiny as they are vulnerable to challenge by any party with standing. AIA instituted proceedings have cut down on the patent caseload of courts by 18 percent, but they are not without critics.[8]

As of November 2014, the PTAB cancelled 80 percent of claims challenged under IPR and 96 percent of claims challenged under CMBR.[9] Some have argued that the structure of the review process also lends itself to abuse as the system can be and is being gamed by petitioners to keep patents tied up in review.[10] For example, a patent can be challenged again and again even once the PTAB has ruled in its favor. CMBR rules are even weaker and allow for evidence to be withheld only to be introduced in later challenges. While there was an 18 percent decrease in patent litigation in courts, trials by PTO increased by 212 percent.[11] Thus, the AIA has...
clearly affected patents, but in ways that have not fully discernible since it takes nearly 2.5 years to bring a case to trial.[12]

**Patent Reform Proposals in 2015**

Five changes to the current patent law regime have been proposed to reduce the ability of firms to engage in abusive behavior: fee shifting, customer stay provisions, heightened pleading standards, transparency, and demand letter reform.

Fee shifting would change U.S. law so that the loser in a patent infringement lawsuit would have to pay for the attorneys’ fees of the winner as well. Only in those instances where the court determines that the loser advanced objectively reasonable positions would they be able to escape the attorneys’ fees. Currently, each part must pay their own fees, and only in exceptional cases is the loser expected to pay. Both versions of the rule have their rightful critics. While there could be more frivolous lawsuits when each party must pay for their legal costs, small but meritorious claims are just as likely when the loser pays for all of the fees.[13] If the goal of the legislation is to undercut those claims that don’t have merit, but are still paid for by small businesses, then it is unlikely that fee shifting would be the most direct solution.[14] By most accounts only 4 to 7 percent of cases go to trial. [15] The other 93 to 96 percent of cases never reach a judgement, and thus would never test a new fee shifting standard. Thus, changes in the standards that would make loser pays less exceptional would likely be a better interim path and have garnered far wider support because it is seen as a middle road between the two.

Customer stay protections make it easier for the manufacturer of an allegedly infringing good to step in to defend its product while putting a temporary halt to proceedings against an end customer. For example, if a company begins litigation against a cafe for its use of a refrigerator which the PAE thinks it holds the patent, then the refrigerator manufacturer can halt the case against the cafe while it defends its patent against the PAE. This change would allow the larger manufacturing firm with more resources and, perhaps, patent lawyers at its disposal to defend its product while protecting end customers, who tend to be smaller, more vulnerable businesses.

Pleading standards are also another area slated for reform. At the beginning of a lawsuit, each side must formally submit their claims and defenses. The information required in patent cases is far less than in other parts of law. (This is due to the loophole called Rule 84, which allows for complaints that follow Form 18 to be sufficient.) Changes to pleading standards are already underway within in the courts.[16] Late last year, the Judicial Conference, which establishes uniform policy for the U.S. courts, suggested that Rule 84 be abolished. In all likelihood, the Supreme Court will approve the changes and it will be sent to Congress. Thus, Congress will likely have to address pleading standards one way or another. The question for Congress is whether it should issue a new standard or be subject to the broader standard.

Because many of the worst offenders have created shell corporations to shelter the identity and nature of the plaintiff, transparency has been another goal for legislators. New requirements would require that parties having a financial interest the patents asserted in a court action are disclosed. While this does create a burden for large integrated firms and could potentially reveal proprietary information, many court proceedings already require this under seal to protect confidential information.

Demand letters mark the beginning of an infringement claim and have garnered attention in the press. A couple years back, a company called MPHJ sent over 16,000 of these letters demanding payment for a “scan to email” patent.[17] While there have been various bills designed to deal with this behavior, the Federal Trade Commission (FTC) brought a suit against MPHJ which resulted in a consent agreement that restricted it from
sending deceptive letters. While these actions by the FTC have lessened the need for a directed bill, the agency has been restrained on this issue, so a bill clarifying the exact purpose of the FTC’s authority and giving them clear guidance on the kinds of behaviors that need to be curbed could deter abusive demand letters.

**Patents and Software Post *Alice***

More than any other, the software industry has been at the heart of recent patent debates. Software patents are controversial, with some even calling for their abolition.

The patentability of software was brought to the forefront in last summer’s Supreme Court ruling in *Alice Corp. v. CLS Bank International.*[18] Alice held patents on computer operated escrow services. CLS sued to have those patents declared invalid. In a 9-0 decision the Court ruled that Alice’s service was merely using a computer to carry out the already well known practice of intermediated settlement. That practice, the Court held, is an abstract idea, and using a computer to implement it does not transform it into a patentable invention.

The fallout of the *Alice* decision is ongoing, but it has sparked renewed debate over software patents in general. Even though it is still early, these patents have been invalidated more often, which has led some to hail the new legal standard as a victory. It is important to note that the Court’s decision did not rule out all software patents; it applies only to patents on art that is only innovative insofar as it carries out an abstract idea with a computer. Some have interpreted the ruling as teeing up a later invalidation of all software patents because all software is, at its core, merely feeding abstract information into a machine which can read it. While some of the most vocal opponents of this approach acknowledge that computer code is probably more suitable for copyright rather than patent protection, software is more than specific code.[19] The real value of a piece of software is in its function, and the invention of new functionality is no less patentable when it is implemented by a computer than when it is implemented by a mechanical device.

**Conclusion**

Congress is now considering a variety of reform proposals each of which has strong support from some groups and strong skepticism from others. The main concern is finding a way to provide strong patents for legitimate inventors while stopping the fraudulent behavior of patent asserters

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