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THE FUTURE OF PATENT TROLL LEGISLATION AND ITS EFFECTS ON THE ENERGY INDUSTRY

JOHN DAVID WEIDMAN*

Introduction

Trolls have a proper place in fairy tales as tricksters and monsters. They live under bridges (that they did not even build) and only let travelers pass if they answer riddles or surrender a tax of gold coins or other valuables. The hero in these stories is generally smart enough to answer the troll's riddles. But if they are truly courageous, they kill the troll. Killing a troll is much harder than just paying them, so why even put forth the effort? Thus, the trolls have a good gig going—minimal cost or risk on their part makes for the perfect extortion scheme.

Modern language uses the term “troll” to describe many different people and acts of particular annoyance. Most notably, there are internet trolls: people with fake profiles who make inflammatory comments on internet news sites and message boards, invoking strong and entertaining reactions from legitimate users. Internet trolls are without a doubt the most common type of troll a person will encounter, but at the end of the day, they do not cause significant economic damage. Therefore, they are not viewed as a genuine threat. A more effective and dangerous modern troll—the patent troll¹—imitates the more traditional meaning of troll: extorting money out

* Special thanks for the direction and encouragement from my faculty advisor, Sarah Burstein, and my editors: Megan Anson, Douglas Brooking, and Mason Smith.

1. Here, “patent troll” refers to entities engaging in extortion or fraud through threat of ungrounded patent litigation. The author recognizes that many refer to these entities as NPEs

of businesses for infringement of patents (their bridge) that their claims unlikely cover. Instead of charging for passage on a bridge, patent trolls extort money out of anyone who ventures near the river. The term “patent troll” is quite inflammatory—painting a picture of a nasty, monstrous extortionist that many think hyperbolizes the extent of the damage they actually cause. But with their specific targeting of some major industries—technology and energy—the economic impact, and the outcry for lawmakers to act, it is clear they truly have become monsters.

The actions of state legislatures,² former President of the United States Barack Obama,³ and technology and energy leaders have urged for the creation of federal legislation to prevent the abuse of the patent system at the hands of patent trolls. Some technology companies have even begun forming giant patent alliances in hopes of avoiding trolls.⁴ The complicated relationship between state and federal legislation in respect to bad faith patent claims—the only real indicator of dealing with a patent troll—and the appropriate steps required to address this problem have major effects on the energy industry. A federal anti-patent-troll law could fix many of the problems arising out of the multiple standards from state law, but changes in civil procedure and venue law—such as the recently decided Supreme Court case *TC Heartland LLC v. Kraft Food Brands Group LLC*—look promising to be more effective at stopping patent trolls overall but less effective in the energy industry.

Problems plague every step in the legislative process—from the very definition of a troll to finding ways to protect against them without completely gutting patent owner’s rights. Effectively defining “patent troll” poses the first of many obstacles for lawmakers. As with any statutory definition, too narrow or broad a definition may lead to significant dangers for all involved in the patent system. Patent trolls are often referred to as

or PAEs (discussed later) but has chosen not to include those because of several discussed flaws.

2. Qian Huang, Grace King & Tim Rawson, *Navigating the Landscape of Anti-Trolling Legislation*, INTEL. PROP. MAG. 54, June 2016, available at <https://www.pillsburylaw.com/en/news-and-insights/navigating-the-landscape-of-anti-trolling-legislation.html>.

3. Anne Flaherty, *Congress May Target Patent Trolls Who Prey on Tech Industry Innovation*, PBS NEWSHOUR, (Apr. 14, 2016, 2:30 PM), <http://www.pbs.org/newshour/rundown/congress-may-target-patent-trolls-prey-tech-industry-innovation/> (President Obama stated that he supported the bill and patent reform).

4. *The Patent Troll Problem*, LOTNETWORK (2016), <http://lotnet.com/the-patent-troll-problem/>.

NPEs, or non-practicing entities,⁵ but that reference misses several important distinctions of perfectly legal NPEs, including licensing firms and many universities. The definition of patent troll, the state legislation and their problems, the lack of federal action, and the possible changes in venue law through the Supreme Court all factor into the problems of the modern troll and an economic drain on the energy industry. First, the comment will address the definition of patent troll and who they are prone to target. Then, it will examine what states have attempted to curb trolls and the many problems the state laws encounter. Next, the comment will consider the options of federal action taken against trolls and the effects of recent venue reform through the Supreme Court. Last, possible patent troll weaknesses will be studied through the alternative actions such as private license agreements designed to quash trolls' ability to sue certain entities for infringement.

I. Definition Of A Patent Troll And Its Targets

True patent trolls extort by acting as companies protecting their rightfully-owned patents when they either do not own the rights to that claimed property or are asserting those rights against someone they have no reason to believe infringes. Trolls execute the disguise so well that it is increasingly difficult to identify the trolls from legitimate businesses—many trolls view themselves as legitimate businessmen anyway. Trolls try to monetize whatever patents they have accumulated by claiming (or threatening to claim) invalid or very weak patent infringements in court against businesses who are likely to settle or pay a small license fee to avoid paying the hefty price of patent litigation.⁶ In addition to the economic and temporal costs of fighting patent trolls, there is the risk that a vague demand letter could turn out to be a legitimate claim, and that by paying the relatively small fee, the troll promises to disappear under its bridge, taking that risk with it.⁷

Technically, patent trolls are a type of NPE.⁸ Patent licensing firms, along with universities and research laboratories, are also NPEs, but they foster innovation by protecting against actual infringement, pushing

5. Matteo Sabattini, *NPEs vs. Patent Trolls: How to Build a Healthy Innovation Ecosystem*, IPWATCHDOG (Feb. 4, 2015), <http://www.ipwatchdog.com/2015/02/04/npe-patent-trolls-innovation-ecosystem/id=54427/>.

6. *Id.*

7. *Id.*

8. *Id.*

licensing to prevent free riding, and providing revenue through legal means that can be poured into new investments.⁹ Many companies fighting against patent trolls choose to call them PAEs, or patent assertion entities, but that name implies that asserting patent rights constitutes a de facto wrong or illegal action.¹⁰ The common use of PAE suggests that a party trying to assert a patent—except of course the person accusing the PAE of being a troll—has ill intent. The vast difference in these definitions is one that must be addressed in an effective piece of legislation. The statutory definition must clearly distinguish between the helpful licensing and research of legitimate NPEs, the just actions of asserting patent rights against an infringer, and harmful entities with an end goal of extortion who merit the label of troll.

As for the common target of patent trolls, the industry must be one with a high number of patents and new filings, many large companies likely to pay settlement demands rather than go to court, and a wide base of smaller companies to better disguise the troll as a small inventor protecting its work. In general, the ideal target either has so much money that they would rather pay the troll out of annoyance or is small enough that it cannot handle the financial burden or risk of one of its few patents failing in court. Initially, the main target was the booming technology industry. As that industry slowly learned to deal with trolls, they have expanded somewhat to the similarly patent-heavy energy industry.

A. Trolls Started With And Continue Targeting Technology Companies

The technology industry in the United States has seen many successes in recent years, and with that success came an onslaught of patent litigation and patent troll claims.¹¹ Though an older—and now failing¹²—giant, Yahoo legal counsel claimed they spent around \$100 million fighting patent trolls between 2007 and 2015.¹³ The reaction of the major technology firms demonstrates the enormity of the threat posed by patent trolls. Technology

9. *Id.*

10. *The Patent Troll Problem*, *supra* note 4 (Patent group constantly refers to trolls as “PAEs”).

11. Gina Hall, *Tech Companies Draw Large Amount of Attention from Patent Trolls*, SILICON VALLEY BUS. J.: BIZJOURNALS.COM (July 13, 2015 7:30 AM), <http://www.bizjournals.com/sanjose/news/2015/07/13/tech-companies-draw-large-amount-of-attention-from.html>.

12. See Todd Spangler, *Yahoo’s False Prophet: How Marissa Mayer Failed to Turn the Company Around*, VARIETY (May 24, 2016 9:06 AM), <http://variety.com/2016/digital/features/marissa-mayer-yahoo-ceo-1201781310/>.

13. Flaherty, *supra* note 3.

companies have grown ever more protective and have launched quasi-alliances against patent trolls.¹⁴ Several state legislatures have attempted to protect companies from this specific threat even though patents are a federal issue.¹⁵ Vermont was the first state to enact legislation targeted at preventing extortion in the form of patent assertion,¹⁶ and it is no coincidence that the technology industry in Vermont provides “40% of the payroll in the state.”¹⁷ For industries with such an important role in the state’s economy, legislators will try to pass anything to protect those businesses and keep them in state. Whatever the companies viewed as a threat themselves, the state legislators viewed as a threat to the state economy. And though the technology industry includes behemoth-sized companies, bleeding that amount of cash to low-level extortionists cannot be an action for any company—regardless of size—that wishes to survive.

B. Expansion From Silicon Valley To The Energy Business

With such an easy setup, lucrative rewards, and low risk of liability or legal consequences, patent trolls easily target technology¹⁸ companies and have now expanded into new areas, including the energy industry. In 2013, patent trolls shifted—or at least broadened—their focus from targeting technology companies to the energy industry.¹⁹ The technology industry is rumored to be oversaturated with trolls, and technology companies continue to become more aggressive in their litigation tactics toward these

14. See *How LOT Works*, LOTNETWORK (2016), <http://lotnet.com/how-lot-works/> (Companies that have formed alliances specifically to stop patent trolls).

15. Huang, King & Rawson, *supra* note 2.

16. *Id.*

17. Abby Isaacs, *New Report Shows Tech Industry Makes Up a Quarter of Vermont’s Economy*, NBC5 (Apr. 14, 2016, 10:32 AM), <http://www.mynbc5.com/article/new-report-shows-tech-industry-makes-up-a-quarter-of-vermont-s-economy/3326875> (internal quotations omitted).

18. The use of “Silicon Valley” and “technology” (used interchangeably) here is referring to computer and internet service based technology separate from such tools used in the energy industry to place companies such as Google and Schlumberger in their corresponding fields while ignoring the numerous overlaps. The author recognizes that the term “technology” may be viewed broadly enough to encompass any patentable subject matter. Also, Silicon Valley is a generalization and in this context does not include several large technology companies such as IBM.

19. Jayme Partridge & Todd Patterson, *Patent Trolls Find New Target in Energy Sector: Study Found 200 Percent Increase in Nonpracticing-Entity Lawsuits during the First Half of 2015*, *ENERGY: A SPECIAL REPORT*, THE NAT’L L.J. (Sept. 28, 2015).

extortionists.²⁰ These factors may have pushed extorting NPEs to look for fresh meat, and energy companies are good prospects for settling early to avoid expensive litigation.²¹ Studies estimate that patent lawsuits filed by NPEs against energy companies tripled between 2006 and 2015,²² and the first six months of 2015 had twice as many NPE patent lawsuits as the first six months of 2014.²³ This data demonstrates that these energy-targeted troll suits have increased exponentially, with no signs of slowing down.

This shift may also have roots in patent case law dealing with the scope of numerous technology patents. In *Alice Corp. v. CLS Bank International*, Alice owned a series of patents that included claims to a common financial process that safeguards against one party in a settlement or agreement not performing their half by holding the payments until both sides have submitted them.²⁴ The Court criticized Alice as trying to get a patent on a simple process they knew would be computerized in the future without actually trying to produce such a program or new idea themselves; it was basic logic that it would be computerized and that there was money to be made if the process could be owned. The decision to deny this broad type of patent, that brings no transformation to an abstract idea, has barred all process patent claims that simply take a business practice and attempt to add to it by making computers do the grunt work.²⁵ Had the patent been for a machine specifically made for this program that actually did the process described, there may have been a different outcome. The Court based its decision that the process and code in the claims were not patentable on the fact that such a basic concept falls under the patent-ineligible abstract ideas of Section 101.²⁶ Since many patent trolls base their arguments on a broad interpretation of their software patents, *Alice* resulted in a setback for trolls in the technology industry—but not as large as one might hope.²⁷ Though a mix of good and bad news for the technology industry, *Alice* may be no

20. John Barr & Tim Grieger, *Patent Trolls Target Oil and Gas Industry*, ENERGY EXECUTIVE MAG. (2015), <http://energy-executive.com/blog/143-patent-trolls-target-oil-and-gas-industry> [<http://web.archive.org/web/20161222153343/http://energy-executive.com/blog/143-patent-trolls-target-oil-and-gas-industry>].

21. *Id.*

22. *Id.*

23. Partridge & Patterson, *supra* note 19.

24. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2352-53 (2014).

25. *Id.* at 2359-60.

26. *Id.* at 2360.

27. Amanda Ciccattelli, *Software Patents Get Struck Down After Alice*, INSIDE COUNSEL (Feb. 1, 2017), <http://www.insidecounsel.com/2017/02/01/software-patents-get-struck-down-after-alice>.

news for the energy sector, which has fewer computerized processes that were targeted. This case may have contributed to the shift of patent trolls toward the energy industry, but it also outlines one of the main tactics in legislation against patent trolls, which seeks to limit the scope of claim interpretation in an infringement suit.

There are many possible reasons for targeting the energy industry, but the fast-paced and high-risk nature of the business itself creates the type of pragmatic settling that patent trolls desire. The broad range of technology, equipment, and processes needed to compete successfully in the oil industry, and the level of specialized knowledge, leads to more patents in general and thus to more patent lawsuits.²⁸ The energy sector's high costs (including legal costs) and overall market size also attract patent trolls.²⁹ In such a large industry, with companies of every size nationwide, it is difficult to discern between patent trolls and a small business rightfully protecting its invention from infringement. To spur on this confusion, patent trolls usually form a separate shell corporation to hold just one group of patents involved in one lawsuit.³⁰ Then demand letters come from unfamiliar corporate entities that add to the illusion of risk of future litigation costs and infringement damages for the recipient energy company. Creating this shell company prevents the patent troll from losing anything more than the lawsuit and limits the possibility that its future claims or business for the specific patents will be affected since the troll has no actual products, services, or material assets.³¹ The ability to hide behind a corporate veil presents a particularly troublesome problem. Patent trolls are not only increasing the number of cases brought overall, but each troll brings more cases to court—up to an average of seven cases per NPE in 2015—because they are enabled by hiding behind shell companies.³²

In addition to the highly-competitive nature of the business, energy companies must protect their interests and technology to survive the current, large, and prolonged decline in oil prices. For the past two years, the price of crude has averaged roughly \$50 per barrel.³³ The last time they sunk that low at the end of 2008, prices quickly returned to around \$75

28. Barr & Grieger, *supra* note 20.

29. Partridge & Patterson, *supra* note 19.

30. *Id.* at ¶ 6.

31. *Id.*

32. David J. Levy & Nicholas E. Floyd, *Update: Patent Trolls Are Targeting the Energy Industry*, MORGAN LEWIS (June 29, 2015), <https://www.morganlewis.com/pubs/update-patent-trolls-are-targeting-the-energy-industry>.

33. *WTI Crude*, CNBC.COM (May 18, 2017), <http://data.cnbc.com/quotes/@CL.1>.

within a couple of months.³⁴ The prolonged slump in the energy industry has resulted in an overall increase in patent litigation, especially in oilfield service and equipment companies.³⁵ There is a direct correlation between the drop in oil and the increase in competitor-on-competitor patent litigation, the likes of which the industry has not seen since the late 1980s.³⁶ As it became important to cut costs while still protecting the current assets of the company to maintain survival, energy companies faced adverse incentives both to avoid risk by settling with patent trolls and litigate threats to their assets. When the industry becomes less profitable, patents become a source of opportunity, with possibilities of profits from both future products and from litigation. Patents provide proof that the company can do something no one else can, which can be a wonderful tool for increasing market share.³⁷ Competitors turn on each other and fight tooth and nail for an opportunity to bring in profits from their patent portfolios through litigation, in which a win not only helps the company's bottom line but directly weakens the competition.³⁸ The general increase in litigation is not solely due to patent trolls, but their increasing persistence in a time of economic downturn in the industry has added to the stress of the situation caused by other factors. This frustrating dichotomy between avoiding risk and having a deep need to protect valuable assets has prompted an outcry for legislation to decrease patent troll extortion and the waste that comes from their practices.

II. State Responses To Patent Trolls And Their Problems

Like most litigation, patent cases are costly; on average, a patent case costs more than one million dollars to defend.³⁹ In addition to the price tag, patent litigation consists of a long and arduous process despite jurisdictional efforts to streamline the process. While there is some dispute over how

34. *Id.*

35. Nushin Huq, *Patent Infringement Cases Increase in Oil and Gas Business*, BLOOMBERG LAW: BIG LAW BUSINESS (Mar. 8, 2016), <https://bol.bna.com/patent-infringement-cases-increase-in-oil-and-gas-business/>.

36. *Id.*

37. *Id.*

38. *Id.*

39. Partridge & Patterson, *supra* note 19.

much monetary damage comes directly from patent trolls, research suggests that the damage is significant, reaching multi-billions of dollars.⁴⁰

The first states to enact legislation against patent trolls, like Vermont, did so with the goal of cutting litigation costs and extortion in their technology industry.⁴¹ The increase in targeting the energy industry led to states with more of a reliance on energy—like Oklahoma and Texas—to pass legislation in an attempt to stabilize the state economy.

In Texas, seventeen of the twenty-five biggest companies by revenue headquartered in the state are oil and gas companies.⁴² Without counting any of the numerous out-of-state companies that contribute to the energy industry in Texas, these seventeen companies had a combined revenue of more than \$800 billion in 2013.⁴³ So, when oil went from nearly \$100 per barrel in June 2014 to less than \$50 for two whole years, the implications for the state's economy—which now makes up 9% of United States' economic output—were far-reaching.⁴⁴ More than half of the 172 oil and gas producers and service providers that filed for bankruptcy from 2015 to October 2016 have done so in Texas courts.⁴⁵ Between the end of 2014 and Fall 2016, Texas lost more than 91,000 jobs related to the energy industry.⁴⁶ It is clear that Texas needs to do whatever necessary to assist its energy companies and bolster its economy, and the state legislature is positioned to most quickly deal with this kind of significant economic and tax loss. The loss of business, jobs, and taxable revenue very likely caused Texas' anti-trolling legislation at the end of 2015.⁴⁷

40. James Bessen, *The Evidence Is In; Patent Trolls Do Hurt Innovation*, THE HARVARD BUS. R., Nov. 2014, <https://hbr.org/2014/07/the-evidence-is-in-patent-trolls-do-hurt-innovation> (Discusses research showing patent trolls cost \$29 billion in legal costs in 2011).

41. Isaacs, *supra* note 17.

42. Office of the Governor of Texas: Economic Development and Tourism, *Texas Top Tier: The Largest Companies Headquartered in Texas*, TEXAS.GOV (2014), http://gov.texas.gov/files/ecodev/Texas_Largest_Companies.pdf.

43. *Id.*

44. Erin Ailworth & Ben Leubsdorf, *Texas, Once A Star, Becomes a Drain on the U.S. Economy*, THE WALL STREET J. (Oct. 12, 2016), <http://www.wsj.com/articles/texas-once-a-star-becomes-a-drag-on-the-u-s-economy-1476264601>.

45. *Id.*

46. *Id.*

47. Huang, King & Rawson, *supra* note 2.

Oklahoma passed its anti-patent trolling legislation in May 2014, before the latest drop in oil prices.⁴⁸ Oklahoma may no longer completely rely on oil as it used to, but oil is still the most significant factor in the state's economy.⁴⁹ Though patents are a federal issue and Oklahoma tends to shy away from regulation, these laws can be used as a specific example of how the state treats its own businesses. Just like the legislature of its southern neighbor, keeping energy companies in Oklahoma, attracting more business to the state, and increasing taxable revenue and jobs were all likely factors in passing this piece of business-friendly legislation.

Overall, there are twenty-nine states that have anti-patent trolling legislation and three more that have proposed versions to the state legislature.⁵⁰ However, patents are exclusively subject to federal jurisdiction, so state governments cannot address the complicated problem of patent trolling with any real definiteness, and the differences in laws may lead to many problems.

A. Problems With State Legislation

The state legislation varies depending on the goals of those states that have applied them, which may be one of the major motivators for the federal government to take action. Each state takes a slightly different approach, and each has its own problems including discouragement of pre-lawsuit discussion, limited state power within patent law, possible increase in litigation, and large variations among the states on a federal issue. None of the laws seem to be affecting the number of patent troll lawsuits.

1. Decrease In Pre-Lawsuit Discussion May Cause A Rise In Litigation

States may try to change the law around the procedure and processes for certain areas of patent lawsuits, but patents and most of their related litigation occur at the federal level. States have taken different approaches, but the majority of the laws affect how lawyers in that state conduct patent infringement issues outside of court. With the lack of ability to change the nature of the lawsuits, legislators turn to what they can control, usually in the form of demand letter (and other pre-lawsuit communications)

48. Phillip C. Swain, *Patent Troll Watch: States Are Pushing Patent Trolls Away from the Legal Line*, FOLEYHOAG (Mar. 14, 2016), <http://www.foleyhoag.com/publications/ebooks-and-white-papers/2016/march/state-ag-patent-troll-watch-march-2016>.

49. Monty Evans, *Oklahoma Economic Indicators*, OKLAHOMA EMPLOYMENT SECURITY COMMISSION (Apr. 2017), https://www.ok.gov/oesc_web/documents/lmiEconIndPub.pdf.

50. Huang, King & Rawson, *supra* note 2 (showing mining and utilities together as a majority of the state GDP).

content.⁵¹ Miscommunication between parties, or no communication at all, can breed a ripe environment for unnecessary lawsuits. One of the main problems of these laws is the hindrance of well-intended pre-lawsuit communication coupled with no signs of preventing actual patent troll extortions.⁵²

One of the pre-lawsuit paths of destroying patent trolls outlaws “bad faith assertions of patent infringement” in an attempt to stop patent trolls from sending out near-identical copies of vague demand letters asking for a settlement on a patent they have not yet divulged.⁵³ This bad-faith element intends to separate patent trolls from legitimate patent infringement suits, but the potential for its high misuse as an overreaching defense by infringers must be considered when choosing a venue.⁵⁴ For protection in these jurisdictions, it is common that all correspondence is kept on record in case a bad faith assertion complaint arises out of either party.⁵⁵ The states often treat the legislation as a mostly idle threat, allowing only the attorney general to instigate civil investigation or actions in court, with formal complaints needed to begin such an investigation.⁵⁶ The difficulty has landed not on the trolls as planned but on the lawful patent holders seeking to properly assert their rights, forcing them into vague communication with possible infringers. While all the state legislation has some form of bad faith assertion as part of the law,⁵⁷ the many variations in definition bring confusion and fear into any pre-lawsuit discussion, causing less of this type of communication and a possible increase in litigation.

To avoid violating these types of legislation, a company asserting a good faith demand letter may have to include sensitive information to a competitor or possible opposing party.⁵⁸ The information for a now-proper demand letter often requires information about which claims of which patent are in question for infringement.⁵⁹ However, giving out such information in the very first contact with a possible infringer is a dangerous

51. *Id.*

52. *Id.*

53. Erich Spangenberg, *Unintended Consequences of Patent Troll Legislation*, IPNAV (2016), <http://www.ipnav.com/blog/unintended-consequences-of-patent-troll-legislation/> (internal quotation marks omitted).

54. Huang, King, & Rawson, *supra* note 2.

55. *Id.*

56. *Id.*

57. *Id.*

58. Spangenberg, *supra* note 53.

59. *Id.*

legal move.⁶⁰ If the other party has specific information about the patent claims and the company that owns them, that party can file its own lawsuit or declaratory judgment action in its favor.⁶¹ Many first letters keep a mood of professionalism, yet still have a very amicable tone to avoid such unnecessary jumps in litigation.⁶² Keeping the first letter light provides a chance for both parties to sign a confidentiality agreement and a forbearance agreement, which benefits all parties involved.⁶³ Specifically allowing for these kinds of communications in the legislation may prevent unnecessary lawsuits, but none of the current legislation specifically provides for this exception.⁶⁴ The current state legislation is still fairly new, and almost none of it has been put to the test in court.⁶⁵

This forced shift of letters from seeking general information to giving out very important details may cause a complete change in the beginning approach to patent infringement suits. Instead of gauging the other party through protected communication, the options are now to either give them all the information necessary to bring a lawsuit themselves or simply go straight to suing the other party without warning or negotiations of a licensing deal.⁶⁶ For how little this will stop patent trolls, it creates more grief for people the legislation means to protect.

2. Large Variation In State Laws

There are twenty-nine different pieces of legislation with different wording and different approaches to preventing patent troll extortion.⁶⁷ Though those states are trying to accomplish the same goals, there are significant differences in the laws as a whole.⁶⁸ In general, the states' laws range from broad legislation that gives courts the power to decide what factors are more important in each case, to narrow definitions that give exact examples of what determines bad faith assertions.⁶⁹ The major differences occur in the definition of bad faith, who can bring an action against a patent troll, and what actions actually make an entity a patent troll in those states. The following consider the content of three states' statutory

60. *Id.*

61. *Id.*

62. *Id.*

63. *Id.*

64. Huang, King & Rawson, *supra* note 2.

65. *Id.*

66. Spangenberg, *supra* note 53.

67. Huang, King & Rawson, *supra* note 2.

68. *Id.*

69. *Id.*

attempts to stop bad faith demand letters shows the range of differences in state laws against patent trolls.

a) *Vermont*

Vermont lists nine factors for a judge to consider when determining whether a party “has made a bad faith assertion of patent infringement. . . .”⁷⁰ The nine factors are generally put into the following categories: action taken or not taken by theasserter, the contents of the demand letter, and the nature of the claim.⁷¹ The factors concerning the information given to the other party include requirements for a demand letter to contain the patent number in question, “the name and address of the patent owner,” and “factual allegations” relating to the specific infringement of the patent claims.⁷² The other factors concern actions taken (or not taken) before or after initial communication to properly abide by the first requirements, to perform analysis of the claims, and general consideration for deceptive, wasteful, meritless, or repetitious court action.⁷³ The law focuses on what should be done before the plaintiff brings a patent infringement complaint to ensure that unnecessary settlements are not extorted from Vermont individuals and corporations. To achieve that goal, a judge wields the power to determine bad faith with loose factors, plus any that the court deems relevant.⁷⁴ This gives the Attorney General the power to act on behalf of the target in civil court as well as a private cause of action with a multitude of available damages.⁷⁵

Many states have followed Vermont’s lead by creating a broad list of factors falling into categories of contents of the demand letter, actions taken or not taken by the troll, and the nature of the claim.⁷⁶ Vermont has faced complaints from disgruntled lawyers, but similarly, so have most of the states that tried to copy or improve upon what was provided in the Vermont legislation.⁷⁷ The immense flexibility suggests that the statutes are more of a scare tactic to be used for threats than an enforceable law.

70. VT. STAT. ANN. tit. 9, § 4197 (West 2017).

71. Huang, King & Rawson, *supra* note 2.

72. VT. STAT. ANN. tit 9, § 4197(b)(1) (West 2017).

73. *Id.* § 4197.

74. *See id.* §§ 4195-97.

75. Huang, King & Rawson, *supra* note 2.

76. *Id.*

77. Spangenberg, *supra* note 53.

b) Texas

The Texas law lists three definite and specific ways that the patent troll asserts a bad faith patent claim and is liable for possible damages.⁷⁸ The most blatant is when the party states in a demand letter that they have filed a lawsuit concerning the patent infringement when they have not.⁷⁹ Next, Texas established criteria for whether a claim is “objectively baseless,” which include claiming a patent or right to license a patent which the sender does not possess, trying to use an invalid patent, or using activity that happened after the expiration of the patent.⁸⁰ Finally, the communication must have the specifications of who asserts a claim, the patent concerned, and “at least one product, service, or technology” that has infringed the patent.⁸¹

The Texas law differs the most from the Vermont law in the definition of bad faith assertion and the possible actions.⁸² The two state’s laws occupy separate ends on the range of narrow and broad definitions and powers given. Though both states presumably passed their respective laws with different industries in mind, and Texas had a couple of years to see how other states would form their laws, both laws encounter similar problems. While Vermont more loosely defines its bad faith definition and allows for a private cause of action, Texas has limited the action and provided no instruction or mechanism on how to bring the suit to the Attorney General’s attention.⁸³ This may suggest the Texas legislature wanted to have a law that encourages potential patent troll victims to stay in state while not damaging the unique, plaintiff-friendly, and patent-heavy phenom of the Federal District Court for the Eastern District of Texas (“EDTX”).⁸⁴

c) Oklahoma

Oklahoma’s law falls between Vermont and Texas, with a strong list of specific acts that are not allowed and another list of actions and parties that are exceptions to the rule. The forbidden actions include any written or electronic communication falsely claiming to file a patent suit, a consistent

78. TEX. BUS. & COM. CODE ANN. § 17.952 (West 2017).

79. *Id.* § 17.952(b)(1).

80. *Id.* § 17.952(b)(2).

81. *Id.*

82. Huang, King & Rawson, *supra* note 2.

83. *Id.*

84. Rob Pegoraro, *Consumer Electronics Industry to Government: Do Something About Patent Trolls*, YAHOO TECH (Jan. 8, 2016), <https://www.yahoo.com/tech/consumer-electronics-industry-to-government-do-230545239.html>.

pattern of threatened litigation with no filing, or any communication with assertions that lack a reasonable basis in fact or law.⁸⁵ The law also contains many options specifically stated to show what assertions may be seen as unreasonable.⁸⁶ The exceptions to the rule include letters advising others on the right to license or enforce the patent, communicating the availability of sale, notices of infringement, or any letter that seeks a license or compensation for infringement of a patent that is not in bad faith. Also, the statute does not apply to universities, a licensing firm on behalf of universities, or any patent owner involved in substantial research or manufacturing.

While Oklahoma has many examples and factors for what constitutes a bad faith demand letter, the broad exceptions seem to make the law hard to enforce. Any party that makes a product or works for a university, is not in danger of breaking these restrictions. Those exceptions directly address several problems that can arise from multiple definitions of patent troll. The law consists of hardline rules with many exceptions, but it may have been better if the legislature set up both as factors rather than strict rules. The current setup may make it possible for patent trolls to fall under one of the exceptions and gives no definition of bad faith, but it defines what makes an illegal demand letter in a clearer way than Texas or Vermont.

While Vermont was the first, and Texas has special circumstances surrounding its law, most of the states with anti-patent-troll laws remain in the middle of the two laws, like Oklahoma and Virginia. Virginia provides many factors to consider in the bad faith definition while also providing several factors that count toward good faith actions.⁸⁷ The law, like most, provides investigation and penalties through the Attorney General but does not form a private cause of action. However, it clearly and easily allows for a complaint to be made with the Attorney General and even has a patent troll unit for that specific use.⁸⁸ Most states have attempted to make a business-favorable law without interfering with the federal system (like Vermont) or being too narrow (like Texas). Unfortunately, none of the current laws has made any noticeable difference in the number or cases with patent trolls or for patent infringement cases in general, both of which have continued to increase.⁸⁹

85. OKLA. STAT. tit. 23, § 112A (West 2017).

86. *Id.* at § 112A(3).

87. VA. CODE ANN. § 591-2152.86 (West 2017).

88. Huang, King & Rawson, *supra* note 2.

89. *See* Barr & Grieger, *supra* note 20; *see also*, Partridge & Patterson, *supra* note 19.

3. Patent Troll Cases Continue To Grow And Evolve

As the patent landscape evolves, with a general increase in the filing and active protection of patents, the techniques used by patent trolls evolves along with it. Many of the earlier patent trolls have now moved from asserting patents to focus on less risky legal operations. A lawyer that worked with TechSearch, a firm considered one of the first patent trolls (and may be the root of the term after they barred defendants in their case from calling them “patent extortionists”), announced that he was ready to leave the business due to its higher cost and risk.⁹⁰ Though older patent trolls may think the area too saturated with smaller groups trying to capitalize on their patents, this switch keeps the threat of patent trolls alive and well.⁹¹ TechSearch held several very broad patents that it asserted against as many people as it could.⁹² The famous reputation of the troll previously helped it win more settlements, but now those types of companies are singled out and intentionally taken to court.

The heightened risk of getting taken to court, coupled with what some lawyers say are greatly increased costs in IPRs, has created an environment for taking down these big, broad patent trolls, but has also allowed for smaller entities to bring an onslaught of smaller suits against as many people as possible.⁹³ The “shotgun approach” defines this tactic because there are multiple chances to hit a target—as long as one hits, the other misses do not usually cause any harm.⁹⁴ The shotgun approach comes with a smaller success rate and smaller returns per threat or suit, but there are many entities able to thrive on this platform. The repetitious mass communication starts to more closely resemble email spam or mass telemarketing, and this increase likely led state legislators to change the demand letters necessary to carry out this plan. If the new shotgun demand letter approach stops working, patent trolls will likely evolve to a new method just as they have in the past.

90. Joe Mullin, *Original “Patent Troll” May Call It Quits, Says There’s NO Money in It: Have we passed peak patent troll? Some of the field’s pioneers say yes.*, ARSTECHNICA (June 10, 2015, 11:43 AM), <https://arstechnica.com/tech-policy/2015/06/original-patent-troll-may-call-it-quits-says-theres-no-money-in-it/>.

91. Joe Mullin, *Trolls Made 2015 One of the Biggest Years Ever For Patent Lawsuits: Go Ask Alice: The Tables are turning in defendant’s favor, but suits abound*, ARSTECHNICA (Jan. 5, 2016, 11:38 AM), <https://arstechnica.com/tech-policy/2016/01/despise-law-changes-2015-saw-a-heap-of-patent-troll-lawsuits/>.

92. *Id.*

93. *Id.*

94. *Id.*

4. Accusing Company Of Being A Troll May Cause Unfair Damage

On the other side of anti-patent-troll legislation is the damage that can be caused to a legitimate assertion of patent rights provided and protected by the Federal Constitution. The mere use of the term “patent troll” in the media and scholarship on the subject could make it more difficult to rightfully protect against true patent infringement.⁹⁵ For a small inventor to be able to use the patent system correctly, he often needs to enlist the help of a patent enforcement specialist.⁹⁶ And the easiest way to pay for these specialists is to license out, partner with, or even sell the patent through a non-practicing entity that has the resources to make the patent profitable.⁹⁷ Most legislation protects large companies—more likely to get an onslaught of infringement claims and settle to vague demands—from patent trolls but ignores the inverse situation of the small inventor trying to enforce his own claim or defend a frivolous claim brought by a large business (not a troll in this case but rather an “ogre”).⁹⁸ Legislators may not be ignoring this on purpose, but large businesses that have more of an effect on taxes and employment numbers, and the state’s economy, are very likely the target for protection of these laws.

Large technology and energy companies are often viewed as patent trolls themselves. For instance, IBM, which filed 7,534 patents in 2014 and 7,355 in 2015, reports more than \$1 billion in annual revenue directly from licensing, and an inquiry into their research and development department suggests it likely profits around \$25 billion a year from its inventions.⁹⁹ Considering the sheer volume of patents IBM owns, there is no doubt that they have spent a lot of time and money protecting those patents. Patent extortion legislation may enable some larger companies to destroy competition and profit from others’ inventions that do not actually infringe, which is very similar to what it is designed to stop.

Many schools and courtrooms have begun to notice the negative effects of using the term “patent troll” to identify a non-practicing entity, or in some cases anyone who has asserted their right to protect their lawfully

95. Edward Lee, *Patent Trolls: Moral Panics, Motions in Limine, And Patent Reform*, 19 STAN. TECH. L. REV. 113, 116-17 (2015).

96. Ron Katznelson, *How Misleading Scholarship Contorts Patent Enforcement into a Patent Troll Fable*, IPWATCHDOG (Mar. 23, 2016), <http://www.ipwatchdog.com/2015/03/23/patent-troll-fable/id=56014/>.

97. *Id.*

98. *Id.*

99. John C. Dvorak, *IBM is the World’s Biggest Patent Troll*, PCMAG.COM (May 4, 2016), <http://www.pcmag.com/article2/0,2817,2493155,00.asp>.

owned patent.¹⁰⁰ Several courts have prevented litigants from using the term “troll” in the courtroom and in certain motions, believing the way media and academia have portrayed patent trolls causes prejudice against the accused party whether they are an extorting NPE or not.¹⁰¹ In the popular radio show and podcast, *This American Life*, the episode “When Patents Attack” delves into the oddities of the patent troll practices and the Eastern District of Texas.¹⁰² Though the show focuses on a large and well-known patent troll, Intellectual Ventures, and its older techniques of patent assertion, the entirety of the show calls out patent trolls in general, including the more evolved modern versions.¹⁰³ They also focus on the role of EDTX and its unusually high number of patent suits.¹⁰⁴ The district hears the majority of the country’s patent cases, and it has proven an entertaining road stop for reporters and journalists to visit the empty offices of the patent trolls in Marshall, Texas that clearly only exist to get favorable jurisdiction.¹⁰⁵

Similar to the radio show on patents, a popular segment on *Last Week Tonight with John Oliver* discussed many great points and problems surrounding patent trolls but vilified some very common and accepted legal practices.¹⁰⁶ For example, the host mentions how patent trolls do not make anything and are thus not useful, which shows a misunderstanding of the importance of lawful NPEs.¹⁰⁷ He also blamed trial lawyers for the failing of a federal anti-patent-troll bill in the Senate, but there have been so many attempts and versions of these bills, with their own groups of problems, springing from many different areas, that it is hard to blame one group for such a complicated law.¹⁰⁸

Companies are branded as patent trolls quite often, whether they earn the labeling or not. Many commonly refer to IPNav as a patent troll, but it is difficult to prove whether such a large company is truly a patent troll.

100. Lee, *supra* note 95, at 116-17.

101. *Id.* at 117.

102. *This American Life: When Patents Attack!*, Chicago Public Radio (July 22, 2011), <https://www.thisamericanlife.org/radio-archives/episode/441/when-patents-attack>.

103. *Id.*

104. *Id.*

105. *Id.*

106. *Last Week Tonight with John Oliver: Patents* (HBO television broadcast Apr. 19, 2015). (The portion of the program discussing patent trolls and legislative reform has been made available for free viewing on YouTube on the show’s official YouTube channel, “LastWeekTonight.”).

107. *Id.*

108. *Id.*

However, IPNav has sued more than 1,600 companies in the past 5 years, more than any in the patent field.¹⁰⁹ With that many lawsuits, it would be hard to say that all are baseless or that all are firmly founded. And if the company were to face ruin because of its riskier cases, that would not be fair to the inventors or holders of its other patents. IPNav is likely not in any danger of being mislabeled considering its own website describes it as a service to turn “idle patents into cash cows,” but there are similar NPEs that suffer from the bad reputation that comes along with being labeled a patent troll.¹¹⁰

The bad reputation that comes with filing bad patent suits against others is well deserved, but the widespread misuse of the term may lead to even more confusion and fear from someone faced with a possible patent infringement suit from a real troll. The damaging effects of this rhetoric are some of the main reasons that state and federal legislators must include clear definitions of actions constituting a troll in their legislation if it is meant to benefit patent holders.

5. Large Portion Of Cases Are All In Eastern District Of Texas

A large problem with state legislation stems from the federal jurisdiction of patent claims. Moreover, a single district hears the majority of the cases—a small town in eastern Texas. One of the more interesting aspects of the United States patent law, the Eastern District of Texas appeared on *Last Week Tonight with John Oliver*¹¹¹, *This American Life*¹¹², the CBS jury-consultant show *Bull*,¹¹³ and more.

As discussed on the excerpt of *Last Week Tonight*, patent trolls favor this venue for litigation because of its quick trial periods and plaintiff-friendly decisions.¹¹⁴ The show used the example of a troll that sued a company who helps disabled persons find employment.¹¹⁵ The company had planned to sue in the EDTX because suits filed there generally favor plaintiffs, which in turn creates an incentive to settle.¹¹⁶ Frequent plaintiffs and defendants

109. David Segal, *Has Patent, Will Sue: An Alert to Corporate America*, NEW YORK TIMES (July 13, 2013), <http://www.nytimes.com/2013/07/14/business/has-patent-will-sue-an-alert-to-corporate-america.html>.

110. *Id.*

111. *Last Week Tonight with John Oliver: Patents*, *supra* note 106.

112. *This American Life: When Patents Attack!*, *supra* note 102.

113. *Bull: Callisto* (CBS television broadcast Oct. 11, 2016).

114. *Last Week Tonight with John Oliver: Patents*, *supra* note 106.

115. *Id.*

116. *Id.*

have been pouring money into the local economy. For example, Samsung built the outdoor skating rink next to the courthouse, hoping that jurors would associate Samsung with good things in their community.¹¹⁷

The Eastern District of Texas has become somewhat of a lightning rod for patent litigation, and many have speculated as to why the small area has more patent cases than any other venue and whether it is good for those cases to end up with only a handful of judges.¹¹⁸ The court hears around forty-four percent of all patent lawsuits in the United States.¹¹⁹ However, this may be more of a venue problem than a patent legislation problem.

In 1988, Congress changed the general venue law, which was interpreted as removing the special rule that restricted venue choices.¹²⁰ Essentially, plaintiffs could choose the most favorable venue for their lawsuit.¹²¹ A study by Villanova and Santa Clara law school professors for PatentlyO revealed that a slight change in patent venue laws could prevent sixty-two percent of EDTX cases from being filed there, thus curtailing the supposed plaintiff advantage.¹²² The new change in venue law through *TC Heartland* could significantly damage patent trolls' home-field advantage in East Texas, but any businesses already based in Texas remain unaffected.

Not only does the court currently boast an oddly high number of patent suits, but NPEs initiate ninety-five percent of patent cases in the EDTX.¹²³ Though not all NPEs are trolls, trolls *are* NPEs and this lopsided number suggests that patent troll activity does not happen more in any other forum.

Many have theorized as to how or why this phenomenon started, but the numbers clearly show that something is different. While defendants win on summary judgment in the average case involving overly abstract patents seventy-one percent of the time nationally, in EDTX only twenty-seven percent result in summary judgment against the plaintiff.¹²⁴ These decisions have changed in most venues due to *Alice* which resulted in throwing out

117. *Id.*

118. *Eastern District Judges*, TXED.USCOURTS.GOV (2017), <http://www.txed.uscourts.gov/?q=eastern-district-judges>.

119. Pegoraro, *supra* note 84.

120. Colleen Chien & Michael Risch, *Guest Post: What Would Happen to Patent Cases if They Couldn't all be Filed in Texas?*, PATENTLYO (Mar. 11, 2016), <http://patentlyo.com/patent/2016/03/happen-patent-couldnt.html>.

121. *Id.*

122. *Id.*

123. Mullin, *supra* note 91.

124. Joe Mullin, *Why Patent Trolls Go to East Texas, Explained*. ARSTECHNICA (Aug. 2015), <http://arstechnica.com/tech-policy/2015/08/why-patent-trolls-go-to-east-texas-explained/>.

many software patents and other broad or abstract claims.¹²⁵ The fact that nearly half of all patent cases are heard in a district following a Supreme Court decision differently than all other forums may not have been a reason to force a change in the court's actions. But this was certainly reason enough to prevent baseless venue shopping.

The immense number of cases involving an unusually high amount of NPEs seem to be the perfect conditions for patent trolls. The number of cases allows them to hide in plain sight while still apparently choosing the venue based on the court's experience, the case history of patent litigation, and the area's openness to intellectual property owners. The town of Tyler, Texas even has a website proclaiming how the whole area is "IP Friendly."¹²⁶ While this district has its own problems of appearing corrupt, many legitimate reasons exist for picking such a venue. Having a court well-versed in patent law is a rarity, and it saves time and money to deal with smaller cases in a venue that has seen more than its fair share of patent cases, even if the outcome favors one side consistently. Defendants likely will waive personal jurisdiction to still take advantage of the speedy patent docket in EDTX. Special circumstances like the Eastern District of Texas make it difficult to find an effective state law against patent extortion and make it equally complicated for any possible federal legislation.

III. The Forced Federal Response To Patent Trolls

With the many problems stemming from state legislation, the pressure increases for federal legislation to fix the patent troll problem. Still, no consensus exists as to which federal approach would be effective to impede patent trolls while avoiding complicating patent litigation. Past and current versions of federal law include changes in both patent law and civil procedure that attack patent trolls at different angles, and both aim to solve the problem single-handedly.

Pressure for federal legislation comes from many different areas, but all appear to be concerned that patent trolls will continue to stifle innovation, the main motivation and purpose of the U.S. patent system.¹²⁷ Calls for congressional action from businesses, state governments, and even the United States Patent and Trademark Office ("USPTO") have been growing

125. *Id.*

126. Julie Samuels, *The VENUE Act: It's Time to Get Patent Trolls out of East Texas*, ENGINE (Mar. 18, 2016), <http://www.engine.is/news/issues/the-venue-act-its-time-to-get-patent-trolls-out-of-east-texas/6580>.

127. *See* U.S. CONST. art. 1, § 8, cl. 8.

louder and continue to be very public. The 2016 Consumer Electronics Show in Las Vegas had a director from the USPTO attend as a keynote speaker, marking the first time anyone from the Office has spoken at the large technology show, and giving credence to the growing concern of patent trolls in innovative industries.¹²⁸ The main focus of the director's speech was that Congress needed to enact legislation to protect these industries from the costly price of dealing with patent trolls.¹²⁹ President Obama, large technology and petroleum industry leaders, and many state governments have all supported federal legislation for patent infringement reform specifically for extortion—though it has led to several attempts in the legislature, nothing has been passed into law.¹³⁰

It is somewhat unusual for an issue that seems so one-sided in the public's eyes to have garnered so much attention. The public outcry and media attention could possibly stem from lobbying efforts from the large and powerful industries that continually find themselves targeted, or it could just come from patent trolls' significant, negative economic impact. Some journalists suggest trial lawyers have actually lobbied against the federal legislation just so they can continue working on baseless lawsuits, but this pessimistic view inaccurately represents patent attorneys and oversimplifies how patent trolls cause economic damage.¹³¹ Either way, this problem has gained the attention of all areas of government involved in patents and commerce. Yet there still has been no consensus on what a plausible solution will look like. The growing problems are likely to be met with more outcry but unlikely to be met with any effective federal legislation.

A. TROL Act And TPTP Act

There have been many efforts at federal legislation, but they have all come to a stalemate or flat-out failed. For instance, the Targeting Rogue and Opaque Letters ("TROL") Act sought to minimize the "abusive use" of demand letters by any patent-asserting entity, similar to most current state legislation.¹³² The TROL Act enables courts "to impose sanctions or

128. Pegoraro, *supra* note 84.

129. *Id.*

130. Flaherty, *supra* note 3.

131. *Last Week Tonight with John Oliver: Patents*, *supra* note 106.

132. Michael Su, Lionel Lavenue & Ben Cassidy, *Patent Reform Beyond the Innovation Act: the VENUE Act*, LAW360 (May 9, 2016, 11:07 AM), <http://www.law360.com/articles/788794/patent-reform-beyond-the-innovation-act-the-venue-act>.

reduced damages on those parties improperly sending demand letters.”¹³³ The act even called for Federal Trade Commission penalties for the distributors who do not follow the sanctions.¹³⁴ Another failed bill was Trade Protection Not Troll Protection (“TPTP”) Act from March 2016, which aimed to use the U.S. International Trade Commission to enforce regulations and penalties on extorting NPEs.¹³⁵

These are just two of many pieces of legislation¹³⁶ that Congress never seriously examined. The state laws could be a sort of experiment to see how similar federal legislation might be effective, but the lack of state power over patents itself keeps those laws from being effective. If the federal government wants to take patent trolls seriously, it must be willing to take *some* action, even if likely to fail.

B. Federal Legislation Is Still Necessary In Addition To Supreme Court Venue Decision

The *TC Heartland* venue case may solve venue problems, but it will not likely stop trolls.¹³⁷ This case decided whether the patent venue statute, 28 U.S.C. § 1400(b)—which says that patent lawsuits “may be brought in the judicial district where the defendant resides” and was interpreted as residing in the state of incorporation—will be the only source for venue choices in patent lawsuits.¹³⁸ The alternative, which had also been used, was 28 U.S.C. § 1391(c)—which allowed for corporate entities to reside in multiple judicial districts in certain circumstances.

The Supreme Court had made a similar ruling before in *Fourco Glass Co. v. Transmirra Products Corp.*¹³⁹ There, the Court decided that the stricter § 1400(b) would apply to patent cases, allowing only for venue in the state of incorporation, But *Fourco Glass* was essentially overruled when the legislature amended § 1391(c) in 1988.¹⁴⁰ Since then, the circuits

133. *Id.*

134. *Id.*

135. *Id.*

136. *Id.*

137. Dennis Crouch, *Patent Venue at the Supreme Court: Correcting a 26-year Mistake*, PATENTLYO (Sept. 14, 2016), <http://patentlyo.com/patent/2016/09/patent-supreme-correcting.html>.

138. *TC Heartland LLC v. Kraft Food Brands Group LLC*, SCOTUSBLOG: SUPREME COURT OF THE UNITED STATES BLOG, <http://www.scotusblog.com/case-files/cases/tc-heartland-llc-v-kraft-food-brands-group-llc/> (at time of publishing, no official opinion has been released).

139. Crouch, *supra* note 137.

140. *Id.*

remained split which caused the Supreme Court to grant certiorari. Though purely procedural, this decision could provide an avenue for stopping patent trolls through restricting venue (specifically away from the Eastern District of Texas).

Before *TC Heartland* went to the Supreme Court, federal legislation designed to restrict venue shopping in patent cases made its way through Congress before being stalled. A study for PatentlyO showed that a slight change in patent venue laws would prevent sixty-two percent of Eastern District of Texas cases from being filed there, and from having a supposed plaintiff advantage.¹⁴¹ However, now that suits brought against corporations in EDTX must be against those incorporated or that “ha[ve] committed acts of infringement and ha[ve] a regular and established place of business,”¹⁴² in Texas—which will decrease the overall lawsuit filings by patent trolls—it may also increase the number of demand letters they send.

The yet-to-be-passed Venue Equity and Non-Uniformity Elimination (“VENUE”) Act and heightened pleading rules looked promising to change the number of frivolous patent claims¹⁴³ and unfair district shopping based on bogus places of business.¹⁴⁴ The effectiveness of the result of *TC Heartland* will likely have a direct influence on whether this legislation will be passed—or if it would even be needed. Before the decision, Senator Orrin Hatch claimed that patent reform has more issues than just venue, and, despite the Supreme Court’s decision, he would be pushing for venue reform.¹⁴⁵ A federal push for patent venue reform adopting law from the Supreme Court could be the easy-to-pass piece of legislation needed to jumpstart other patent reform, such as an anti-patent-trolling law.

The restricted venue option from the Supreme Court would prevent a lot of patent trolls from suing certain patent holders in the Eastern District, just like the proposed legislation. But that only slows down the trolls; it does not solve the problem. Patent trolls will still be able to sue a large portion of the energy industry in EDTX because of the industry’s size in the state. Any company incorporated or with a principal place of business in Texas is not helped by this decision, and for the energy industry, that is a high

141. Chien & Risch, *supra* note 120.

142. *TC Heartland LLC v. Kraft Foods Grp. Brands LLC*, No. 16-341, 2017 WL 2216934, *8 (2017).

143. Samuels, *supra* note 126.

144. Chien & Risch, *supra* note 120.

145. Gene Quinn, *Hatch Says Patent Venue Reform Likely Regardless of SCOTUS Decision in TC Heartland*, IPWATCHDOG (Feb. 2017), <http://www.ipwatchdog.com/2017/02/16/hatch-venue-reform-likely-scotus-tc-heartland/id=78495/>.

portion.¹⁴⁶ There are still many options for favorable venues for patent plaintiffs, and no amount of venue restriction will stop trolls. Instead, the impact on patent trolls may be decided by how the federal courts of Delaware treat patent cases because so many companies are incorporated there.¹⁴⁷

As far as the scope of patents is concerned, *Alice* cut into the number of computer patents targeted by patent trolls, but it has yet—and is not likely—to make a dent in the energy industry’s patents. Adversely, a similar approach of preventing broad patents in court through legislation may have more of a negative effect on patents as a whole. While the energy industry and other economic forces want to spur innovation and protect against extortion, they also want to be able to protect their rightfully owned patents. This type of legislation would prevent too many valid claims from going to court, and it would only mean more economic woes for the energy industry.

Though venue reform may protect other industries from patent trolls, the reform will likely have a lackluster effect on the energy industry, and still in need of further legislative protection. However, following the states’ examples of legislation may simply lead to the same more problems the states have. Federal legislation must attack the methods of patent trolls directly and not only rely on venue reform.

IV. Other Alternatives

Any decline in patent troll extortion will likely be due to personal changes in approaches to patent claim settlements, not to state law. There are likely endless ways for companies or lawyers to take action to prevent extortion by patent trolls, but there are also courses of action (though far-fetched) that may stop trolls from attacking in the first place. Only federal legislation would have enough power to cut down on extortion whether through fear of action or guiding law in courts where patent cases are determined. With the high demand for action and the willingness of state governments to experiment with their theories, it is likely that the states will continue to try more options; the federal government will have to wait and see what works. If the law does not work at the state level, it does not mean it will not work at the federal level because of its jurisdiction over patents. Therefore, the federal legislation may need to try the states’ methods as well as some new techniques. However, the slow pace of federal legislation

146. Office of the Governor of Texas, *supra* note 42.

147. Quinn, *supra* note 145.

means that it will likely be years—and millions (or billions) of dollars—lost in the meantime to pesky trolls.

A. Looking To Silicon Valley And Private Agreements

The technology industry became more extreme while dealing with trolls, which created a divide between companies who were constantly being attacked by trolls and trying to ward off their numerous demands with minimal settlements or licenses and companies who became so-called patent assertion entities. These patent assertion entities may want to just protect their intellectual property. But due to the now extreme measures they are likely to face in the technology industry, they must aggressively pursue patent litigation anywhere and everywhere to keep their doors open by securing high revenues to buy other patents. It has become a vicious cycle that continues to weigh on the technology industry and that the energy industry must try to avoid.

Ira Blumberg, the Vice President of Intellectual Property at Lenovo, discussed his time working for a large patent troll and that they operate for the good of the inventors.¹⁴⁸ In theory, if licensing firms did not buy patents from inventors, most would not make any money from the invention. And for the patents to be bought, the firms must be able to make money through patent litigation.¹⁴⁹ On the other (and perhaps more convincing) side, patent trolls do much more harm than good to business and innovation, which are cornerstones of the patent system.¹⁵⁰ The patent troll where Blumberg worked, due to their size and experience, was not even concerned with the validity of a claim because they knew that it would cost their targets between two and three million dollars just to find out if the claim had merit.¹⁵¹ This allowed the troll to receive settlements of up to one million dollars, which is quite different than the original technology patent trolls. The energy industry wants to avoid those high-dollar settlements, so it must observe what did and did not work for the technology industry.¹⁵²

The technology industry uses all its might and influence to call for federal legislation and has successfully received legislation from states (after all, they are the reason for the first anti-patent-troll laws). But industry leaders have also taken it upon themselves to investigate which

148. Ira Blumberg, *Why Patent Trolls Won't Give Up*, TECHCRUNCH (June 5, 2016), <https://techcrunch.com/2016/06/05/why-patent-trolls-wont-give-up/>.

149. *Id.*

150. *Id.*

151. *Id.*

152. *Id.*

private actions outside of the courtroom can be utilized to protect against patent trolls. For Blumberg and Lenovo, the necessary private action seemed to be joining a nonprofit community of companies called the License of Transfer Network (“LOT”)¹⁵³, which works to minimize threats from patent trolls by ensuring that their patents cannot be asserted against another member of LOT.¹⁵⁴ While this particular group has many large technology companies, banks, and automakers—such as Amazon, Lenovo, Google, Ford, Nissan, and JPMorgan Chase¹⁵⁵—the entire agreement rests on their willingness not to sue one another for patent infringement, which is going to be a harder sell in the energy industry due to the highly competitive (and sometimes hostile) nature between companies.

Technically, because the agreement is only for licensed patents, Company A may still get to sue Company B for breach of contract, which may or may not have anything to do with their patents that they share. However, if Company A were to license or sell the patent to a licensing firm, or perhaps even a subsidiary that is not part of LOT, then Company A’s licensing firm cannot get damages in a patent infringement suit against Company B. However, Company A would still be able to force Company B into a licensing deal. Because few members would directly hold patents in the parent company that is a member of LOT, it is essential that alliance members not infringe against or sue one another. The incentive to stay peaceful is upholding the value of innovation for the future of their industries, but there are numerous benefits to these giants for making their own intellectual property rules.

For the smaller companies involved, many entered the LOT group through Google’s Patent Starter Program, which gave groups of patents to fifty different startups (the only requirement for a “startup” seemed to be a company with revenues between \$500,000 and \$20 million) that applied to the program on the condition they would join LOT.¹⁵⁶ Considering the strong limitations within the group, any startup that already has patents they need to sell or license out for capital may no longer be able to do so and will definitely get a lower price as part of LOT. Thus, even Google suggests

153. *Id.*

154. *How LOT Works*, *supra* note 14.

155. *Our Community*, LOTNETWORK (2016), <http://lotnet.com/our-community/>.

156. Kevin A. Rieffel, *Why Google Wins by Giving Away Patents to “Startups” Willing to Join the LOT Network*, IPWATCHDOG (Aug. 2, 2015), <http://www.ipwatchdog.com/2015/08/02/why-google-wins-by-giving-away-patents-to-startups-willing-to-join-the-lot-network/id=60162/>.

no company join without a significant look into future legal and monetary ramifications.¹⁵⁷

Many of the same companies also participated in the Industry Patent Purchase Program (“IP₃”), which provides a special portal for the offer of sale of patents to all members at once.¹⁵⁸ This portal makes it easier for inventors to sell directly to industry giants who will pay a fair value for a patent and will hopefully make it less tempting to sell patents to patent trolls who will never make use of the invention other than for exploitation. This directly attacks patent trolls’ logic that they offer inventors their only opportunity to make money. Also, a function like this is much more advantageous for competitors to know in which areas their competition may be investing resources. However, this alliance may do more harm than good. If the LOT alliance applies only when the patent is sold or transferred—and the patent cannot be asserted against any member—there is no reason to spend money on a patent indefensible against half the giants in the industry. If the buyer gets a patent from Google, Lenovo may directly infringe upon it and cannot be stopped, rendering the patent worthless. If LOT becomes a large group, they may stop some patent trolls out of sheer intimidation, but only by gutting the worth of their own patents. It is likely that the IP₃ system will only attract patent holders who were already opposed to selling to patent trolls because the system does not provide a good environment for patent holders to get the best price.¹⁵⁹ This setup trades a federal system of protection for private agreements that seem unlikely likely to be upheld.

B. Why Energy Cannot Copy Silicon Valley

The energy and technology industries are both prime targets for patent trolls, but there are major differences that will lead to a divide when it comes to how they both deal with those trolls. LOT has expressed a desire to diversify its members to provide a wider base of protection, stating that seventy-five percent of litigation from trolls against JPMorgan Chase (one of its first larger members outside of the technology industry) were for

157. *Id.*

158. Jeff John Roberts, *Tech and Auto Firms Join Google-Led Patent Purchase Program*, FORTUNE MAG. (May 18, 2016), <http://fortune.com/2016/05/18/patents-ip3/>.

159. Ryan Davis, *4 Things to Know About Google, Ford Patent Marketplace*, LAW360 (May 23, 2016, 7:34 PM), <https://www.law360.com/articles/798802/4-things-to-know-about-google-ford-patent-marketplace>.

patents outside of the banking industry.¹⁶⁰ However, it is easy to see how patents in the technology industry overlap with those in banking and automobile manufacturing, especially with Google's research into self-driving cars.¹⁶¹ And though the energy industry increasingly relies on new technology from Silicon Valley to help cut costs during this slump,¹⁶² members of the LOT network like Google and Amazon favor heavier regulation and a push for full use of "renewable energy," and generally label large energy companies as the enemy.¹⁶³ On the other side, IBM, which has been consistently filing thousands of patent assets a year, has a large hand in energy and utility analytics¹⁶⁴ and is not part of LOT.¹⁶⁵ Though some large oil companies may be able to build a similar alliance with smaller patent holders, the nature of the energy industry suggests it is not likely to adopt such a model of private agreement.

Oil companies could create a group like LOT if they could agree not to sue each other, which is unlikely. But if they could persuade IBM and other energy-friendly technology companies to agree not to sue, they could accrue numerous patents. That scenario is likewise implausible, as it favors IBM with a negligible advantage to the energy companies. The technology industry appears to view the patent system in a much more idealistic way, with a different grasp on innovation and putting it above the competition in some sense. The setup is essentially a patent sharing system that lets the members steal ideas without being sued. While coding has some other protection, like copyright, the energy industry does not have a secondary protection for this kind of setup, except in the form of contracts. So, for the energy industry to set up a patent infringement alliance or patent licensing

160. William New, *Helping Patenters in a Sea of PAEs: Interview with LOT Network's Ken Seddon*, INTELL. PROP. WATCH (Dec. 1, 2016), <http://www.ip-watch.org/2016/12/01/helping-patenters-sea-paes-interview-lot-networks-ken-seddon/>.

161. See *Waymo Technology*, WAYMO.COM (2017), <https://waymo.com/tech/> (where Google's self driving technology, now called Waymo, is shown to be put into cars made by Google).

162. Rachael King, *Oil and Gas Companies Turn to Digital Technology as Low Energy Prices Pressure Business*, THE WALL STREET J. (April 25, 2016, 2:13 PM), <http://blogs.wsj.com/cio/2016/04/25/oil-and-gas-companies-turn-to-digital-technology-as-low-energy-prices-pressure-business/>.

163. Jacob Kastrenakes, *Apple, Google, Microsoft, and Amazon Back EPA in Challenge of Clean Energy Rules*, THE VERGE (April 1, 2016, 7:46 PM), <http://www.theverge.com/2016/4/1/11350482/epa-rules-backed-by-apple-google-microsoft-amazon-court-filing>.

164. *IBM Analytics for Transforming Energy and Utilities*, IBM (2017), <http://www.ibm.com/analytics/in/en/industry/energy-and-utilities/>.

165. *How LOT Works*, *supra* note 14.

alliance similar to the LOT Network, it would require several large companies to begin with extensive contracts that protect their most sensitive intellectual property, while still allowing for protection against trolls. Then the group would need to add medium and small companies, or the group would go after all small companies as if they were trolls (or ogres). If the larger companies treat all small companies as trolls, then the patent system may collapse within the industry. The problem stemming from the mix of big and small companies is that the larger companies will still provide more patents and therefore more sway in the group. Thus, the structure of these groups would also have to be delicately handled.

A patent lawsuit could make or break a small company. This makes them less of a target for trolls, or at least for less money, but it also makes it less advantageous for them to team up with an energy giant. They run the risk of the larger companies using their patents and getting much less in return for their agreement. Yet there is not much incentive for the members of LOT to join, and they still have amassed numerous (600,000) patents and are protected from being sued for infringing on any of them.¹⁶⁶ If there a group of large energy patent holders formed an alliance, they would only provide protection from the patents that have been sold to trolls by an energy company in the alliance. Many patents (perhaps the majority) asserted by trolls are not failed assets of an energy company that would be part of this alliance, but ones acquired from a small company or individual that was forced to sell for capital or a lack of manufacturing ability. So, most of the troll's weaponry would remain untouched without extensive membership from smaller energy patent holders.

If the energy industry took more private action against trolls, it may be easier to form an alliance with fewer restrictions on suing each other and more on selling patents. However, as the many complications of the energy industry show, private action similar to the technology industry will be more difficult in the face of industry giants and their competitiveness toward each other. The rise in patent suits correlating with the drop in oil prices was due to large and medium oil companies attempting to deprive one another of capital, not an increase in large companies attacking small companies that had no way to pay off the damages. Without a serious change in the landscape of the energy industry, an alliance is more trouble than getting federal legislation passed in the first place, especially if technology and energy lobby together for a version on which they agree.

166. *Our Community*, *supra* note 155.

Another area in which technology companies have changed their dealings with patent trolls is their zealous protection of their own patents and their willingness to see a lawsuit through to court. Technology companies have become harsher on patent asserters, which scares away some patent trolls. But it also costs a lot to develop that reputation and makes every single case have higher stakes. There is no quick fix for the whole industry that will prevent extortion, nor will a successful change prevent loss forever unless it results in changes at the individual level of the lawyers for both plaintiffs and defendants in a patent lawsuit.

C. Individual Actions To Prevent Patent Troll Extortion

Though there is advice on how to individually stop patent trolls on sites from *Huffington Post*¹⁶⁷ to *Forbes*,¹⁶⁸ the most realistic and effective tactic to stopping patent trolls is to understand how they work and to make sure the company's legal representation understands the level of risk of actual infringement before settling and paying into the troll's scheme. With legal counsel that is trustworthy and aware of the chances of being targeted by a patent troll, the costs for avoiding litigation may go up, but the costs being paid out in unnecessary licenses will no longer directly fund the troll's own lawsuits. With the different demand letter laws in many states, it is important to be up to date on each state's specific requirements. Even letters for infringement by one party may have to be written differently if sent to offices in separate states. For larger businesses, the change is generally not in how counsel understands the situation, but in a decision to be tough on patent trolls for the sake of its other targets. With no effective legislation, individual action is likely the most effective pathway to stopping trolls in the immediate future. But it may be as unclear as all the other options.

Conclusion

Patent trolls are a major problem in the United States, and they are specifically growing within the energy industry. The fall of oil prices has

167. Bill Cheney, *Measures Needed to Stop "Patent Troll" Abuse*, THE HUFFINGTON POST (Feb. 5, 2014, 10:06 AM), http://www.huffingtonpost.com/bill-cheney/patent-troll-abuse_b_4724533.html.

168. Drew Hendricks, *3 Measures Small Businesses Should Take to Avoid Patent Trolls*, FORBES: ENTREPRENEURS (Sept. 30, 2013, 10:39 AM), <http://www.forbes.com/sites/drewhendricks/2013/09/30/3-measures-small-businesses-should-take-to-avoid-patent-trolls/#457430773fb4>.

initiated an increase in patent litigation between legitimate companies and a rise in attacks from patent trolls that is not likely to slow down without significant intervention. Though the technology industry has several more years of experience with these extortionists, most of the private techniques used have been fruitless in stopping the trolls and would be improbable in the energy industry.

Almost half of the states have provided some form of legislation in the guise of business-friendly laws aimed at patent trolls and the evolved shotgun approach taken with their demand letters. The state laws have many problems, some of which are directly against the interests of most businesses in the state, causing major difficulties in communications between possible parties to a lawsuit. Though all the legislation is relatively new, no regulations at the state level of a completely federal system look to be promising, but they may have helped bring the problem to a national audience who holds the power to demand federal legislation. Considering the unique role of the Eastern District of Texas in the United States patent system, the Texas law may be the only state law that has a chance of making a dent in the large amounts of money wasted yearly on baseless patent lawsuits and licenses.

There have been many attempts at federal legislation, but all have failed to make it to law. Without a federal level of experimentation, an effective law will never be found. Though the Supreme Court made changes in venue selection law in *TC Heartland* and the VENUE Act may provide the same relief, neither will effectively fix the newer shotgun approach of patent trolls, especially for business in Texas. Federal legislation to limit pre-lawsuit communications such as in demand letters like most of the aforementioned state laws may be done in a less harmful approach at the federal level, but a study of the different effects from each state's laws would be needed. Even then, there would likely be an experimentation period of several years before effective regulations could be put in place. Though there is a large outcry for change from the government; the technology, energy and retail industries; educators; and all sizes of business; no federal legislation looks likely to pass soon that has not already been covered in the Supreme Court. And the ability of patent trolls to adapt to new legal environments may always remain faster than the federal government.

There are many avenues for change: pleading standards, more venue restrictions, patent suit communications, state laws, federal laws, high-court cases, and even forming giant private alliances that promise to continue innovation while undermining the entire patent system. But none of them

are likely to be as effective as a company with the proper representation that understands patent trolls' tactics and is willing to do the work necessary to kill the trolls. The hero that takes on the modern patent troll is a well-informed attorney that knows how to use all the small weapons of state laws and venue reform to protect his clients.