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Startups and Patent Trolls

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Startups and Patent Trolls

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Summary

The America Invents Act requires the study of the positive and negative effects of patent assertion entities (“PAEs” or “trolls”)³ on the economy. This report provides one account of these impacts, as they are experienced by young technology companies. How patent demands impact startups is critical because they are a vital source of innovation and new jobs,⁴ and whether patents hurt or help is fiercely debated. In addition, little attention has been paid to date to the distributional impacts of PAE suits. Small companies and startups are more vulnerable to failure than large, well-established companies, and the implications of this vulnerability as it relates to patent demands are not well understood. To assess the impact of trolls on startups, I analyzed a comprehensive database of patent litigations from 2006 to the present, conducted a non-random survey of 223 tech company startups, 79 of which had received a demand, and interviewed nearly twenty subjects with relevant knowledge of startup patent issues.

Although large companies tend to dominate patent headlines, most unique defendants to troll suits are small. Companies with less than \$100M annual revenue represent at least 66%⁵ of

¹ I thank my interview subjects and survey respondents, RPX Corp. and in particular Seth Besse, Lex Machina, Michael Risch, Jim Bessen, David Schwartz, Brian Love, Eric Goldman, Nicole Shanahan, Wesley Helmholz, Michelle Ma, and Dirk Calcoen for their contributions to this project. The survey and interviews described in this paper were conducted with approval by Santa Clara University's Office of Research Compliance and Integrity: <http://www.scu.edu/provost/research/Human-Subjects.cfm>.

² An earlier draft of this paper was submitted to the General Accounting Office, and its contents will be periodically updated, with updates posted on Twitter (@colleen_chien).

³ Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 328 (2010) (PAEs are “entities . . . focused on the enforcement, rather than the active development or commercialization of their patents.”), *accord*, FTC, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 8 n.5 (Mar. 2011), available at <http://www.ftc.gov/os/2011/03/110307patentreport.pdf>. Unlike the more popular term “NPE,” “PAE” excludes universities, startups and others who seek to commercialize or transfer their technology. For ease of reference, this report uses “PAE” interchangeably with “troll” and patent assertions by PAEs are referred to as “trolling.” In places where I refer to “NPE,” it is because the research that I am citing is based on an analysis of NPEs rather than PAEs.

⁴ As described, e.g., in John C. Haltiwanger, Ron S. Jarmin and Javier Miranda, *Who Creates Jobs? Small vs. Large vs. Young*, NBER Working Paper No. 16300, August 2010 at Abstract, available at <http://www.nber.org/papers/w16300> (“Business startups contribute substantially to both gross and net job creation.”).

⁵ James Bessen and Michael Meurer, *The Direct Costs from NPE Disputes*, Boston Univ. School of Law, Law and Economics Research Paper No. 12-34, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2091210, at

unique defendants and the majority of them make much less than that: at least 55%⁶ of unique defendants in PAE suits make under \$10M per year. Suing small companies appears to distinguish PAEs from operating companies, who sued companies with less than \$10M of annual revenue only 16% of the time, based on unique defendants.⁷ Around 60% of the demands during this period involved software or high-tech patents.⁸ 40% of survey respondents stated that they were being targeted because of their use of another's or a widely available technology.

The characteristics of small companies can make it harder to absorb a PAE demand – 40% percent of small companies that received a demand and responded to the survey (N=79) reported a “significant operational impact”: delayed hiring or achievement of another milestone, change in the product, a pivot in business strategy, a shut-down business line or the entire business, and/or lost valuation. (Figure 1) The smaller the company, the more likely it was to report a significant operational impact. (Table 2) To the extent patent demands tax innovation, then, they appear to do so regressively, with small companies targeted more as unique defendants, and paying more in time, money and operational impact, relative to their size, than large firms. Yet an operational change was not the only response to a demand: 22% of responders reported that, to resolve the demand, their primary response was to “do nothing,” while 35% fought the demand, and 18% settled it. Based on available information, costs were highest when fighting in court was the primary response (with average expenditures of \$857K (N=7)); settling cost an average of \$340K (n=12) and fighting out of court cost \$168K (N=18), on average (Table 1).

Small companies have also been able to monetize their patents, including through the licensing and sale of their patents: as many as 50% of “non-practicing entity” (NPE)⁹ patents are

footnote 10. If defendants with unrecorded revenue (24% of PAE defendants) are assumed to have less than \$100M in annual revenue, the percentage is 82%.

⁶ Based on the RPX Database, described at Appendix C, using recorded revenue. If defendants with unrecorded revenue (46% of PAE defendants) are assumed to have less than \$10M in annual revenue, the percentage is 75%.

⁷ Author calculation using RPX database.

⁸ Based on a class-based definition of “software” that reflects an amalgamation of scholarly definitions from four sources: James Bessen, 2011. “A Generation of Software Patents,” Boston Univ. School of Law, Law and Economics Research Paper No. 11-31 (at footnote 68); Hall, Bronwyn H., Adam B. Jaffe, Manuel Trajtenberg, 2001. “The NBER Patent Citation Data File: Lessons, Insights and Methodological Tools,” NBER Working Paper No. 8498. (at Appendix 1, p.41), Chien *Of Trolls* supra note ___, Stuart J.H. Graham & David C. Mowery, Software Patents: Good News or Bad News? 14 (GaTech TI:GER Working Paper Series, 2004), available at http://tiger.gatech.edu/files/gt_tiger_software.pdf. Described in John Allison and Colleen Chien, “*Identifying Software Patents*,” forthcoming. Accord, Bessen, Ford, and Meurer, at Table 2 (finding 62% of NPE patents to be software patents).

⁹ Various analyses cited throughout this paper have been done on “NPEs” rather than “PAEs”; accounting for citations to both types of entities in this paper.

sourced from companies with under \$200M in revenue.¹⁰ The cash infusion can support the business and provide an alternative revenue source, and 4% of survey respondents reported that they had monetized their patents, with another 20% saying that they had considered it. However, the majority of software startups don't have patents.¹¹ Among those that do have them, the conditions that surround a majority of sales are unclear. Small companies focused on building and growing the business often lack the time, inclination, or spare patents that are needed to monetize their intellectual property. Rather, patent sales are often prompted by a transition or the distress of the small company. When patents are sold in a "firesale," the proceeds are returned to creditors, investors and intermediaries rather than directly to the company. Because few patents are valuable, it may be said that the patent market represents more of an invitation to play the patent "lottery" than it does a sure thing that investors or companies can rely on. But a healthy market for patents can also benefit small companies that buy them. Growing companies can buy patents from the marketplace, for defensive or offensive purposes, although this practice was uncommon among survey respondents.

What can be done to decrease the harms of patent assertion and increase the benefits of a robust patent market to small companies, startups, and innovation? Focusing exclusively on the first question, as reported in this paper, the data suggest that a number of the reforms put in place over the last year, including by the America Invents Act, are having a positive impact. Fewer defendants are being named in patent suits. The new post-grant review provisions will reduce the leverage of patent plaintiffs in some cases.

However, a focus on startups and small companies dealing with patent demands reveals that many reforms don't directly benefit them. Prior user rights¹² benefit older companies, but don't help new start-ups. Startups are usually cash-poor, but challenging patents is expensive.¹³ Litigation reforms likely deter some suits from being brought in the first place, but don't reach small companies against whom litigation is threatened, but not brought.¹⁴ Proposals to increase

¹⁰ Data reported in Colleen Chien, *Race to the Bottom*, INTELLECTUAL ASSET MANAGEMENT MAGAZINE (January/February 2012) Figure 2.

¹¹ Related research suggests that two-thirds of software entrepreneurs don't have patents, see Stuart J.H. Graham, et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey*, 24 Berkeley Tech. L.J. 4 (2009) (Figure 1), and that some startups are less inclined to get them, Leonard Kravits, *Do Patents Really Matter to Startups?* (June 21, 2012) TECHCRUNCH, <http://techcrunch.com/2012/06/21/do-patents-really-matter-to-startups-new-data-reveals-shifting-habits/>.

¹² 35 USC 273 (2011).

¹³ United States Patent and Trademark Office Fee Schedule, UNITED STATES PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/web/offices/ac/qs/ope/fee092611.htm> (describing a fee increase for *ex parte* reexamination to \$17,750, and implementing fees of \$27,200 and \$35,800 for filing petitions for *inter partes* review, and covered business method review)

¹⁴ Approximately 2/3 of respondents to the survey that received a PAE demand were not sued.

the cost of software patents would limit the number of patents but would also disadvantage startups that patent, relative to large companies and PAEs with large budgets.

A focus on small, and indeed the smallest companies suggests a distinct set of concerns and, potentially, reforms. But because small companies represent the majority of PAE targets, making things better for them would advance broader patent reform. I propose three ways in which the specific needs of small companies being targeted by PAEs could be addressed.

- Small companies are vulnerable targets when, because of a lack of leverage, they pay nuisance settlements regardless of the merits. Yet 22% of survey respondents reported that they did nothing to respond to a patent demand. Collective, self-help-based solutions such as joint defense efforts and industry association groups that can set policies for the group (e.g. do not settle)¹⁵ and coordinate and pooled purchasing of patent defenses e.g. insurance for small companies could undermine divide-and-conquer tactics. Better dissemination of best practices about resolving patent disputes could also go a long way. Appendix E, a list of “best practices,” contains some of them. Economies of scale have not yet been meaningfully captured in patent defense,¹⁶ but by spreading information, risks and costs, the transaction costs and thus the return on trolling, can be reduced.
- Small companies are often targets of patent suits because they are users of technology. Innovatio LLC has sued small coffee shops and hotels that use wifi,¹⁷ and Project Paperless LLC has sued small businesses due to their use of digital scanners.¹⁸ 40% of survey respondents stated that they were being targeted because of their use of another’s or a widely available technology and at least 60% of cases involved software or other high-tech patents. But the practice of suing those who innocently use technology instead of those who make the technology, if within the court’s reach, should be discouraged. Courts can do so through active case management and staying cases brought against users;¹⁹ Congress could consider adopting some version of an “innocent user defense” or

¹⁵ For a description of the industry association groups that helped railroads best patent speculators around the turn of the century, and their specific tactics, see Colleen V. Chien, *Reforming Software Patents*, HOUSTON LAW REVIEW, 2012 (Forthcoming); Santa Clara Univ. Legal Studies Research Paper No. 08-12, available at <http://ssrn.com/abstract=2125515>.

¹⁶ Some of these ideas are described in Colleen V. Chien, *Turn the Tables on Patent Trolls*, FORBES (Aug. 9, 2011) <http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls/>.

¹⁷ Jesus Diaz, *Patent Troll is Suing Small Hotels and Coffee Shops for Offering Wi-Fi*, GIZMODO (Oct. 4, 2011), <http://gizmodo.com/5846419/patent-troll-is-suing-small-hotels-and-coffee-shops-for-offering-wi-fi>.

¹⁸ STOP PROJECT PAPERLESS: THE PATENTS, <http://stop-project-paperless.com/the-patents/> (last visited Sept. 2, 2012).

¹⁹ See, e.g. Colleen V. Chien, *Reforming Software Patents*, HOUSTON LAW REVIEW, 2012 (forthcoming); available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2125515 (see section III(C)(1)(b) for discussion of user

expanding existing limits on liability for users of technology that now exist for surgical method patents to internet and software technologies that represent staple articles of commerce.²⁰

- Small companies increase the returns to patent assertion when they legitimize PAE patents, regardless of their validity, by agreeing to royalty-based settlements. As courts bolster the standards for proving damages, they and others should discount the precedential impact of small company royalty settlements that are more about the patent's nuisance value than its economic value. By reducing the returns to "royalty-padding," courts would diminish the returns to going after small companies. The same principle could be applied to the other instrumental ways small companies are being used by PAEs to secure venue and early settlements to feed the war chest.

In sum, on the reform side, a number of unique characteristics make some startups and small companies, even though they lack deep pockets, attractive targets to PAEs. Efforts to make them less attractive can be bolstered by understanding the instrumental roles they play in patent assertion campaigns.

1. Background and Literature Review

Section 34 of the America Invents Act requires the study of the positive and negative impacts of patent trolls on the economy. Scholars and others have hypothesized, described, and estimated the extent of these impacts, with more and less relevance to small companies.

The Costs and Impacts of Trolling on Small Companies

Bessen et. al. have taken the most extensive look at the prevalence and financial costs of PAE assertions. Bessen & Meurer estimate that NPEs cost companies \$29B in 2011,²¹ and in related work found that little of the costs imposed by public company trolls have been provided back to inventors.²² Using a version of the RPX Database, described *infra*, they find that companies making less than \$1B comprise 90% of unique defendants and mount 59% of defenses, and that those making less than \$100M comprise 66-82% of unique defendants and

defenses); James Yoon, *Expanding the Customer Suit Exception in Patent Law*, JD SUPRA, <http://www.jdsupra.com/legalnews/expanding-the-customer-suit-exception-in-28989/>.

²⁰ Staple articles and commodities of commerce are less susceptible to claims of infringement under 35 U.S.C. § 271(c).

²¹ See Table 1 from Bessen & Meurer, *supra* note ____.

²² James Bessen, Jennifer Ford, and Michael Meurer, *The Private and Social Costs of Patent Trolls*, CATO INSTITUTE, Winter 2011-2012 available at <http://www.cato.org/pubs/regulation/regv34n4/v34n4-1.pdf>.

mount 33-50% of defenses.²³ They find that the median revenue of a defendant company reporting revenue is \$10.8M.²⁴

Ball & Kesan and Chien have considered the distribution of patent lawsuits. Ball & Kesan find that in 2000 and 2002, most small plaintiffs were suing other small plaintiffs;²⁵ Chien finds that among patent cases filed from 2000-2008 involving high-technology patents, “sport of king” suits pitting companies with more than \$100M in revenue against each other were the most common.²⁶

Schwartz has written about the tactics of contingent fee patent lawyers. Based on 40 interviews, he finds that “bottom tier” firms tend to assert a single portfolio against a large number of defendants, including weaker defendants.²⁷ “Middle tier” firms sue weaker companies for their strategic, rather than purely economic value. Campaigns against weaker defendants help establish venue in a favorable district,²⁸ lead to settlements that fund further litigation, “feed[] the war chest,” and strengthen the patent, all in preparation for a PAE’s ultimate campaign against big defendants.²⁹ Chien has described nuisance fee economics in the patent system:³⁰ where defendants pay not because of the economic value of the patent, but in order to avoid the cost of determining liability and resolving a patent demand.³¹

There have been no systematic studies of the impacts of patent assertion on small company operations. Tucker considered the impact of one PAE campaign in the medical imaging software industry. She found slower growth in sales and incremental innovation in accused products relative to other products made by the same companies.³² However, these targets were “large” IT companies rather than small startups.

²³ This figure assumes unreported revenues are under \$100M; see Bessen et al., *supra* note __ at Table 1.

²⁴ *Id.*

²⁵ Gwendolyn Ball & Jay Kesan, *Transaction Costs and Trolls: Individual Inventors, Small Firms and Entrepreneurs in Patent Litigation* 13 (2009), at Abstract available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1337166.

²⁶ Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C. L. REV. 1571, Abstract (2009). Companies with less than \$100M in revenue were defendants 24% of the time (Table 5) (considering “Predation” and “Limited Stakes” cases).

²⁷ David L. Schwartz, *The Rise of Contingent Fee Representation in Patent Litigation*, ALABAMA LAW REVIEW (forthcoming 2012) at Figure A (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1990651).

²⁸ *Id.* at n. 128.

²⁹ *Id.* at 36.

³⁰ Chien, *Reforming Software Patents*, *supra* note __ at I.C.

³¹ See also David Rosenberg & Steven Shavell, *A Model in Which Suits Are Brought for Their Nuisance Value*, 5 INT’L REV. L. & ECON. 3 (1985).

³² Catherine Tucker, *Patent Trolls and Technology Diffusion* (Massachusetts Institute of Technology, Management Science, Working Paper, 2011) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1976593.

Anecdotal press has reported a wide variety of responses to PAE demands by small companies, ranging from withdrawing products from the US market,³³ to paying a settlement fee that put a company's survival "in danger,"³⁴ to paying nothing besides attorney fees to settle a claim.³⁵

Benefits to Small Companies

By providing new ways for patentees to monetize their patents, PAEs can support small companies.³⁶ Without PAEs to fight for the rights of small inventors, according to one account, they would be "virtually frozen out of the patent licensing market."³⁷ Small and medium enterprises can license, license and sell back, securitize, or sell their patents.³⁸

While the patent marketplace is growing,³⁹ scholars and others have described it as still underdeveloped, possessing a "high degree of illiquidity,"⁴⁰ operating in a "high-friction transaction environment,"⁴¹ and representing a "blind market" where "[w]illing buyers and sellers would not be able to find each other."⁴² But by creating a demand for and transacting in patents, PAEs increase their value. The real possibility that a startup company's patents will eventually be used for offensive purposes has been widely recognized in the industry; Twitter

³³ Charles Arthur, *App Developers Withdraw From US as Patent Fears Reach 'Tipping Point'*, THE GUARDIAN APPS BLOG (Jul. 15, 2011) <http://www.guardian.co.uk/technology/appsblog/2011/jul/15/app-developers-withdraw-us-patents>.

³⁴ *When Patents Attack!*, *This American Life*: Episode 441 (Jul. 22, 2011) transcript available at <http://www.thisamericanlife.org/radio-archives/episode/441/transcript>. See also Joe Mullin, <http://patentexaminer.org/2011/09/notorious-patent-enforcer-fotomedia-is-back-with-a-bigger-law-firm-and-hunting-bigger-targets/>

³⁵ Sarah Perez, *Fark.com Settles With Patent Troll For Zero Dollars!*, TECHCRUNCH (Aug. 10, 2011) <http://techcrunch.com/2011/08/10/fark-com-settles-with-patent-troll-for-zero-dollars/>.

³⁶ See, e.g. James F. McDonough, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, EMORY LAW JOURNAL, Vol. 56 (2006), Nathan Myhrvold, *The Big Idea*, Harvard Business Review (2010).

³⁷ Letter from Paul Ryan, CEO of Acacia Research Corp., in response to FTC Requests for Comments, Project No. P093900 "Evolving IP Marketplace" (May 13, 2009) available at <http://ftc.gov/os/comments/iphearings/540872-00048.pdf>.

³⁸ Described in Gaétan De Rassenfosse, *How SMEs Exploit Their Intellectual Property Assets: Evidence From Survey Data*, SMALL BUSINESS ECONOMICS, 39(2), 437-452, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1726208.

³⁹ For a history of the patent marketplace, see Colleen V. Chien, *From Arms Race to Marketplace: The New Complex Patent Ecosystem and Its Implications for the Patent System*, HASTINGS LAW JOURNAL, Vol. 62, p. 297, December 2010, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1703557.

⁴⁰ Dietmar Harhoff, *The Role of Patents and Licenses in Securing External Finance for Innovation*, European Investment Bank Papers, R&D Financing Of Innovation in Europe, Vol. 14, No.2 2009, 74-98 http://www.eib.org/attachments/efs/eibpapers/eibpapers_2009_v14_n02_en.pdf.

⁴¹ RPX Corp. Investor Presentation, 3rd Quarter 2012, 8, available at files.shareholder.com/downloads/ABEA.../RPXQ3Invest_Web.pdf.

⁴² Mark Lemley and Nathan Myhrvold, *How to Make a Patent Market*, HOFSTRA LAW REVIEW, Vol. 36, p. 257 (2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1012726.

has introduced a license that would reduce its odds.⁴³ Recent high-profile patent sales mean that now “everyone is a potential patent seller,” according to one interviewee.

Several have analyzed the source of PAE patents. Two analyses, by Risch⁴⁴ and by Chien, relying on data from RPX Corp.⁴⁵ suggest that the majority originate from corporations. According to the RPX data, 50% of PAE patents come from companies with under \$200M in annual revenue.⁴⁶ Risch reported that the majority of corporate sellers he investigated were still operating, including as a company receiving licensing revenue.⁴⁷

The Berkeley Patent Survey, a comprehensive survey of over 1,000 startup companies, asked whether and why startups get patents. It found that most tech startups don’t patent, because it is expensive.⁴⁸ Among seven possible reasons companies sought patent protection, to obtain licensing revenues ranked last.⁴⁹ A recent lay study of 12,000 funded technology companies found that, in recent years, startups from have become less likely to file for patents.⁵⁰

2. Data Sources and Methods

Building upon the existing literature, this paper addresses the impact of PAE demands on small companies. I focus on several areas that have received scant empirical attention: the operational impacts of PAE demands on small companies, the distribution of PAE impacts, and the opportunities that the patent marketplace presents to small companies.

I used three primary sources of data: (1) a comprehensive database of patent litigations developed by RPX Corp. that has previously been used by academic researchers (“RPX Database”),⁵¹ (2) interviews with nearly 20 subjects involved in asserting patents against, purchasing patents from, selling the patents of and defending small companies against PAE patents, and (3) 223 responses to a non-random survey of small tech companies and startups that I conducted in late summer 2012, 79 from companies that had received a patent demand.

⁴³ See, e.g., Twitter’s Innovator Patent Agreement <http://blog.twitter.com/2012/04/introducing-innovators-patent-agreement.html>.

⁴⁴ Michael Risch, *Patent Troll Myths*, SETON HALL LAW REVIEW, Vol. 42, p. 457, 477 (2012) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1792442.

⁴⁵ Chien, *Race to the Bottom*, *supra* note ___ at Figure 2.

⁴⁶ *Id.*

⁴⁷ Risch, *Patent Troll Myths*, at 27-28, 31.

⁴⁸ Graham et al., *supra* note ___, accord Kravits, *supra* note ___ (“Since 2005, the average start-up has become less likely to apply for patents than companies founded in the previous year.”).

⁴⁹ *Id.* Graham et. al., *supra* note ___ at Figure 2.

⁵⁰ Kravits, *supra* note ____ .

⁵¹ In my present analyses of the RPX Database, I exclude universities and research organizations that fit under the more expansive term “NPE” (non-practicing entity) but are not properly considered PAEs.

More details about each data source are provided in Appendices A-C. However, an important question concerns appropriate use of data from the survey. The survey was distributed non-randomly, through venture capitalists and media outlets focused on tech startups rather than to the general population. Like many media outlets, the ones that advertised the survey have been critical of the patent system. The solicitations made reference to the context of this study, and the chance for the input to be provided to the government pursuant to the AIA's Section 34 study.

These realities introduce the possibility of bias in who took the survey, and in their reporting with respect to patent demands. To account for this reality and minimize the impact of bias, I used several safeguards. I solicited responses from those who hadn't received demands, as well as those that did, with the result that the majority of companies that filled out the survey had not received a demand.⁵² I didn't limit demands to PAE demands, and indeed, a handful of respondents described demands they received from operating companies. To capture the positive and negative impacts of patent assertion, I asked both about the sale/purchase of patents from the patent marketplace, as well as the impacts of patents demands, and report responses to both sets of questions. I used neutral language in my descriptions and solicited primarily factual information within the recollection and primary grasp of the responders, using an iterative process to refine the questions.

Perhaps the most novel finding of this report relates to the different impacts experienced by subpopulations *within* my respondents, and in particular the relationship between company size and impact. However all findings should be interpreted in view of the universe of responders and the survey design, and viewed together with corresponding or conflicting evidence from related academic literature and my interviews. As others have noted, data about the impacts of PAEs is notoriously difficult to obtain.⁵³ To allow readers to reach their own conclusions, I include the questions from the survey, a sample of a blog-based solicitation, and the various checks I performed, in Appendix A.

The Prevalence of Small Companies Defendants in PAE Suits

One difficulty with determining how many PAE suits have named small defendants is that recorded revenue from commercial databases like Dun & Bradstreet (Hoover's) is not available for many companies, particularly younger and smaller ones who don't have a public

⁵² See Appendix A.3 (reporting that out of 233 respondents, 144 or 64% hadn't received a demand).

⁵³ See e.g., remarks of Chris Sacca, *This American Life*, Episode 441: When Patents Attack! transcript *available at* <http://www.thisamericanlife.org/radio-archives/episode/441/transcript> ("people in this community [] almost uniformly said they couldn't talk to [a reporter] []. They're afraid to.") One VC I interviewed noted that many startup companies are "suffering in silence."

“footprint”⁵⁴ in terms of leases, employees, and other metrics from which revenue can be estimated. Thus, the prevalence of small company defendants in PAE suits can only be estimated, and these estimates are presented below based on 1) recorded revenue, represented by the lower end of the range, and 2) revenue assuming that companies with unrecorded revenue are small.⁵⁵

As described above, Bessen & Meurer found that 66% to 82% of unique defendants in NPE cases made less than \$100M, representing 33% to 50% of the defenses. Based on my analysis of the RPX Database,⁵⁶ companies with less than \$10M of annual revenue represented at least 55% of unique PAE defendants,⁵⁷ bringing 26% of PAE defenses.

3. The Costs and Impacts of PAE Demands to Small Companies

The survival of entrepreneurial companies depends on their focus and ability to execute against operational milestones. I found that this makes them uniquely vulnerable to PAE demands, which can divert scarce money and founder time from the business, incense management, and at times, force significant operational changes.

Patent demands can be costly to resolve, and particularly so for small companies. The overwhelming majority of companies said that resolving the demand required founder time⁵⁸ (73%) and distracted from the core business (89%); most experienced a financial impact as well (63%). However, responses and the costs of these responses ran the gamut; for example, 22% of those surveyed said they “did nothing” to resolve the demand.

Respondents listed as their primary response: to fight (35%), settle (18%), do nothing (22%), change the product or business (9%), or other/unresolved (17%) (Table 1). The costs associated with each of these responses varied widely, with fighting the court being the most costly as requiring close to a million dollars on average to resolve, and doing nothing, naturally, representing the cheapest option. These responses should not necessarily be seen as representing

⁵⁴ See Ball & Kesan, described *supra* note ____, at 3.2.

⁵⁵ There are a variety of approaches for dealing with missing data, and assuming that they all fall into one category is often not appropriate. However, because larger companies tend to leave a “footprint” through the recording of revenue, leases, and other discoverable operational metrics, it is likely that many if not most of the companies with unrecorded revenue were smaller, rather than larger in size. The assumption that companies with unrecorded revenue make less than \$100M per year has been relied upon by a number of patent studies including Ball & Kesan, *supra* note __ at 3.2, Chien, *Of Trolls*, *supra* note ____, at n. 160 (2009) and Bessen & Meurer, *supra* note ____, at 10.

⁵⁶ Described Appendix C.

⁵⁷ 55% is a conservative estimate – if companies without coded revenue are assumed to be small, the share grows to 75%. In addition, this figure excludes threats to sue, however, in my survey I found the likelihood that a company reported an actual litigation, rather than the threat of one, increased with revenue. Lawsuits represented only 31% of demands received by companies with under \$10M in revenue, but 67% of demands received by companies with over \$10M in revenue. If this trend is accurate, then the proportion of all patent demands that are directed at small companies is larger than what I report here.

⁵⁸ Including founders and self-identified C-level employees.

company choices – if a company is sued, it’s harder to ignore than if the company merely receives a demand letter. In addition, the type of demand a company receives (letter, suit, or based on a “nuisance” or “credible” suit for example) may depend on the size of the company. Thus, Table 1 includes not only average cost data where it was reported but also how this revenue compared to the revenue that the company reported on the survey (taking the midpoint when a revenue range was presented).

TABLE 1: Primary Responses to PAE Demands, and Their Costs

Primary Response to PAE Demand	Primary Response		Average Cost of Response		% of Annual Revenue Spent Resolving Demand	
	N	%	N	Average \$	N	Average \$
Product/Business Change	7	9%	5	\$32K	5	13%
Doing nothing	17	22%	15	\$2.4K	15	0%
Settlement (\$ or equity)	14	18%	12	\$340K	12	13%
Fighting in court	9	11%	7	\$857K	6	24%
Fighting out of court	19	24%	18	\$168K	18	5%
Other/unresolved/legal fees	13	17%	9	\$7-\$21K	8	0-6%
Total	79	-	66	-	64	-

Time and Money Impacts

PAEs want money, but startups are often cash-poor, leading potentially to a strained settlement dynamic. For example, Lodsys, a PAE that has targeted software application developers, has offered small targets a zero dollar settlement with an escalating royalty upon meeting a certain revenue threshold.⁵⁹ One survey respondent reported that they gave equity in their company to settle a PAE claim. Another company paid off a PAE by giving them rights to sue over the company’s patents, its lawyer told me.

If a small company is sued and can’t get out with a small settlement, one strategy is to put the company on “life support,” in the words of one defense lawyer – that is, to do the least that is required to avoid defaulting on the case and hope that larger companies with deeper pockets will

⁵⁹ See Lodsys Patent License Royalty Agreement, Appendix E, at 4.2 and 4.3. (on file with the author)

take the lead. Several lawyers noted that this can lead to “awkward conference calls” during which no one says anything.⁶⁰

Impact on Hiring, Innovation, and Operations

In addition to financial impacts, PAE demands can also harm the survival and operation of a small company. Although PAE suits are often called “nuisance” suits, one of the most significant findings of this study is that, among small company respondents to the survey, many reported one or more significant operational impacts.⁶¹ Receiving a demand was described as potentially representing a “death knell” for a prefunded company: no one wants to invest in a company where founder time and investor money is going to be “bled to patent trolls,” as one interviewee put it.

Among respondents to the survey that had received a PAE demand, 40% reported that the demand had a significant operational impact, which I define as resulting in: a business strategy pivot, product change, business/business line exit, delay in hiring or meeting operational milestone, and/or a reduction in the value of the company.

Survey respondents explained these operational impacts:

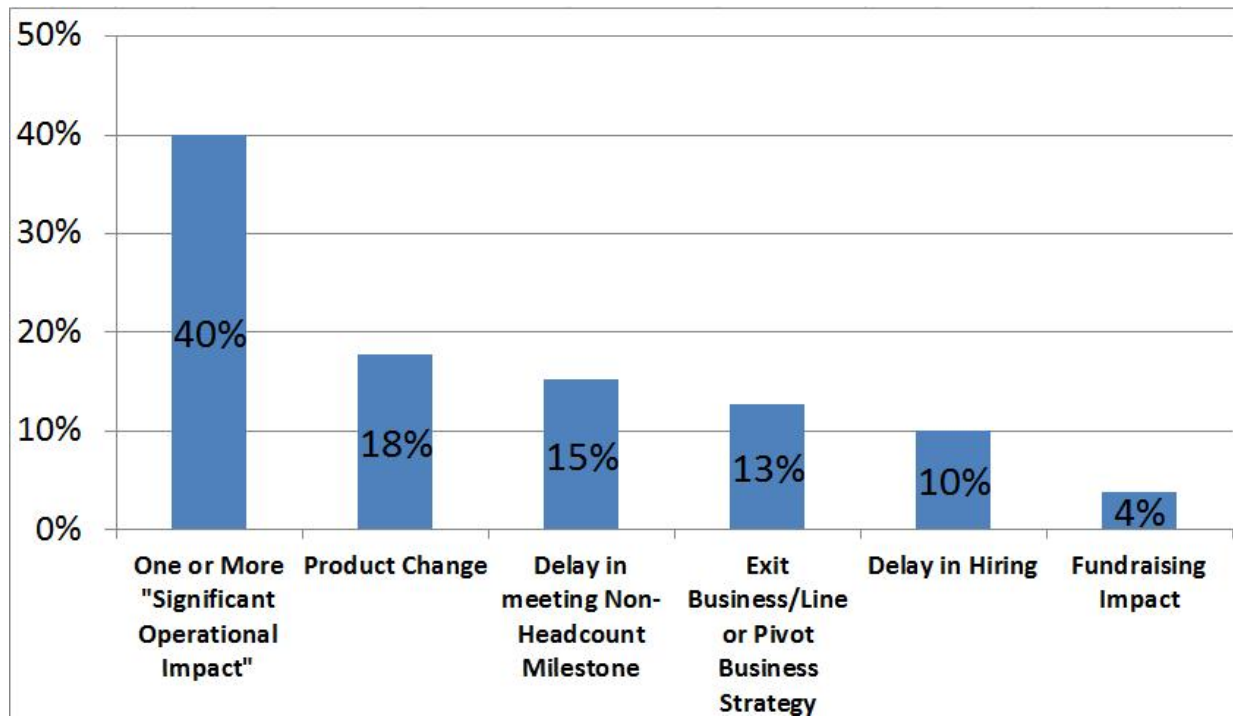
“The plaintiff held a patent on a system that, to the uneducated observer, might cover our product. It did not. The plaintiff was unreasonable in their demands. [] At our hearing we demonstrated very conclusively that the definitions used in the description of the patent and the claims were not related to our product and service. During the third year of the litigation we sold the company and the presence of the lawsuit severely diminished the value during that transaction.”

“Almost all telecommunication codecs are covered by patents....The company who demanded of us exists only to pool and monetize patents and listed about 30 violating patents. We had no choice but to pay, and as a young company, it killed us.”

⁶⁰ See, e.g., Jackson Walker, LLP article “The Ten Attorneys You Meet in Your Joint Defense Group” available at <http://images.jw.com/calert/iplitigation/2011/jacksonlatham03.pdf> (“The Free Rider: []This attorney never volunteers to take the lead on any group tasks even when it is clearly his/her turn to do so. The Free Rider’s failure to pull their own weight inevitably results in joint defense calls that are plagued with protracted periods of awkward silence while the group waits to see if The Free Rider will finally step up and take the lead on a task.”)

⁶¹ A choice of one or more of the following options, in response to the question: “How did the demand impact your company’s operations, if at all?”: delayed hiring or achievement of another milestone, changed the product, pivoted their strategy, shut down a business lines or the entire businesses, and/or lost valuation due to a patent demand.

FIG 1: Distribution of “Significant Impacts” Resulting from a PAE Demand



As a litigation attorney put it:

“Pre-A round companies are really [][s** out of luck]. It’s really a big problem. They can’t raise financing to defend the case. No one wants to fund an untested company. A piece of the funds, management time are bled out to lawyers. They can go out of business over [these kinds of suits].”

The smaller the company, the less able it was to absorb the impact of a lawsuit without a significant impact: the smallest companies reported the highest rate, while companies over \$100M in revenue reported no impact from troll suits, even though they were sued at a much higher frequency than small companies in the sample.

Table 2: The Impact of PAE Demands on Small Companies

Revenue	N	Responded that Demand Had a Significant Operational Impact*
up to \$100K	13	62%
\$100K-\$1M	20	55%
1-\$10M	20	40%
10-\$100M	12	42%
\$100M-\$1B	6	0%
\$1B+	6	0%
Total	79	41%

*Qualifying answers to the question, “How did the demand impact your company’s operations, if at all?”: pivot business strategy, business/business line exit, delay in hiring or meeting operational milestone, change in product, reduced value of the company.

Several respondents noted the particular vulnerabilities of small companies in the patent system, for example:

“Google, Oracle and Apple can fight all day with pennies from their earning. The real problem is with small companies for whom the legal system is our enemy.”

“Many small firms can't even read a patent let along [sic] figure out when and where to go to find out if they need to license them or how to design around them. This makes these companies sitting ducks.”

Emotional and Intangible Impacts

Patent demands can exact a personal toll: as responders remarked, demands have “invoked rage over the waste of time,” made a target “very very angry,” “ruined family friends” and caused “stress” and “ill-will generation [sic].” As several survey respondents put it,

“It was agonizing to hand over all the money we had earned from a product we had invented and created ourselves to a firm that invents nothing and creates nothing. Our founder has since lost his house, car [sic] all his assets.”

“They sued my startup for infringement on a group of insanely broad software patents. While many much larger companies are fighting we do not have the resources to do so. It is the single most frustrating experiences I've had professionally. Extortion, pure and simple. The troll even admitted his model was to sue everyone, get settlement dollars because fighting was too expensive.”

“We wasted about 50k of hard earned money on litigations :-/ [sic]”

As defense lawyers who work with a large number of large and small companies put it, some small companies are “much more likely to take it personally” and threats can “send them over the edge,” inflicting considerable emotional distress. Others are less emotional about it – they see a troll lawsuit as an unfortunate “rite of passage” for successful business.

Chilling Effects

Among those who had not received a demand, some reported significant impacts from watching others receive them. Numerous respondents who had not received a demand said they used open source software in order to avoid liability. Others reported being very conscious of patent threats. Said one small software company, for example: “[w]e have limited ourselves to the UK & European markets, simply because the mere threat of Patent Litigation if we enter the US market, is a WHEN not IF question.” Another said “I used to develop software for retail and on spec for publishing by other companies. But we've quit that because the risk of patent litigation.”

The Strategic Role of Small Companies in Troll Campaigns

Small company defendants play distinctive roles in troll campaigns, resembling the roles played by weaker defendants as Schwartz has described.⁶²

Food for Bottom Feeders

“Bottom feeder” trolls make demands of many companies at once in order to get nuisance settlements.⁶³ As one survey respondent put it “pretty much every other company in the same business was named as defendant.” The consensus appeared to be that many small companies settle such claims made by PAEs, whatever the merit, because they could not afford to fight them.

Pawns in Campaigns Against Large Companies

Small companies are also being used in order to secure a royalty rate or venue or “feed the war chest”⁶⁴ in support of campaigns against larger, deeper-pocketed targets, several interviewees said. Based on my analysis of the RPX Database nearly two-thirds of the time small

⁶² Schwartz, *supra* note ____, at figure A, 36 and n. 128.

⁶³ See *id.* at (describing the “bottom” of the contingent fee market, where “patents are enforced against an entire industry” and offers to settle are tied to and below the cost of defense)

⁶⁴ Accord, *id.* *e.g.* at 36

companies are sued by trolls, they are sued along with a larger company. As an experienced defense lawyer told me:

“I’m not proud of it, but most [of my small company] clients are willing to agree to a royalty agreement [with a]... tiny base, large rate. [The trolls] come against the little guy and say you’ve got really low revenue, we want to establish a high royalty rate. They hate to do this, and screws people later but [it’s what happens].”

For example, PAE Lodsys offered small app developers a royalty rate of 0.575% of revenue that became due only once the app developer reached a quarterly revenue of \$10,000.⁶⁵ Such settlements in effect would require no money upfront from a small developer, but allow Lodsys to advertise that their patent was licensed at a certain rate.

Suing Small Companies as Customers, Using Small Companies to Get to Large Customers

Small companies are often targeted for their use or adoption of existing technology, rather their own technology. Technology users like the Red Cross have been sued for soliciting charitable contributions on the Internet,⁶⁶ and others, for adopting off the shelf or technologies into their business. Kelora, for example, has sued e-tailers that incorporate faceted search, often through technology vendors, into their products.⁶⁷ Because many building blocks of commerce are patented, colorable infringement is widespread, creating a large number of targets to go after.⁶⁸

Small companies who serve large customers are also sometimes sued in order to give the PAE a reason to go after a large user. The liabilities between users and vendors can be difficult to untangle, for example as described by one respondent:

“We are a technology vendor. The patent trolls have a habit of going after our customers, not directly us. Our customers have much deeper pockets. But we are forced to indemnify our customers, so ultimately we had to take over the defense and get involved in paying part of the settlement.”

⁶⁵ See Lodsys Patent License Royalty Agreement, at 4.2 and 4.3 (on file with the author).

⁶⁶ 157 CONG. REC. H4480, H4496 (Statement of Rep. Crowley) (legislative history in the House of the America Invents Act), available at http://www.uspto.gov/aia_implementation/20110623-debate_hr_1249_h4480-h4505.pdf. *Ziarno v. Am. Red Cross*, No. 99 C 3430 (N.D. Ill. June 28, 2001).

⁶⁷ Based on personal conversations with lawyers and defendants against the claims of Kelora and described, e.g., at <http://www.internetretailer.com/2012/05/22/big-patent-win-e-retailers>

⁶⁸ Users of technology were also targeted en masse by patent speculators around the turn of the century, see, e.g., Gerard Magliocca, *Blackberries and Barnyards: Patent Trolls and the Perils of Innovation*, 82 NOTRE DAME L. REV. 1809 (2007).

While going after users and makers of technology gives PAEs more options for enforcing their rights, widespread campaigns targeting small companies that have little to do with the underlying technology increases their liability and are difficult if not impossible to anticipate.

4. The Benefits of PAEs to Small Companies

PAEs provide ways for patentees to monetize their patents, often when there is not an alternative. Several interviewees commented big companies get so many patent demand invitations or demands, they “systematically ignore them.” Small companies have more options now than before the growth of the patent marketplace.⁶⁹

Monetization Opportunities

Some small companies have been able to sell or monetize their patent portfolios to support ongoing or new practicing business ventures. As one successful patent monetizer associated with the PAE NTP has been quoted about the strategic management of patents:

“Quality patents, strategically deployed, support young operating businesses and provide investors additional ways to achieve return. Rights these businesses can generate internally, acquire from others, and license will move them to a higher level faster. It also helps to have the capital and commitment to get there.”⁷⁰

A successful patent assertion campaign can support the business, or help fund a transition, for example, to another operating company business model or full time patent assertion.⁷¹ 4% of survey respondents stated that they had monetized their patents. A handful explained that they had either sold the patents along with a product line, sold unused patents outright, or licensed their patents.

⁶⁹ Described, e.g. in Chien, *Arms Race*, *supra* note ____.

⁷⁰ Patrick Anderson, *Augme Patent Case To Be Set for Trial – Board Member Don Stout Credits Patent Licensing As Key To Advancing Young Operating Companies*, GAMETIME IP, <http://gametimeip.com/2012/06/07/augme-patent-case-to-be-set-for-trial-board-member-don-stout-credits-patent-licensing-as-key-to-advancing-young-operating-companies/>.

⁷¹ See, e.g. description of transitions to patent-focused companies made by Words, Inc. <http://seekingalpha.com/article/871021-2-davids-troll-for-goliath-sized-patent-litigation-dollars>, and OpenWave Communications <http://www.techdirt.com/blog/wireless/articles/20120418/03490318538/early-mobile-internet-company-that-failed-to-adapt-becomes-patent-troll.shtml>

96% of survey respondents said they had not monetized their patents, in many cases because the company did not have a patent, consistent with the received wisdom that many startups don't get patents.⁷² Interviews corroborated this:

“startups don't have an extra 15,000 to pay a lawyer to go follow around their engineers,” said one serial patent entrepreneur

An executive at a patent investment firm put it this way: “[Small companies] don't know about [sales opportunities] or can't get it together to sell it. It's not on their radar. It takes 3 years to get a patent. Startups don't have an IP person. [The patents they have] []are core, not able to shed it.”

When small companies do sell, the impact of such sales is not clear. Much of it depends on whether the company is healthy, e.g. selling to support a going concern, or in distress, e.g. in the process of dissolving, bankrupt, or restructuring the business to focus on patent assertion. Some monetization campaigns appear to fit the latter profile. Acacia, which buys and asserts the patents of others, has described as typical sources of patents: “distressed corporations” and “failed corporations controlled by VCs.”⁷³ Acacia and Intellectual Ventures have each profiled its patentees on their websites. Among the 90 patentees that on the “Investor Testimonials,”⁷⁴ “Inventor Spotlight,”⁷⁵ and “Senior Spotlight,”⁷⁶ sections of their websites, based on our analysis, less than 15% appeared to be connected to still practicing companies not focused on patents.

However, it could also be that companies that sell or monetize their patents are not proud and therefore unwilling to talk about them. It's not “PC” to talk about patents in a positive way, was the sentiment of one serial entrepreneur, but small companies can benefit from them, for example, against other competitors in the market. With respect to selling to PAEs, said one serial entrepreneur:

⁷² Graham et. al., *supra* at note ____.

⁷³ Acacia Research Group LLC, First Quarter 2012 Presentation, available at p.4. <http://acaciatechnologies.com/ACTGPresentation1stQtr2012.pdf>.

⁷⁴ Acacia Research Group, LLC website, Testimonials (last visited Sept. 2, 2012) <http://www.acaciatechnologies.com/testimonials.htm>.

⁷⁵ Intellectual Ventures website, Inventor Spotlights (last visited Sept. 2, 2012) <http://www.intellectualventures.com/index.php/inventor-network/inventor-spotlights>; *see also* two recently profiled operational spin-offs, described at Todd Bishop, Intellectual Ventures: Why haven't there been more spinoffs?, GEEKWIRE (Aug. 21, 2012 4:18) <http://www.geekwire.com/2012/intellectual-ventures-spinoffs/>.

⁷⁶ Intellectual Ventures website, Inventor Network (last visited Sept. 12, 2012) <http://www.intellectualventures.com/index.php/inventor-network/senior-inventors>.

“The scenario of selling means you’ve failed completely. No deal can be made to salvage the company, you have nothing to tell your kids about. It’s just to pay off creditors. [You’re] embarrassed to be selling like this”

When a patent is sold in a “firesale,” the proceeds generally do not go back directly to the inventive entity but rather, to pay back investors or creditors. The company can benefit, however, by being able to dissolve rather than go bankrupt, or delay the death of a seller, one high-volume buyer stated. If a company is experiencing a transition when it decides to move away from a business line, it may also sell its patents, interviewees said.

Impact on Investment Incentives

Because few patents are economically valuable,⁷⁷ however, it appears, companies cannot necessarily rely on their patents for an exit or revenue strategy. One entrepreneur described the time and money efforts he made to develop a patent portfolio, which he could not monetize as desired. Another talked about the difficulties he faced in getting patents on what he thought was valuable and novel technology. Inventors, interviewees said, tended to have an inflated sense of the value of their inventions, leading to unrealistic expectations and demands of targets.

However, if a company does hold a “crown jewel” patent that proves to be valuable, they may have a range of options, ranging from becoming a PAE to just holding the patent, said one serial entrepreneur.

Some have expressed concern about the potentially distortionary role that the “patent lottery” – the promise of a potentially high payoff from patenting – plays on startup investment. As was posted on a blog board in the summer of 2012:

“In the past six months I have been approached by two investors with interests in large patent portfolio investment. They used to invest in start-ups. Why the change? Less risk

⁷⁷ In the words of one industry veteran, there are three bands of patents: “crown jewels” that can be used to currently block a large segment of the market and are worth about \$700K+/patent; “mid-value” patents in the \$3-500K range; “stocking suffers” (\$2-300K per patent) that add bulk to a portfolio that “aren’t currently being infringed but that’s the way the market is going,” and “pure bulk” patents that are valuable only as part of a portfolio, and may have open applications.” Others commented that the distribution of patent value is highly skewed, with few patents in the crown jewel range and even fewer in the even more elite “diamond” range; these diamonds can come from different sources but are more likely to be from a large R&D company, if they are willing to release them, or strategic independent inventors that are ahead of their time, others said.

[and?] bigger potential gains. It's a no brainer. Investing in invention is for schmucks. They are wrong but accurate.”⁷⁸

In a related chapter in patent history,⁷⁹ US Congressman S.A. Hurlbut of Illinois, commented about the lottery issue:

“I think that the present patent law as it is administered [] tends to [] foster that gambling spirit. I think it holds out the same temptation in the instances of these enormous profits, that have been made from time to time, that are held out by the lottery.”⁸⁰

Paths to Patent Liquidity

The patent market is characterized by extensive information asymmetry and high transaction costs. Small companies that sell their patents pay broker fees of 15-25% (35% on the high-end) or are offered “rock-bottom” prices by aggregators who have superior access to information about patent valuation and “are trying to get it for the cheapest price they can,” as one plaintiff’s lawyer put it. One patent buyer disagreed, however, stating that if the transaction is brokered, the owner will get a fair price. Highly valuable patents may be solicited directly on behalf of buyers.

As between selling and asserting patents, with a contingent firm or other partner, the former is seen as the cleaner and faster route. Most startups lack the legal skills, litigation finance, temperament, and investment horizon over many years required to credibly assert patents. It is unusual for a firm to be great at monetizing IP and great at being a practicing company, was the sentiment of several interviewees: “most companies don’t have the stomach to sue.”

Purchasing Opportunities in the Patent Marketplace

As buyers, growing companies without large portfolios can buy patents on the open market and quickly bulk up their portfolios “on-demand.”⁸¹ Facebook recently bought patents

⁷⁸ Comments of Nicolas White, Tangible IP, in response to Joff Wild, Intellectual Asset Management blog post *Now that IP is Mainstream, Let’s Not Mess This Once in a Lifetime Opportunity Up*, July 6, 2012, both available at <http://www.iam-magazine.com/blog/Detail.aspx?g=b0610bab-d371-4401-bd6f-6b12368b8eb0>

⁷⁹ Turn of the century United States, with respect to railroad patents, see, e.g. STEVEN W. USSELMAN, *REGULATING RAILROAD INNOVATION: BUSINESS, TECHNOLOGY, AND POLITICS IN AMERICA, 1840-1920*, at ___ (2002) (describing the activities of patent speculators who bought up patents and sued the entire industry based on them)

⁸⁰ 45th Congress, Arguments before the Committee on Patents (1878), at 440.

⁸¹ This phenomenon is described in Chien, *Arms Race*, supra note ___ at ___.

from Microsoft to defend it against a patent lawsuit by Yahoo!;⁸² Intellectual Ventures' IP for Defense program allows companies to access and borrow patents from Intellectual Ventures' large portfolio to defend themselves against threats of patent litigation. Its subscribers include high-growth companies Blue Cat Networks,⁸³ Dashwire,⁸⁴ and Vlingo.⁸⁵ 2% of survey respondents said that they had considered purchasing patents; another 20% said that they had considered buying patents, but had not done so.

5. Reforms

What can be done to reduce the harms of patent assertion and increase the benefits of a robust patent market to small companies? I focus primarily on the first question, leaving to others a discussion of the ways that the patent marketplace could better support small companies.

Existing Reforms

Many things have been done recently, by the courts, Congress, and PTO, to make patent assertion more difficult.⁸⁶ Some of these reforms are having the desired effect. The adoption of the "e-discovery reforms" spearheaded by the Federal Circuit Advisory Council,⁸⁷ several interviewees noted, have reduced the ability of parties to drive up legal bills with harassing discovery requests.

The nuisance fee model of patent litigation is also under attack as the costs of assertion are going up for patentees. In particular, greater judicial scrutiny of damages⁸⁸ and the increasingly difficult climate for enforcement "has caused big ticket litigation funders to flee patents," said one IP strategist. Considering the ten months before and after enactment of the America Invents Act, it appears that NPE suits have registered a decline in total PAE defendant count⁸⁹ although the number of suits went up, likely due to the misjoinder rules.⁹⁰ The share of

⁸² Ingrid Lunden, Facebook Buys AOL Patents From Microsoft For \$550 Million In Cash, TECHCRUNCH (April 3, 2012) <http://techcrunch.com/2012/04/23/aols-new-patent-owners-facebook-in-a-550m-deal-with-microsoft/>.

⁸³ Intellectual Ventures website, Services & Solutions: BlueCat Networks Case Study (last visited Sept. 2, 2012) <http://www.intellectualventures.com/index.php/services-solutions/case-studies/bluecat-networks>.

⁸⁴ Intellectual Ventures website, News & Info: "Leveling the Playing Field with Patents for Defensive Purposes: (April 6, 2011) <http://www.intellectualventures.com/index.php/insights/archives/leveling-the-playing-field-with-patents-for-defensive-purposes>.

⁸⁵ Intellectual Ventures website, News & Info: "Vlingo Corporation Enters Into License Agreement and Patent Sale Agreement with Intellectual Ventures" (July 26, 2010) <http://www.intellectualventures.com/index.php/news/press-releases/vlingo-corporation-enters-into-license-agreement-and-patent-sale-agreement>.

⁸⁶ Many of them are described, *e.g.*, in Reforming Software Patents.

⁸⁷ Described, *e.g.* Matt Miller, *Texas Court Builds on Judge Rader's Model Order*, DISCOVER READY (March 13, 2012) <http://discoverready.com/blog/texas-court-builds-on-judge-raders-model-order/>.

⁸⁸ In particular, the rejection of the entire market value rule and increased need for damages experts and surveys to prove damages, interview subjects said.

⁸⁹ Author's analysis comparing October 1, 2011 to August 31, 2012 and October 1, 2010 to August 31, 2011.

small companies among unique defendants has gone down,⁹¹ suggesting that fewer of them are worth pursuing under the new rules.⁹²

But young, small companies experience these reforms differently than large ones. When defenses cost time and money to access, they well may be out of a startup's reach. For example, it costs an estimated \$100K - \$400k to challenge a patent administratively, cheaper than full-blown litigation but, said lawyers I interviewed, still out of reach for the resource constrained defendants. Knowing this, the PAE will offer a settlement that is a fraction of the cost of defense. Similarly, if a small company is to be sued at all, it will often prefer to be joined in a case with a large co-defendant, rather than alone, so that it can benefit from the co-defendant's deep pockets and efforts to invalidate the patent. But the newly enacted "misjoinder rules" discourage too many defendants from being joined in a single case.⁹³ Prior user rights⁹⁴ benefit older companies against younger patents, for example, but don't help new start-ups.

The proposed SHIELD Act would require PAEs to pay the fees of defendants if the patent was invalid or non-infringed.⁹⁵ But, in order to get the fees, a defendant would need to first spend enough time litigating to invalidate or prove non-infringement, and then seek successful collection from a troll potentially specifically structured to be judgment proof. While the bill is laudable for its effort to tailor reform to software patents only, and even the balance of power between certain plaintiffs and defendants, fee-shifting generally has less of an impact on repeat-player plaintiffs and may deter certain meritorious suits by plaintiffs.⁹⁶ Still, for small company defendants, the Act would likely have a significant and positive impact, by changing the economics of contingent fee representation, and thus, deterring certain PAE suits from being brought at all.

Finally, one problem with a number of these reforms is that they don't directly or necessarily help those against whom litigation is threatened, but not brought. Two-thirds of the respondents to my survey fit into this camp.

⁹⁰ Described, e.g. *Patent Reform and the Law of Unintended Consequences*, RPX BLOG, <http://www.rpxcorp.com/index.cfm?pageid=14&itemid=17>.

⁹¹ Author analysis based on RPX Database.

⁹² The "misjoinder rules" of the 2011 America Invents Act limit who can be sued in a single patent infringement action, to parties who are engaged in the "same accused product or process." America Invents Act, sec. 19(d), 125 Stat. at 332-33 (New section 299)

⁹³ *Id.*

⁹⁴ 35 USC 273 (2011).

⁹⁵ SHIELD Act, H.R. 6245, 112th Cong. available at https://www.eff.org/sites/default/files/SHIELD_ACT_0.pdf. Fees can already be shifted under "exceptional" circumstances (35 USC 285) and related situations; they are awarded about 50 times a year. See Chien, *Reforming Software Patents*, at 37.

⁹⁶ Based on the empirical and theoretical literature on fee-shifting, described comprehensively *id.* at Section III.D.1.

New Reforms

A focus on small, and indeed the smallest companies suggests a distinct set of concerns and, potentially, reforms. But because small companies represent the majority of PAE targets, making things better for them would advance broader patent reform. I propose three ways in which the specific needs of small companies being targeted by PAEs could be addressed. None requires legislative implementation, but could be implemented by the courts and also through self-help.

- Small companies are vulnerable targets when, because of a lack of leverage, they pay nuisance settlements regardless of the merits. Yet 22% of survey respondents reported that they did nothing to respond to a patent demand. Collective, self-help-based solutions such as joint defense efforts and industry association groups that can set policies for the group (e.g. do not settle)⁹⁷ and coordinate and pooled purchasing of patent defenses e.g. insurance for small companies could undermine divide-and-conquer tactics. Better dissemination of best practices about resolving patent disputes could also go a long way. Appendix E, a list of “best practices,” contains some of them. Economies of scale have not yet been meaningfully captured in patent defense,⁹⁸ but by spreading information, risks and costs, the transaction costs and thus the return on trolling, can be reduced.
- Small companies are often targets of patent suits because they are users of technology. Innovatio LLC has sued small coffee shops and hotels that use wifi,⁹⁹ and Project Paperless LLC has sued small businesses due to their use of digital scanners.¹⁰⁰ 40% of survey respondents stated that they were being targeted because of their innocent use of another’s or a widely available technology and at least 60% of cases involved software or other high-tech patents. But the practice of suing those who innocently use technology instead of those who make the technology, if within the court’s reach, should be discouraged. Courts should do so through active case management and staying cases

⁹⁷ For a description of the industry association groups that helped railroads best patent speculators around the turn of the century, and their specific tactics, see Colleen V. Chien, *Reforming Software Patents*, HOUSTON LAW REVIEW, 2012 (Forthcoming); Santa Clara Univ. Legal Studies Research Paper No. 08-12, available at <http://ssrn.com/abstract=2125515>.

⁹⁸ Some of these ideas are described in Colleen V. Chien, *Turn the Tables on Patent Trolls*, FORBES (Aug. 9, 2011) <http://www.forbes.com/sites/ciocentral/2011/08/09/turn-the-tables-on-patent-trolls/>.

⁹⁹ Jesus Diaz, *Patent Troll is Suing Small Hotels and Coffee Shops for Offering Wi-Fi*, GIZMODO (Oct. 4, 2011), <http://gizmodo.com/5846419/patent-troll-is-suing-small-hotels-and-coffee-shops-for-offering-wi-fi>.

¹⁰⁰ STOP PROJECT PAPERLESS: THE PATENTS, <http://stop-project-paperless.com/the-patents/> (last visited Sept. 2, 2012).

brought against users;¹⁰¹ Congress could consider adopting some version of an “innocent user defense” or expanding existing limits on liability for users of technology that now exist for surgical method patents to internet and software technologies that represent staple articles of commerce.¹⁰²

- Small companies increase the returns to patent assertion when they validate PAE patents, regardless of their validity, by agreeing to royalty-based settlements. As courts increase the standards for proving damages, they and others should discount the precedential impact of small company royalty settlements that are more about the patent’s nuisance value than its economic value. By reducing the returns to “royalty-padding,” courts would diminish the returns to going after small companies. The same principal could be applied to the other instrumental ways small companies are being used by PAEs to secure venue and early settlements to feed the war chest.

In sum, a number of unique characteristics make some startups and small companies, even though they lack deep pockets, attractive targets to PAEs. Efforts to make them less attractive can be bolstered by understanding the instrumental roles they play in patent assertion campaigns. This paper provides the groundwork for doing so.

¹⁰¹ See, e.g. Colleen V. Chien, *Reforming Software Patents*, HOUSTON LAW REVIEW, 2012 (forthcoming); available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2125515 (see section III(C)(1)(b) for discussion of user defenses); James Yoon, *Expanding the Customer Suit Exception in Patent Law*, JD SUPRA, <http://www.jdsupra.com/legalnews/expanding-the-customer-suit-exception-in-28989/>.

¹⁰² Staple articles and commodities of commerce are less susceptible to claims of infringement under 35 U.S.C. § 271(c).

APPENDIX A. The Survey

1. Overview

I created the “Patent Demand Survey” to get input from small companies and startups about the impact of patent demands, including litigation and demand letters and patent sales, on their business. The survey linked to a website explaining its purpose (see screenshot below) and invited companies that had and hadn’t received a demand to respond. I used two methods to recruit respondents: private, closed solicitations (trusted advisors such as VCs and associations that work with founders and entrepreneurs), and public solicitations (through widely-read blogs, see screenshot below). I asked companies who handle legal disputes for the company, which could include single application developers, general counsel, founders, or other employees, to fill out the survey. I asked respondents, in their answers, to distinguish between demands received by entities that do not offer products and services (“NPEs,” as the term “PAE” is foreign to many) and those that do.

2. The Questions

I developed the questions in the survey based on a variety of sources including press accounts of PAEs and proposed or contemplated reforms. I asked several entrepreneurs and others to take earlier drafts of the survey and used their feedback to refine the questions in order to increase readability, reduce bias, and maximize accuracy in responses. A list of the questions I asked is provided below. I designed and administered the survey using open source survey technology (Google Forms), and the information was kept confidential and any identifying information about specific threats or companies, stripped from the results. The survey was reviewed and approved by Santa Clara University's Office of Research Compliance and Integrity.

SURVEY QUESTIONS

<For “power targets” – targets who had received over 5 demands – I also solicited yearly information about patent demands but because the responses were difficult to interpret, I discarded this portion of the survey>

Introduction

1. What industry is your company in?
2. When was your company founded?
3. In what country is your company based?
4. How many employees (approx) does your company have?
5. What is your company's annual revenue?

up to \$100K

\$100K-\$500K

\$500K-\$1M

\$1M-\$3M

\$3M-\$5M

Other:

6. For any patent demands your company has received, did your company know about the patent or the patentee before receiving the demand?

Yes

No

I don't know

N/A - my company hasn't received any patent demands

Other:

7. How many patent demands has your company received from an entity that does not offer products/services?
(an "NPE")

Lawsuits and demand letters/licensing invitations are examples of demands.

8. How many total demands has your company received (from any source)?

Lawsuits and demand letters/licensing invitations are examples of demands.

5+ (you will be asked for aggregate information about these demands)

1-4

0 (skip to closing section)

Loop (if any NPE demands, question loop up to 3 times)

9a. In what year was the demand made?

10a. Who made the demand?

A company that does not make products/services

A company that makes products/services

Other:

11a. Was the basis for the demand your company's use of another's technology, or its own technology?

Example of demand based on "another's or existing technology": demand was based on conforming product to a technology specification or an off-the-shelf/purchased technology solution.

My company's technology

Another's or existing technology

Other:

12a. What type of product was accused of infringement?

13a. Was a lawsuit filed?

Yes

No

14a. How did your company respond to the demand? Check all that apply:

paid money to settle the claim

paid equity in your company to settle the claim

by doing nothing

by fighting in court

by fighting out of court

Other:

15a. How much did it cost your company to resolve the demand (an estimate)?

Please include in your total all expenses including licensing fees and legal fees.

16a. Who within the company spent time resolving the demand?

E.g. founder, software developer, engineer

17a. How did the demand impact your company's operations, if at all? Check all that apply:

Distraction from core business

Financial impact

Delay in hiring

Delay in meeting non-headcount operational milestone

Change in accused product

Pivot business strategy
Exit Business/business line
No impact
Other:

18a. Please include any other details that you think are significant about this demand and how it was resolved.
(e.g. why you were targeted, what sources of help you found helpful, the options you considered)

19. Has your company ever sold, licensed, or otherwise made money off its patents?

N/A - we don't have patents
Yes
No
Other:

20. If yes, please briefly describe

21. If your company has patent(s), please check any of the following that are true about your reason for having them:

N/A - we don't have patents
To prevent others from copying our products/services
To improve the chances of securing investment
To obtain licensing revenues
To improve chances/quality of liquidity (e.g. acquisition/IPO)
For defensive reasons - to prevent or deter patent infringement, or improve bargaining position
To enhance our reputation/product image
Other:

22. Has your company considered purchasing patents?

Yes and we've done so
Yes but we haven't done so
No
I don't know

23. Is it okay for me to quote you (without identifying you)?

Yes
No
Other:

24. Other comments?

Public Solicitation Example



Groklaw

When you want to know more
but don't know where to look

To read comments to this article, go [here](#)

Can You Please Help With a Patent Demand Survey? ~ pj

Tuesday, July 17 2012 @ 10:15 AM EDT

I found out some more details about the patent demand survey that Professor Colleen Chien of Santa Clara University is asking folks to fill out. First, the link didn't resolve properly in the [previous article](#) that mentioned it, so I've corrected it now, but I wanted to highlight it here also, in case you gave up earlier. If you go [here](#), you can fill it out. [The survey is on that page. Scroll down and it begins with the word "Background".]

Second, what's a patent demand? It could be a letter demanding you license a patent or a threat of a lawsuit, that sort of thing.

Also, you don't have to be a CEO or head of a startup or a lawyer to provide useful information, if the company you work for has received a demand letter, or been sued by a non-practicing entity or anybody with a patent, you can fill out the form. If you are an app developer, you qualify. If you are a software developer, you qualify, even if your company isn't a tech company. Even if you've never had a demand made on you or your company, you can still fill out the form. The idea is to figure out what's going on in the patent world, particularly with small companies and entrepreneurs and startups. Are threats of patent litigation chilling innovation? If there is a problem, and it's widespread, they'd like to get more precise about it. So, it's inclusive.

If you can talk your boss into filling it out instead, that's fine, but make sure you don't both fill it out, to make certain the results are as accurate as possible. Only one person per company. I know there are probably victims of certain trolls out there, but don't list any such names of who made a demand on you or your company, just what happened, what the demand was, and all the other details the survey asks about.

It's anonymous, so don't give your name either, and nothing you say will be quoted unless you give permission, and if you have any questions, you can contact Professor Chien [colleenchien@gmail.com].

Congress, I've just learned, is having hearings on patents this week, and as it happens Professor Chien is going to testify, so if you have information you'd like her to take with her, so to speak, this is your moment. The purpose of the survey, in other words, is to help frame policy recommendations, so it's important, if you care about patents, and I know a lot of you do. Just be sure to be accurate and precise.

Here are her exact instructions:

I'm a law professor conducting a survey of the impacts of patent demands, particularly on small companies and entrepreneurs. If you handle legal disputes (for example as a solo app developer or person who is familiar with the legal issues your company experiences), please complete this anonymous survey (one per company). If you fill out the form, I will provide the results to the source providing the survey to you. The results will be aggregated and used for academic purposes only, including to form the basis of policy recommendations I'll disseminate to the public, including via twitter: @colleen_chien.

The survey solicits your input on patent demands - e.g. demand letters, requests to license, and lawsuits. However, you should take the survey even if you've never received a demand. Please do not include your name or the name of any specific "demand"; if you do, your response may be discarded. The entire survey should take 2-15 minutes. The answers will be kept strictly confidential. More information: <http://bit.ly/N0S3J0>

Your feedback on this issue is really important! Thank you so much for taking the time and please contact me with any questions or concerns:

Colleen Chien
Assistant Professor
Santa Clara University School of Law
colleenchien@gmail.com
[@colleen_chien](https://twitter.com/colleen_chien)

Thank you!

Congress would like to know if this is as big a problem as they're hearing, so a well-done survey collecting real-world experiences would be helpful. Please do spread the word in all the ways you know about, including ones that the Internet makes possible, if you don't personally have an experience to share.

This is an opportunity to be heard (no, I can't guarantee results, but at least it's an opportunity to help, if anyone chooses to act), so if you've ever complained that no one is listening to developers, this is a good time to speak and tell what you know.



Survey Opening Screenshot

Patent Demand Survey - GL007

I'm a law professor conducting a survey of the impacts of patent demands, particularly on small companies and entrepreneurs. If you handle legal disputes (for example as a solo app developer, GC, or CEO of your company), please complete this anonymous survey (one per company). If you fill out the form, I will provide the results to the source providing the survey to you. The results will be aggregated and used for academic purposes only, including to form the basis of policy recommendations I'll disseminate to the public, including via twitter: @colleen_chien.

The survey solicits your input on patent demands - e.g. demand letters, requests to license, and lawsuits. However, you should take the survey even if you've never received a demand. Please do not include your name or the name of any specific "demander"; if you do, your response may be discarded. The entire survey should take 2-15 minutes. The answers will be kept strictly confidential. More information: <http://bit.ly/N0s3Ju>

Your feedback on this issue is really important! Thank you so much for taking the time and please contact me with any questions or concerns:

Colleen Chien
Assistant Professor Santa Clara University School of Law
colleenchien@gmail.com
@colleen_chien

Thank you!
* Required

Background

Questions about the company you work for and any demands it has received. When I say "you" in the survey, I mean your company.

1. What industry is your company in? *

E.g. mobile application, e-commerce, social media, enterprise software, etc.

2. When was your company founded? *

3. The Responses

I received 223 responses to the survey, 79 from companies that had received patent demands. A number of respondents reported several demands and I tracked them distinctly. Approximately a third of the responses (both overall and from those that received patent demands) were from closed solicitations (trusted adviser), and two-thirds from open solicitations (blog post). Respondents were largely from the tech industry, and the majority had less than \$10M in annual revenue and were younger than 10 years old.

Profile of Respondents

Annual Revenue	1+ Demands	No Demands	Average
up to 1M	44%	76%	65%
1-\$10M	33%	18%	23%
10-\$100M	11%	4%	7%
\$100M-\$1B	4%	0%	1%
\$1B+	5%	1%	3%
N/A	3%	1%	1%
N	79	144	233

Age of Company (yrs)	1+ Demands	No Demands	Average
0-5	30%	51%	43%
5 to 10	19%	18%	18%
10 to 20	29%	16%	21%
20+	19%	14%	16%
N/A	3%	1%	2%
N	79	144	233

APPENDIX B. The Interviews

Over the phone and in-person in late summer 2012, I interviewed 18 subjects involved in asserting against, purchasing from, buying and selling from and defending small companies with respect to PAE patents as well as the small companies themselves. The subjects were primarily though not exclusively from the Bay Area. The interviews were conducted with approval by Santa Clara University's Office of Research Compliance and Integrity: <http://www.scu.edu/provost/research/Human-Subjects.cfm>. The specific roles of the subjects included: in-house counsel, entrepreneurs, venture capitalists, patent defense attorneys, plaintiff's firms that represent NPEs, buyer and seller- side patent brokers, and IP advisory and investment firms. I asked them to confirm their experience and focused my questions on issues that were consistent with their expertise. Subjects were given a one-way NDA in which I promised not to disclose their identity in connection with any non-public information or quotes that I used.

APPENDIX C. RPX Database (2005-2012)

To analyze patent litigations brought by PAEs, I used a database of NPE patent litigations developed by RPX Corp. that has been previously used by academic researchers "RPX Database."¹ RPX includes in its definition of "NPE": patent assertion entities (PAEs), universities, individuals, and non-competing entities

¹ Used by and described in Bessen & Meurer, supra note ____, at pp.8-9.

(NCEs),² entities. I report my results with respect to individuals and patent assertion entities,³ and exclude universities and NCEs.

To test for Type 1 and Type 2 errors in the RPX Database with respect to litigation type coding I performed a separate check. I compared the RPX codings with an independent coding analysis I performed primarily based on a database I developed for a previous project (“North Carolina” database)⁴. The share of disagreements between the databases was 7%, with the net number of PAEs varying by 4%.

APPENDIX E.⁵ Best Practices for Startups With Respect to Responding to a Demand (#1-10) & Selling Patents (#11)

In the course of conducting my interviews and reading through survey responses, I developed this list of “best practices” for startups dealing with various issues. #1-#10 were written with the input of Stefani Shanberg,⁶ a litigation partner with the law firm of Wilson, Sonsini, Goodrich, and Rosati.

1. Don’t Panic

This is perhaps the hardest advice to follow. Being on the receiving demand can be extremely upsetting. But patent demands are now increasingly a fact of life, and investors, and underwriters, board members, and potential acquirers know this. Most demands will go away before a suit is filed and most cases are not bet-the-company-litigation. Your supporters will not likely back away from you just because of a patent troll suit. Just as in business, keeping your cool will help you stay in control of the situation, rather than vice-versa.

2. Keep a Low Profile

If you’re small, there’s a reasonable chance you’re only one of hundreds or thousands of people receiving a demand letter. Take a look at the patent and the allegations; if you can form a reasonable belief that a license is not needed, file the letter away. Twenty-two percent of survey respondents resolved the threat by doing nothing. If you have a discussion with the troll, you will have to pay money. No matter how little you have, they will want a piece of it. If they sue you, you will likely have to pay them money, but why do it early if you may be able to avoid it altogether?

3. Find a Lawyer with a Long-Term View and a Business Savvy

² Id. at 8. An “NCE” lawsuit is one brought by a practicing company asserting patents that it does not itself practice.

³ Some reasons for separating these classes are addressed in Kesan and Schwartz,

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2117421

⁴ Database and coding methodology detailed in Colleen V. Chien, *Of Trolls, Davids, Goliaths, and Kings: Narratives and Evidence in the Litigation of High-Tech Patents*, 87 N.C. L. REV. 1571, fn 160 (2009).

⁵ Appendix D deliberately omitted due to space constraints. Email colleenchien@gmail.com for an earlier version of the appendices including this Appendix.

⁶ <http://www.wsgr.com/WSGR/DBIndex.aspx?SectionName=attorneys/BIOS/5719.htm>

Your lawyer is a great resource, but make sure your lawyer understands and has your business interests in mind. Some lawyers are reluctant to advise you to do nothing. Yet, that is often the best strategy. Choose someone who you trust to watch your back business-wise, and who is interested in a long-term relationship with you. There is no one-size-fits-all approach to these cases.

4. Know Yourself

Though your first instinct when seeing a demand may be think of the million reasons the the patent is rubbish, the easier way out is to assess whether the patent has anything to do with your business. By reflecting on your own business, you may be able to come up with easier ways out – that you don't practice the patent, are indemnified, are licensed, or don't have any revenue. If the patentee is persistent, these defenses are more likely to convince the patent owner to drop their case. As appealing is it may be to “kill” the patent, principles can be very expensive in patent litigation. Your priority should be getting yourself out. One exception is if you have your own unique prior art; then, go ahead and focus on invalidity and leverage it to try to obtain an early resolution.

5. Check out the People, not just the Patent

If the patentee is persistent, check them out. Who is holding the patent, who represents them, have they been involved in other litigations or campaign? Get as much information as you can as who is behind the suit can matter as much if not more than the patent they hold. Some patent trolls are out for quick cash. Others may have different reasons for targeting you: they think you are an easy target, they are using your money to go after someone bigger, or they are hoping to use you to set an example for their future campaigns. But few actually want to take their cases to trial. Check the company out using Secretary of State websites, conducting online searches, checking patent ownership. If they've sued before, find out how the story ended, including by calling up other targets or their lawyers. Find out who the decision makers are, whether they are involved in other businesses subject to countersuit, whether they have perhaps sued you before (it happens; these guys change their names and change counsel and sometimes go back to the already-licensed well).

6. Poverty Defense

These cases are about money. Don't be shy about telling the patentee about your financial situation and that you really aren't worth their time. It is worth asking what it will take for them to go away, and educate them that there's really no revenue from the accused products. Your lawyer can do this on your behalf. They can share information about your financials on a confidential basis. Or you can make the call yourself, explaining that you have a little cash to resolve the problem and don't want to spend it on a lawyer. Often it is best to focus on economic defenses, as the patent troll is unlikely to agree with you that you don't infringe and certainly not that the patent is invalid. But they don't often want to pursue someone costly litigation when there is no pot of gold at the end of the rainbow.

7. Team Up

If you're small and you're sued, the odds are good that you will have company. Seek out joint defense groups and allow codefendants with more exposure to lead the way. Be a member in good standing of a joint defense group, but be careful that you don't end up committed to costs that you would not have incurred on your own. While you may be able to put the case on "life support," the other defendants may opt for a more aggressive defense and to split costs on an equal basis with you. Joint representations—when a single firm represents multiple parties—as opposed to joint defense—where parties coordinate but have their own counsel—most acutely presents the possibility of fees divided equally among a number of parties with different exposures and different goals. Joint representation makes the most sense when parties have similar exposure and goals.

8. Life Support

Lawsuits are expensive, but they can be done efficiently. Keep a low profile. Produce documents without a fight. If you can, offer to help with the defense so you don't have to pay a lawyer to do all of the heavy lifting, e.g., you can have an engineer assess non-infringement defenses or search for prior art. The distraction is costly, but perhaps less so than the lawyer's fees.

9. Pick Battles Carefully

Prioritize the fights that matter—in lawsuits, typically "I don't infringe" or damages-related defenses arguments will win the day. In certain circumstances, an administrative challenge (reexamination or post-grant review) to the asserted patent may also provide you with leverage. Be aggressive where it counts most. There may be opportunities to set a precedent that you won't go down without a fight, and to do so without breaking the bank. Other times the adage, even when you've won, you've lost – in terms of time, attention, and resources – applies.

10. Advice For All Times: Don't be an Easy Target

Trolls pick their targets by studying websites, looking at product specs, and trying to make out a case that you need a license. Don't make it easy for them. Require registration before granting access to whitepapers, detailed documents, or video tutorials that delve into the behind the scenes details. Think twice about being on customer lists or advertising the ins and outs of your business, the products you use, etc., unless there's a good business reason for doing so. Often it is the companies that advertise most successfully that are the most frequent targets of troll demands—troll threats should not drive business decisions, but don't be surprised when your successful marketing campaign is followed by an onslaught of troll letters.

11. If you are looking to sell your patents

It is advisable to work with a broker or other source with a lot of comps. Unfortunately there is no real registry of patent sales and their prices. Buyers don't want to pay more than they have to. So your odds will go down of getting a fair price unless you really understand the market. With respect to patents in general, it's a buyers' market because a few patents are worth a lot. If you don't work with a broker, there's a real risk that your patent won't be on the radar. 15% is about right. The patents that sell have claims that lend themselves to provable, detectable claims of infringement. In cases of method claims, it is preferable that all the steps are

carried out by a single entity, though recent caselaw has loosened this requirement. Brokers will often carry out the due diligence of matching the claims to potential products but if you can do so beforehand, that may give you leverage for discounting their commission.