

Analyzing the Role of Non-Practicing Entities in the Patent System

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ESSAY

ANALYZING THE ROLE OF NON-PRACTICING ENTITIES IN THE PATENT SYSTEM

David L. Schwartz[†] & Jay P. Kesan^{††}

Currently, there is an important debate about the role of non-practicing entities in patent litigation. People are asking: What are the costs and benefits associated with NPE litigation? Are they too high, too low, or just right? This Essay makes two contributions to the discussion. First, we review a recent study, The Direct Costs from NPE Disputes, by James Bessen and Michael J. Meurer. The study presents new data on the litigation costs and settlement expenses incurred by a subset of defendants in NPE cases. Some of their findings are provocative, but we find their methodology to be deficient in several respects, which limits the usefulness of the data and thus the implications that can be drawn from them. We also offer suggestions for future research on NPEs, including data collection and analysis. Second, we argue that the study asks the wrong question. The debate should be reframed to focus on the merits of the lawsuits, including patent system changes focusing on reducing transaction costs (e.g., lawyers' fees) in patent litigation, instead of focusing solely on whether the patent holder is a non-practicing entity.

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INTRODUCTION

Currently, patent litigation is undergoing a seismic change. In the past, industry competitors lodged the bulk of patent-infringement lawsuits.¹ But recently, an increasing number of patent lawsuits have been initiated by entities who do not manufacture products themselves, including universities, individual inventors, failed businesses, and speculators who purchase patents from others.² This heterogeneous group of patent holders has loosely been referred to as “non-practicing entities,” or “NPEs” for short, and some estimate that approximately 60% of new patent lawsuits are filed by NPEs.³ Some pejoratively refer to some or all NPEs as “patent trolls,” analogizing that these patent holders wait until another brings a product to market and then jump from under the bridge to demand a toll.⁴ Others refer to some or all NPEs as “patent assertion entities,” or “PAEs.”⁵

The rise in NPE lawsuits has coincided with other changes in the patent system. For instance, patent litigators appear to be polarizing into a plaintiffs’ bar and a defense bar.⁶ This polarization in lawyers is new to patent litigation but has existed for many years in other areas of the law, such as medical malpractice, products liability, and labor law.⁷ In addition to the lawyers, certain industries have experienced more infringement allegations by NPEs, an occurrence that has created rifts in many debates about patent reform.⁸ In general, many

¹ 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, 1603 (2009) (noting that over 80% of patent lawsuits filed between 2000 and 2008 involving “high tech” patents were filed by practicing entities).

² See Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 458 (2012).

³ Colleen Chien, Assistant Professor, Santa Clara Univ., Presentation to the DOJ/FTC Hearing on Patent Assertion Entities: Patent Assertion Entities, at slide 23 (Dec. 10, 2012), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2187314 (reporting that 61% of patent lawsuits filed from January 1 to December 1, 2012, were filed by patent assertion entities). But see Christopher Anthony Cotropia, Jay P. Kesan & David L. Schwartz, *Patent Assertion Entities (PAEs) Under the Microscope: An Empirical Investigation of Patent Holders as Litigants* 16 fig.1 (Ill. Pub. Law Research Paper No. 14-17, 2013), available at <http://ssrn.com/abstract=2346381> (reporting lower numbers of suits brought by PAEs, with the results varying based upon the definition of PAE used).

⁴ James Bessen, Jennifer Ford & Michael J. Meurer, *The Private and Social Costs of Patent Trolls*, REGULATION, Winter 2011–12, at 26, 26, available at <http://www.cato.org/sites/cato.org/files/serials/files/regulation/2012/5/v34n4-1.pdf>.

⁵ See Chien, *supra* note 3, at slide 4.

⁶ David L. Schwartz & Jay P. Kesan, *Analyzing the Role of NPEs in the Patent System*, PATENTLY-O (Aug. 21, 2012), <http://www.patentlyo.com/patent/2012/08/analyzing-the-role-of-npes-in-the-patent-system.html>.

⁷ See, e.g., Lee A. Rosengard, *Learning from Law Firms: Using Co-Mediation to Train New Mediators*, DISP. RESOL. J., May/July 2004, at 16, 16, 18 (noting that the medical-malpractice industry has distinct plaintiff and defense bars).

⁸ Large manufacturing, computer and IT, and financial-services companies sought damages reform in patent litigation purportedly due to the increase in costs caused by patent assertions. On the other hand, small and mid-size technology companies argue that

large IT and electronics companies are frequent targets of NPEs, while big pharmaceutical companies are rarely, if ever, approached by NPEs.⁹ The topic of NPEs in patent litigation—their costs and benefits—has featured prominently in the press, including extensive coverage of a study reporting that the “direct, accrued costs” of NPEs were \$29 billion in 2011.¹⁰

Commentators and patent practitioners have expressed varying and diverse opinions about the impact of NPEs on the patent-litigation system. Some claim that NPEs are antithetical to the Constitution’s mandate that the patent laws encourage innovation.¹¹ They argue that NPEs hinder rather than encourage innovation, especially in the software field.¹² Others claim that NPEs provide small inventors and companies an opportunity otherwise missing to receive rewards for their inventions.¹³ How should we evaluate these competing claims?

In this Essay, we explain how to approach this important question. We argue that a data-driven, objective approach to the issue is critical. Anecdotal evidence of abuses by NPEs or large operating companies and the various theories on why NPEs may encourage or frustrate innovation are useful, but they cannot resolve the debate. We believe that *data* is critical to evaluating broad trends in patent litigation and patent-related behavior. Yet there is little hard data, and much of the data that exists is mixed or inconclusive. A much more thorough empirical analysis of the issue is needed.

We also submit that the debate about NPE litigation should be reframed. We submit that the debate should focus on the merits of the lawsuits or the *actions* of the parties in the litigation, or both, and

damages reform would (1) limit trial courts’ flexibility to craft appropriate remedies, (2) make infringement cheaper, and (3) encourage litigation rather than payment of licensing fees. See David W. Opderbeck, *Patent Damages Reform and the Shape of Patent Law*, 89 B.U. L. REV. 127, 135–37 (2009).

⁹ See Ian Rainey, *The War over Information Technology Patents: How Microsoft v. I4i Is Reforming the Mobile Entertainment Industry*, 11 U. DENV. SPORTS & ENT. L.J. 137, 154 (2011) (“As opposed to the pharmaceutical companies, information technology companies have recently become increasingly concerned with infringement claims initiated by non-practicing entities or patent trolls.”).

¹⁰ James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 389 (2014).

¹¹ See John M. Golden, Commentary, “Patent Trolls” and Patent Remedies, 85 TEX. L. REV. 2111, 2112 (2007).

¹² See Bessen & Meurer, *supra* note 10, at 392.

¹³ See Jiaqing “Jack” Lu, *The Economics and Controversies of Non-practicing Entities (NPEs): How NPEs and Defensive Patent Aggregators Will Change the License Market*, LES NOUVELLES, Mar. 2012, at 55, 61, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1935524 (discussing how entrepreneurs, universities, and research institutions who do not have competency in marketing and licensing can alleviate the risks associated with patents by selling their patents to NPEs, thereby freeing them to exploit “their comparative advantages in innovating”).

not on the parties' identities. We believe that focusing on the merits is a more fruitful approach than focusing solely on whether the patent holder is or is not an NPE.

This Essay proceeds in three parts. In Part I, we set forth some difficulties in empirically evaluating NPEs. To illustrate the point, we critically examine a recent high-profile study, which appears in this same issue of the *Cornell Law Review*, that reported that the "direct, accrued costs" of NPEs were \$29 billion in 2011.¹⁴ In Part II, we offer constructive suggestions on how to design a better empirical study of NPEs. Finally, in Part III, we offer suggestions on how to improve the patent system if the empirical data shows that problematic behavior by NPEs is widespread.

I

EMPIRICAL EVIDENCE AND THE DEBATE ABOUT NPEs

Whatever we call them, one question persists: why do NPEs exist? Under one narrative, NPEs serve an important market need: acting as an intermediary for some patentees.¹⁵ Trading to make money in the market is as old as mankind. Here, the cost of patent litigation—due to the traditional hourly billing model—is prohibitively high for most small to medium-sized patent holders. NPEs purchase patents from these patentees who cannot afford to enforce their own patents. NPEs accept the risks and uncertainty associated with attempting to enforce the patent rights. And NPEs expect and are entitled to make money for assuming those risks and uncertainty. Without the payment from an NPE, the inventors would receive no compensation whatsoever for their invention.

Another related development is contingent-fee representation for patent enforcement. Contingent-fee representation has recently become more widely available but, according to theory, is primarily for a select group of innovators with patent rights that are perceived as valuable before litigation commences.¹⁶ NPEs, together with contingent-fee lawyers, create avenues for appropriating rewards for valuable patent rights that are owned by entities with limited resources, including universities.

There is, however, a counternarrative: that NPEs are opportunistic players in the patent system and serve almost no useful purpose.¹⁷

¹⁴ Bessen & Meurer, *supra* note 10, at 389.

¹⁵ See Ashish Arora, *Patents, Licensing, and Market Structure in the Chemical Industry*, 26 RES. POL'Y 391, 395–97 (1997).

¹⁶ See David L. Schwartz, *The Rise of Contingent Fee Representation in Patent Litigation*, 64 ALA. L. REV. 335, 358 (2012) (explaining the "substantial due diligence" that lawyers state that they perform before they agree to represent a client on a contingent-fee basis).

¹⁷ See Risch, *supra* note 2, at 459.

Under this narrative, NPEs assert marginal patents and read patent claims unreasonably expansively. Under any reasonable view, the patents are likely invalid or not infringed by the NPEs' targets. NPEs, who themselves do not innovate or introduce any products into the marketplace, merely extract rents from the large, innovative companies that they sue. They create fear of holdup by selecting venues where injunctive relief is available such as the International Trade Commission. They seek and accept "nuisance" settlement amounts, far below the cost of litigation, so that the NPEs' targets have no incentive to defend in costly litigation.¹⁸ And, worst of all, NPEs do not materially help the original inventors of the patents. They are not returning any significant money to the inventors; instead, as intermediaries, the NPEs and their lawyers pocket almost all of the revenues.

We believe that objective, empirical evidence is critical in the study of NPEs. While a consensus exists that data is critical, a huge hurdle in the study of NPEs is that there is no uniformly accepted definition of who is an NPE or patent troll.¹⁹ Obviously, before we can meaningfully study or even discuss NPEs, it is important to define precisely what is an NPE.

Some entities clearly fall within the definition of an NPE: for instance, a shell company unrelated to the original inventors that purchases a patent for the sole purpose of enforcement. Additionally, the large patent aggregators who purchase portfolios of patents from inventors and others for the primary purpose of enforcement are clearly NPEs, although perhaps of a different sort than small shell companies. The classification of other entities is less clear. For instance, while universities clearly are "non-practicing" in that they rarely if ever commercialize products themselves, many leading scholars do not consider universities to be trolls.²⁰ University faculty and graduate students are often true innovators and have core competencies in sectors that are creative and innovation-centric. However, their profession—academic research—does not involve manufacturing, marketing, and distribution capabilities.

¹⁸ Patrick Anderson, *Do NPE's "Cost" Us \$29 B? Intellectual Ventures Co-Founder Peter Detkin Sets the Record Straight*, GAMETIME IP (June 28, 2012), <http://gametimeip.com/2012/06/28/do-npes-cost-us-29-b-intellectual-ventures-co-founder-peter-detkin-sets-the-record-straight/>.

¹⁹ Golden, *supra* note 11, at 2112 n.7 (observing that "a widely accepted definition of a patent troll has yet to be devised").

²⁰ See, e.g., Mark A. Lemley, *Are Universities Patent Trolls?*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 611, 612 (2008) (arguing that universities should not be deemed trolls); Risch, *supra* note 2, at 468.

Similarly, many do not view individual inventors as patent trolls, although they are technically non-practicing.²¹ While admittedly anecdotal, individual inventors frequently complain that most large companies ignore requests to license their patents even when infringing.²² If university and individual patentees are to receive compensation for their patented inventions, then their licensees or proven infringers must sell products or services embodying their patents.²³ In the absence of such market adoption, there is rarely if ever a reward to be had.²⁴ Such innovators do not typically have the access to the capital that is necessary to bring their inventions to market. They also do not have the existing channels of manufacturing, marketing, and distribution. As a result, their options are quite limited in trying to receive any compensation for their patented technologies. We recognize that researchers and policymakers disagree on whether individual inventors and universities are PAEs, NPEs, and/or trolls. Individual inventors enforcing their own patents make up a fair percentage of non-operating-company patent lawsuits. According to data we have recently gathered, approximately 20%–30% of 2010 non-operating-company patent lawsuits were filed by individuals or enforcement companies formed by the individual inventor.²⁵

We question whether such individual inventors should be included within the definition of NPE. Some argue that NPEs are bad on the ground that they function as middleman between the original inventor and the infringer.²⁶ The argument is that the NPE extracts too high a price for its service and that the original inventors do not receive sufficient compensation to justify the additional liability on the

²¹ See Risch, *supra* note 2, at 468 (noting that nonlitigious NPEs, such as individual inventors, “are not the object of scorn that litigious entities are”).

²² This is an age-old complaint by individual inventors who are NPEs. In the early 1850s, for instance, Elias Howe’s repeated requests for I.M. Singer & Co. to pay a license fee for its (unauthorized) use of Howe’s patented lockstitch were rejected, resulting in Howe (an NPE) suing Singer for infringement. See Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s*, 53 ARIZ. L. REV. 165, 183–85 (2011).

²³ See generally Lemley, *supra* note 20, at 618 (recognizing patent licensing and litigation as important revenue sources for universities). We recognize that in rare circumstances these patentees can receive compensation without sales. For instance, they may receive an up-front, lump-sum licensing fee, or they could sell their patent rights to a practicing entity that does not end up practicing the particular patented invention.

²⁴ A number of people have discussed the peculiar problems that various types of non-practicing entities or small firms might face in appropriating value from their inventions. See, e.g., John M. Golden, *Principles for Patent Remedies*, 88 TEX. L. REV. 505, 545 (2010) (“For small firms or independent inventors, . . . patent rights might be the only effective means to obtain a return on investments in research and development.”).

²⁵ Cotropia, Kesan & Schwartz, *supra* note 3, at 16 fig.1.

²⁶ See Andrei Hagiu & David B. Yoffie, *The New Patent Intermediaries: Platforms, Defensive Aggregators, and Super-Aggregators*, 27 J. ECON. PERSP. 45, 53 (2013) (discussing how NPEs can cause economic harm by acting as intermediaries).

operating company.²⁷ To the extent that NPEs are viewed as bad for this reason (which may be the case in some shell holding companies), this is rarely if ever the case when individuals enforce their own patents. Individual patent owners enforcing their own patents typically receive the vast majority of any licensing revenue.²⁸

Another, newer business form is the patent-privateering model.²⁹ Privateering is the practice of an operating company assigning its patents to a shell company.³⁰ The shell company monetizes the patents and returns a percentage of the downstream collections to the operating company.³¹ While the shell company is technically an NPE, the patents were invented and prosecuted by operating companies. These hybrid relationships seem quite different from individual inventors and even from large patent aggregators, which often buy patents and have no ongoing relationship with the original inventors.

To exemplify the difficulties of empirically evaluating NPEs, we now turn to a recent, highly influential study. Two Boston University researchers, James Bessen and Michael J. Meurer, published a study called “*The Direct Costs from NPE Disputes*” in this issue of the *Cornell Law Review*.³² Their study purports to assess the direct costs of patent assertions by non-practicing entities.³³ Bessen and Meurer’s study relies on two proprietary data sources compiled by RPX Corporation: (1) results of a survey of certain NPE defendants and (2) a database of NPE lawsuits from 2005 through 2011.³⁴ The study finds that the direct costs of NPE patent assertions are “substantial, totaling about \$29 billion accrued in 2011.”³⁵ One-quarter of these costs are litigation

²⁷ See *id.* at 61–62 (discussing how superaggregator NPEs impose a high price on operating companies while paying lower compensation).

²⁸ Bessen and Meurer contend that no one disputes that “NPEs have a bargaining advantage over practicing-entity patent plaintiffs because NPEs are invulnerable to patent counterclaims and have lower litigation costs, especially discovery costs.” Bessen & Meurer, *supra* note 10, at 413. We agree with the latter half of their claim regarding counterclaims and discovery costs. However, one should not lose sight of the fact that practicing-entity patent plaintiffs have several additional avenues of settlement available that NPEs do not. For instance, cross licenses or outside business relationships may constitute part of the settlement of a competitor lawsuit, while NPEs only are interested in money. This limits the options of NPEs in settling cases relative to practicing entities. We believe that this complicates the analysis of which type of entity has a “bargaining advantage.”

²⁹ See Tomewing, *Introducing the Patent Privateers*, 45 INTELL. ASSET MGMT., Jan./Feb. 2011, at 31, 32–33.

³⁰ See *id.*

³¹ See *id.*

³² Bessen & Meurer, *supra* note 10. When Bessen and Meurer first released their study in the summer of 2012, we posted an earlier draft of this Essay. All of us—Bessen, Meurer, Schwartz, and Kesan—have worked back and forth with the Editors of the *Cornell Law Review* to revise our articles to respond to each other’s points.

³³ Bessen & Meurer, *supra* note 10, at 389.

³⁴ *Id.* at 394–95.

³⁵ *Id.* at 422.

costs—primarily legal fees for accused infringers.³⁶ The study argues that this ratio “implies that a substantial part of the direct costs of NPE litigation is a deadweight loss to society.”³⁷ It also claims that “NPE patent assertions hinder innovation by hurting small inventors.”³⁸ Finally, Bessen and Meurer find that “it seems difficult to make a convincing argument that the effect of NPEs is to increase innovation incentives.”³⁹ The study’s conclusions, especially the \$29 billion figure, have been reported widely in the press, including coverage by CNN, Bloomberg, Reuters, the BBC, *The Atlantic*, *The Huffington Post*, CNET, and numerous blogs.⁴⁰

To be clear, we acknowledge that Bessen and Meurer’s study provides interesting new data. Public data on litigation costs and settlements in patent litigation is scarce. The vast majority of patent cases settle, and most settlement agreements include a confidentiality provision prohibiting the parties from publicly disclosing its terms.⁴¹ Furthermore, companies rarely publicly disclose the amount paid to outside lawyers in attorneys’ fees. The study provides new information about costs and settlements that was not previously available, and for that we commend them. In addition, they provide data on the previously unexplored topic of NPE assertions that did not result in litigation. This is also an interesting issue. As described in more detail

³⁶ *Id.* at 400.

³⁷ *Id.*

³⁸ *Id.* at 411.

³⁹ *Id.*

⁴⁰ See, e.g., Susan Decker, *Business Costs Quadruple on Patent-Owner Claims: BGOV Barometer*, BLOOMBERG (June 26, 2012, 12:00 AM), <http://www.bloomberg.com/news/2012-06-26/business-costs-quadruple-on-patent-owner-claims-bgov-barometer.html>; David Goldman, *Patent Trolls Cost Inventors Half a Trillion Dollars*, CNN MONEY (Sept. 21, 2011, 5:19 AM), http://money.cnn.com/2011/09/21/technology/patent_troll_cost/index.htm; Dara Kerr, *Patent Trolls Curb Innovation and Cost the U.S. \$29B in 2011*, CNET (June 26, 2012, 5:41 PM), [http://news.cnet.com/8301-1023_3-57461110-93/patent-trolls-curb-innovation-and-cost-the-u.s-\\$29b-in-2011/](http://news.cnet.com/8301-1023_3-57461110-93/patent-trolls-curb-innovation-and-cost-the-u.s-$29b-in-2011/); *Patent trolls' Cost Other US Bodies \$29bn Last Year, Says Study*, BBC NEWS (June 29, 2012, 4:36 PM), <http://www.bbc.co.uk/news/technology-18598559>; Rebecca J. Rosen, *Study: Patent Trolls Cost Companies \$29 Billion Last Year*, ATLANTIC (June 29, 2012, 7:37 AM), <http://www.theatlantic.com/technology/archive/2012/06/study-patent-trolls-cost-companies-29-billion-last-year/259070/>. A few blogs have criticized the study. See *A \$29 Billion US Troll-Tax or Just Another Statistical Smokescreen?*, PATENTOLOGY BLOG (June 29, 2012), <http://blog.patentology.com.au/2012/06/29-billion-us-troll-tax-or-just-another.html>; Anderson, *supra* note 18. In addition, *IAM Magazine's* blog subtly implies that the large amount of press that the study generated is due to the push of several major corporations, presumably ones that favor the policy changes recommended in the study. Joff Wild, *The PR Genius of Messrs Bessen and Meurer*, INTELL. ASSET MGMT. BLOG (June 28, 2012), <http://www.iam-magazine.com/blog/Detail.aspx?g=e780ve3b8-715d-484f-9318-d04d81e0e9d8>.

⁴¹ See John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 709 (2011) (asserting that in the context of software and NPE patents, settlements are confidential); Jay P. Kesan & Gwendolyn G. Ball, *How Are Patent Cases Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes*, 84 WASH. U. L. REV. 237, 259 (2006) (noting that “approximately 80% of patent cases settle”).

below, some of their results are provocative and deserve further scrutiny, while others are questionable. However, as academics interested in patent law, patent policy, and empirical methodology, there are a number of limitations in Bessen and Meurer's methodology that we recommend they or others address. In our opinion, these limitations require that Bessen and Meurer's findings on the issue of NPEs be viewed with some reservations and skepticism.

Our views can be summarized as:

- (1) **Figures Based on Biased Sample.** Bessen and Meurer's \$29 billion calculation of the direct cost of NPE patent assertions should be viewed as the highest possible limit—the true number is very likely to be substantially lower. It is the outer bound because the survey is not a random or representative sample; instead, it likely is a biased sample, which renders Bessen and Meurer's extrapolation of the total costs similarly biased too high.
- (2) **Lack of Basis for Comparison of Figures.** The vast majority of the \$29 billion figure consists of settlement, licensing, and judgment amounts.⁴² For economists, these are not “costs,” as they are classified in Bessen and Meurer's study, but rather “transfers.”⁴³ Such transfers to patent holders are the contemplated rewards of the patent system. Furthermore, before declaring litigation costs (i.e., lawyers' fees) too high, there must be some basis for comparison. Bessen and Meurer provide no such comparison. For further academic studies, we propose comparing them either to the ratio of lawyers' fees to settlements in practicing-entity patent litigation or to complex commercial litigation more broadly.
- (3) **Questionable Definition of NPE.** Bessen and Meurer's calculations rest upon a questionable and very broad definition of NPE. We suggest that they disaggregate among different categories of NPE, which should be possible with RPX's database.
- (4) **Lack of Credible Information on Benefits of NPEs.** Bessen and Meurer's estimate of the benefits of NPE litigation is based on an analysis of very limited information, namely SEC filings from 10 publicly traded NPEs.⁴⁴ We recommend a survey of NPE plaintiffs analogous to the survey of NPE defendants in order to provide more complete information on this issue.

⁴² See Bessen & Meurer, *supra* note 10, at 405–06.

⁴³ See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 8–9 (8th ed. 2011).

⁴⁴ See Bessen & Meurer, *supra* note 10, at 403.

A. Perceived Flaws in the Survey and Analysis

1. *Estimate of Costs Is Likely Biased Too High*

First, we believe that Bessen and Meurer's estimate is likely biased to be very high. Their estimate is based on a relatively small survey, which was extrapolated to the larger population of NPE lawsuits.⁴⁵ We find flaws with both the survey and the subsequent extrapolation.

With respect to the survey, it is not a random sample of NPEs. Without a simple random or stratified sample or other evidence that the sample is representative, it is improper to impute the results of the sample to the larger population. According to Bessen and Meurer, RPX sent the survey to "about 250 companies," which include "RPX clients and nonclient companies with whom RPX has relationships." This vague description of survey recipients is difficult to evaluate. We recognize that confidentiality concerns may limit the amount of disclosure that can be provided about the sample. Still, we recommend that Bessen and Meurer release substantially more information about the surveyed population, which need not include the identity of the subjects but which can permit examination for whether it appears representative. Information about the frequency at which the subjects were defendants in patent litigation, some information about the legal counsel engaged by defendants in these suits (i.e., American Lawyer 100 firms or less expensive, smaller firms), a more detailed breakdown of the subjects' industries, a more detailed breakdown of the subjects' revenues, and how many of the subjects were RPX clients would be helpful.

Without this information, we are left to make several assumptions about the pool of survey recipients, which we feel are reasonable and which lead us to the conclusion that there is a strong selection bias. RPX calls itself a defensive patent aggregator.⁴⁶ A large portion of RPX's business model is providing subscriptions to customers who are repeat defendants in patent-infringement lawsuits.⁴⁷ RPX asserts that its subscription fees "are significantly lower than the typical patent acquisition (and defense) costs a client would otherwise face."⁴⁸ It seems extremely likely that RPX's clients have experienced high litigation costs, perhaps much higher than the average company. As such, the survey has a strong selection bias in favor of companies that are

⁴⁵ See *id.* at 394 (noting the sample size); *id.* at 422 (concluding that "[t]he direct costs of NPE patent assertions are substantial, totaling about \$29 billion accrued in 2011").

⁴⁶ See Catherine White, *Taking on the Trolls*, INTELL. PROP. MAG., Oct. 2012, at 98, 98, available at <http://www.rpxcorp.com/siteFiles/News/ABAFDBBC110C77BC90FE5F0BEFDEEDE9.pdf> (noting that "RPX states it offers defensive patent aggregation").

⁴⁷ See *id.* at 98–99 (describing how RPX generates funds).

⁴⁸ See Nexsen Pruet & Dan Leonardi, *Avoiding Confrontations with Licensing Firms*, LEX- OLOGY (July 18, 2011), <http://www.lexology.com/library/detail.aspx?g=03dbc3de-fb58-4c-b9-ba39-6b0d1affa8d5>.

repeat defendants in NPE litigation and thus need the services of RPX to reduce future patent liabilities. In other words, high litigation costs are probably the reason the companies became RPX clients in the first instance. The other subjects who received the survey are identified only as “nonclient companies with whom RPX has relationships.”⁴⁹ Without more information, we can only assume that these are potential customers of RPX. Again, these likely are companies with higher litigation costs and liability exposure compared to the average company.⁵⁰ They may also be more risk averse and settle for higher amounts than the average company. Thus, without further information, the companies to whom the survey was sent are likely biased, with these companies having much higher than average litigation costs.

We further suspect that the subset of companies that actually responded to the survey is even more biased. According to Bessen and Meurer, 82 companies completed the survey, a response rate of approximately one-third.⁵¹ Bessen and Meurer provide no descriptive information about how these 82 companies compare to the approximately 250 companies to whom the survey was sent. We believe such information should be disclosed. Without more information, a reasonable assumption is that the responding companies likely had easier access to the information (i.e., better electronic recordkeeping), which likely means larger companies or companies that were more motivated to respond (i.e., they have higher exposure and costs), or both. Thus, it is very likely that there were selection effects on multiple levels: the solicited companies had higher costs and expenses than the average company, and the responding companies had higher costs and transfers than the universe of companies solicited. Our view is supported by Bessen and Meurer’s disclosure that 72% of the 82 respondents are publicly traded companies, while only 14% of all NPE defendants are.⁵² Public companies are much more likely to engage higher-priced lawyers and have higher litigation costs and expenses.

⁴⁹ Bessen & Meurer, *supra* note 10, at 394.

⁵⁰ Bessen and Meurer respond that we are conflating “litigation frequency with cost per defense.” *Id.* at 416. They speculate that frequent defendants may be more efficient at defending because they have the relevant documents handy, have trained personnel to handle depositions, etc., and thus have lower costs than average. *See id.* We don’t know whether their speculation is correct as we do not have access to the underlying data, but we have our doubts. The largest NPE defendants (a group that includes most of the large IT companies) typically hire lawyers from the largest law firms having the highest hourly billing rates, and many of these firms are not known for lean staffing on matters. While some defendants must be more efficient, we suspect that this is not frequent. We informally polled several experienced patent litigators, all of whom expressed skepticism about the correctness of Bessen and Meurer’s hypothesis that RPX clients are more efficient litigators. But at this point, without more data, we cannot rule it out. We suggest that Bessen and Meurer release more data about the sample to illuminate this question.

⁵¹ *Id.* at 395.

⁵² *See id.* at 410 tbl.5.

If Bessen and Meurer's sample was biased, then their estimate of the costs for the population of NPE defendants must be biased as well. In fact, their estimate of the population magnifies the bias from the small sample.⁵³ Extrapolating from a sample to the full population is only sound if it is a representative sample, preferably randomly generated. Furthermore, the sample size of respondents (82 for litigated cases and a mere 46 for nonlitigated cases) is very small.⁵⁴ Bessen and Meurer do seem to take into account the differences between large and small firms.⁵⁵ However, their method of extrapolation does not take into account differences among large firms and among small firms. If their sample consists of large firms that have higher litigation costs than the average large firm and small firms that have higher litigation costs than the average small firm (using their definitions), then their extrapolation still leads to a biased result. Thus, we remain unconvinced that their results are not biased too high. In sum, at best, Bessen and Meurer's estimates of costs and transfers can be understood as the highest possible bound. In other words, the actual costs and transfers from NPE litigation cannot be higher than their figure and are very likely to be significantly lower.

Bessen and Meurer acknowledge that their sample is not random but contend that there is evidence that it is representative.⁵⁶ This contention is based on benchmarking of their survey to other estimates of litigation costs.⁵⁷ Their benchmarking analysis is incorrect, in our view, because it is based on inaccurate assumptions about patent litigation. Bessen and Meurer claim that their sample is comparable to litigation estimates of costs through the completion of discovery published by the American Intellectual Property Law Association

⁵³ Even if the sample was unbiased, researchers normally make clear that their estimates of the larger population include uncertainty. This is typically accomplished through reporting the confidence interval. Here, with a relatively small sample (82 respondents), the range of potential values of the population would likely be large. Bessen and Meurer, however, report an exact number: \$29 billion. *Id.* at 389.

⁵⁴ *See id.* at 395.

⁵⁵ *See id.* at 402 n.72. Bessen and Meurer define a large firm as one with greater than a billion dollars in annual revenue. *Id.* at 398.

⁵⁶ *See id.* at 401–04 (“[T]he survey sample was not randomly selected and hence could be unrepresentative. . . . We can check the representativeness of our sample by comparing our findings to other empirical evidence. . . . The close similarity of these means suggests that sample-selection issues do not substantially bias the survey findings.”).

⁵⁷ In the original draft of Bessen and Meurer's study, they attempted to benchmark to two outside studies. *See* James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes 13–15* (June 28, 2012) (unpublished manuscript) [hereinafter Bessen & Meurer, *Draft*], available at http://www.bu.edu/law/faculty/scholarship/workingpapers/documents/BessenJ_MeurerM062512rev062812.pdf. In the final version, they benchmarked to three outside studies. *See* Bessen & Meurer, *supra* note 10, at 401–04. We commend them for taking serious efforts to benchmark since showing that their sample is representative is critical for making any inferences about the population.

(AIPLA).⁵⁸ They benchmark to a second survey of lawsuits from 1985 to 2004 in which a patent owner was required to pay the defendant's legal fees.⁵⁹ They then make adjustments to both cost estimates based on the average number of papers filed with the court in cases that end in summary judgment and cases that do not.⁶⁰ As we pointed out in a previous draft of this Essay, most cases settle much, much earlier than summary judgment.⁶¹ With respect to the adjustment that Bessen and Meurer made, we question whether it is sound. Their adjustment implicitly assumes that all papers filed with the court are of roughly the same value. In fact, many of the documents filed with the court in the early stages of litigation are routine, inexpensive filings such as notices of appearance and pro hac vice admissions.⁶² By assuming that these early filings are roughly equivalent to filings later in the case (which are more likely to be expensive, dispositive motions), we suspect that Bessen and Meurer's adjustments overstate the average cost of litigation. Furthermore, NPE cases are often filed in speedy venues and likely are resolved even faster, and thus cheaper, than the median from other studies.⁶³ Finally, Bessen and Meurer benchmark the settlement amounts from their sample to the licensing revenues of 10 publicly traded NPEs and find that they are "broadly similar."⁶⁴ We think that if Bessen and Meurer's sample is "broadly similar" (however that is defined) to litigation involving publicly traded NPEs, then that is further evidence that their sample is biased too high. We base this on an assumption that publicly traded NPEs seek much more than the average NPE in terms of settlement or licensing fees, an assumption we believe is likely correct. Thus, the benchmarking does not support

⁵⁸ See Bessen & Meurer, *supra* note 10, at 401–04.

⁵⁹ See *id.* at 402.

⁶⁰ See *id.*

⁶¹ David L. Schwartz & Jay P. Kesan, Essay: Analyzing the Role of Non-Practicing Entities in the Patent System 7 (unpublished manuscript) (on file with authors); see also Kesan & Ball, *supra* note 41, at 246 (noting that "the vast majority of cases settle" and that "a much higher proportion of final rulings of invalidity occur at the pre-trial stage").

⁶² For example, in *DNT, LLC v. Sprint Nextel Corp.*, Civil Action 3:09-cv-00021 (E.D. Va.), more than half of the first 75 docket entries in the case were for inexpensive filings such as appearances and motion for admission pro hac vice. The docket entries near the close of the case were substantive (and likely expensive) briefing on key issues in patent litigation.

⁶³ See QUINN EMANUEL TRIAL LAWYERS, QUINN EMANUEL URQUHART & SULLIVAN, LLP, BEST PRACTICES FOR DEFENDING AGAINST PATENT TROLLS (2011), available at <http://www.jdsupra.com/documents/60ca1e29-8ea5-4db6-ae4b-b5a562b38fc0.pdf> (noting that NPEs tend to prefer courts with historically speedy trial times due to the value of speed to NPEs). RPX also may have assembled its own data on current cases, especially for those involving NPEs. We suggest that such data be made available.

⁶⁴ Bessen & Meurer, *supra* note 10, at 403.

Bessen and Meurer's contention that their data is representative. It actually shows the exact opposite: that the data is biased too high.⁶⁵

2. *Analysis of the Costs of NPE Litigation Lacks an Adequate Baseline*

Second, Bessen and Meurer state that the costs of NPE litigation to defendants are "substantial," as measured two different ways.⁶⁶ They first assert that the *direct* costs (the sum of legal costs and settlement or judgment costs) are "substantial" because they total \$29 billion.⁶⁷ They also assert that the *legal* costs are 23% of the total and *licensing* costs are 77%.⁶⁸ Bessen and Meurer assert that this ratio "implies that a substantial part of the direct costs of NPE litigation is a deadweight loss to society."⁶⁹ Even assuming that Bessen and Meurer's estimates on the population were accurate, we question both of their inferences.

Turning first to the \$29 billion "cost" figure, we disagree with their terminology. By Bessen and Meurer's own estimate, roughly three-quarters of the direct costs are verdicts, licensing fees, or other settlement amounts.⁷⁰ According to standardized economic terminology, these figures are "transfers" contemplated by the patent system, not "costs."⁷¹ In other words, this is the money paid to a patent owner in exchange for the disclosure and expense required to obtain a patent. The transaction has resulted in money moving from one entity to another in exchange for intellectual property rights, and economists do not consider these costs. Only if the NPEs' patent lawsuits are mer-

⁶⁵ There is another reason that the 2011 AIPLA cost study that Bessen and Meurer use to benchmark is inapplicable. The 2011 AIPLA study is based upon responses from 2010, which likely reported data from 2009. This may make the cost estimates too low. However, the 2009 responses presumably are from competitor patent litigation, not NPE litigation. Competitor litigation is more document intensive and is frequently litigated more heavily by both parties (e.g., due to the injunction risk). Bessen and Meurer apparently agree with these observations but still take the position that NPE-litigation costs may be higher than average litigation costs because "the stakes tend to be higher and holdup problems are especially severe." Bessen & Meurer, *supra* note 10, at 401-02 n.70. But the 2013 AIPLA cost survey provides evidence that contradicts Bessen and Meurer's claim. See AM. INTELLECTUAL PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 2013 (2013). For the first time in 2013, the AIPLA cost survey separates the cost of defending NPE cases from the costs of all patent litigation. Not surprisingly (to us), the average cost of defending NPE cases is substantially less than the average cost of litigating a patent case. Thus, on balance, the 2011 AIPLA study costs should be higher than Bessen and Meurer's data. The fact that they are in line further supports the view that Bessen and Meurer's data is biased too high.

⁶⁶ Bessen & Meurer, *supra* note 10, at 422.

⁶⁷ *Id.*

⁶⁸ *Id.* at 400 n.62.

⁶⁹ *Id.* at 400.

⁷⁰ See *id.* (explaining that legal costs are about a third as large as settlement costs and one quarter of total litigation costs).

⁷¹ See POSNER, *supra* note 43, at 8-9.

itless and these transfers have no relation to the value of the asserted patents are Bessen and Meurer correct that the full amount should be viewed as a cost.⁷² Bessen and Meurer report that the median settlement amount from their sample is \$1.38 million and the median of litigation costs is \$560,000.⁷³ RPX reports on its website slightly different information: “in the majority of NPE assertions almost half the cost to operating companies is legal cost.”⁷⁴ Those numbers are provocative, as is Bessen and Meurer’s data on the skewed distribution of legal costs, and they deserve further scrutiny. But we do not believe that on their face they prove that all or most patent lawsuits brought by NPEs are meritless. It could be that these are legitimate cases of infringement without sky-high damages.

That leaves the 23% of direct costs that Bessen and Meurer report as legal costs, an amount that Bessen and Meurer deem “substantial.”⁷⁵ Bessen and Meurer are correct that attorneys’ fees and other litigation costs to the accused infringer are properly considered “costs” by economists.⁷⁶ The costs to the accused infringers are dollars that economists would consider to be in the “bad” ledger. The litigation costs to the patentees and to the courts, which Bessen and Meurer did not measure, would also be placed on this bad ledger.

We believe, however, that for completeness, these costs must be balanced with the policy goals and benefits of NPE litigation. Without this balancing, the necessary implication of Bessen and Meurer’s assertion is that all litigation is wasteful and should be abolished. Take for instance the criminal justice system. It costs money for accused wrongdoers to hire legal counsel. But that doesn’t mean that we should abolish the entire system. Rather, the costs are balanced against the public policy of punishing wrongdoers, deterring others from committing crimes, etc. Turning back to patent law, the policy interests that need to be considered include promoting innovation, rewarding inventors, and deterring infringement.⁷⁷

⁷² Bessen and Meurer argue that costs and transfers equally affect operating companies. See Bessen & Meurer, *supra* note 10, at 418 (“Innovation is equally discouraged by the payment of legal costs and the payment of transfers.”). We agree that from a bottom-line perspective, money out the door is money out the door. However, that completely ignores that the purposes of the patent laws include encouraging and rewarding innovation. Payments made by infringers to owners of valid patents must occur for the patent system to work. While not all payments fit into this category, we believe that it is improper to categorically include all payments as costs.

⁷³ See *id.* at 399 tbl.2.

⁷⁴ *Prying Open the “Black Box” of NPE Costs*, RPX BLOG (June 26, 2012), <http://www.rpxcorp.com/index.cfm?pageID=169&itemID=24>.

⁷⁵ See Bessen & Meurer, *supra* note 10, at 400 & n.62.

⁷⁶ See *id.* at 417–18 (discussing legal fees and other operating costs); see also POSNER, *supra* note 43, at 8–9 (discussing differences between costs and transfers).

⁷⁷ In theory, enforcement of patents, including by NPEs, may also lead to other positive externalities such as encouraging potential infringers to develop searching or licensing

A different way to consider the legal-cost issue is to pose the question: what should we compare the costs to? As empirical scholars, we need to evaluate whether the \$6.7 billion (23% of \$29 billion) is statistically different from some other number. It is unrealistic to assume that the costs should be zero. No one is surprised that lawyers charge a lot of money to represent accused infringers who are large corporations. We believe that the legal costs should be compared to the costs of patent litigation between practicing entities. More precisely, the question is: How does the ratio of legal fees to recoveries in NPE lawsuits compare to the ratio in competitor lawsuits? We recommend further research into the ratio for competitor or practicing-entity litigation to make such a comparison. We also suggest a comparison to complex commercial litigation. We submit that, without a baseline, one cannot evaluate whether the legal costs in NPE cases are too high, too low, or just right.

3. *Relies on a Questionable Definition of NPE*

In addition, Bessen and Meurer use an expansive definition of non-practicing entity, beyond even those used by most critics of NPEs. Bessen and Meurer equate NPE and patent troll⁷⁸ and define them as:

patent assertion entities, individual inventors, universities, and non-competing entities (operating companies asserting patents well outside the area in which they make products and compete).⁷⁹

Bessen and Meurer include patent owners who manufacture products (i.e., *practicing* entities) within their definition of *non-practicing* entities—if the patents are “well outside the area in which they make products.”⁸⁰ We take no position on the objectively correct definition of non-practicing entity but merely note that including practicing entities within the definition of non-practicing entities is very difficult to justify.

In our opinion, the definition used by Bessen and Meurer is somewhat unconventional, and the breadth of their definition partially drives their results. Bessen and Meurer’s calculation assumes that every time a small inventor licenses a patent to a practicing company, it results in a “deadweight loss,” regardless of the merits of the infringement claim.⁸¹ We note that innovators who do not manufacture products or offer services that embody their patented technolo-

practices or to help bring about more and more efficient compliance with others’ patent rights generally.

⁷⁸ Bessen and Meurer expressly state that NPEs and trolls are the same. See Bessen & Meurer, *supra* note 10, at 387 (“[N]on-practicing entities’ (NPEs), popularly known as ‘patent trolls’ . . .”).

⁷⁹ *Id.* at 395.

⁸⁰ *Id.*

⁸¹ See *id.* at 400.

gies (which are included within Bessen and Meurer's definition of NPE) are not parties to be simply tossed aside as socially unproductive actors.

We believe that Bessen and Meurer's results would be more meaningful if they were disaggregated among the different categories, which should be possible with RPX's database. For instance, one may be interested in the direct costs and transfers caused by shell patent-holding companies who are unrelated to the original patent owner. Alternatively, one could study the costs and transfers using a definition of NPE that is broader but that excludes universities.⁸² We believe that these disaggregated estimates would provide a clearer picture. Obviously, narrowing the definition of non-practicing entity would lower Bessen and Meurer's \$29 billion figure. While it appears that universities comprise only a small proportion of patent holders in litigation, individual inventors make up a larger share. From our data, approximately 20%–30% of 2010 non-operating-company patent lawsuits were filed by individuals or an enforcement entity formed by the individual inventor.⁸³ Others have estimated that over 50% of all NPE suits are brought by companies owned or controlled by the original inventors.⁸⁴ If these were excluded, by how much would Bessen and Meurer's estimate decrease? Bessen and Meurer respond to our concerns about their definition by saying that these definitional issues are likely to have "only a small impact" on their results.⁸⁵ We cannot understand how removing 50% or more from the data would not reduce their cost projection or materially affect the results. Unfortunately, without more information, we have no ability to determine the size of this reduction. And notwithstanding Bessen and Meurer's doubt of its significance, more finely grained data will permit other researchers greater resources for additional analyses.

4. *Ignores Small Businesses Who Are Patentees*

Finally, Bessen and Meurer argue that "much of this burden" of NPE litigation "falls on small and medium-sized companies."⁸⁶ They assert that small and medium-sized companies "accrue larger costs rel-

⁸² Others studying patent litigation have disaggregated universities, among other types of NPEs. See John R. Allison et al., *Extreme Value or Trolls on Top? The Characteristics of the Most-Litigated Patents*, 158 U. PA. L. REV. 1, 24 & n.43 (2009) (citing Lemley, *supra* note 20, at 612).

⁸³ See Cotropia, Kesan & Schwartz, *supra* note 3, at 16 fig.1.

⁸⁴ Raymond P. Niro, *Why Bash Individual Inventor-Owned or Controlled Companies?*, IPWATCHDOG (June 30, 2013, 10:24 AM), <http://www.ipwatchdog.com/2013/06/30/why-bash-individual-inventor-owned-or-controlled-companies/id=42613/>.

⁸⁵ Bessen & Meurer, *supra* note 10, at 396 (arguing that the broader definition of NPEs does little to distort their conclusion).

⁸⁶ *Id.* at 389.

ative to their size.”⁸⁷ From this data, they make the leap that NPE litigation is bad for small businesses. We concur that NPE litigation—all litigation in fact—is usually undesirable for small-business defendants. But what about small-business patent-owner plaintiffs? The patent system is one of the few tools that small businesses have available to compete against larger, more established players in the market. When Bessen and Meurer refer to small and medium-sized companies, they mean only the accused infringers. Patent owners with valid and infringed patents must be considered within this category as well.

Bessen and Meurer also contend that NPEs do not increase innovation incentives.⁸⁸ To measure returns to patent holders, Bessen and Meurer look at revenues⁸⁹ and expenditures from “10 publicly listed firms that were predominantly in the patent-assertion business during the period from 2005 to 2010.”⁹⁰ They claim that these companies filed lawsuits against 1,450 companies from 2005 until 2010, amounting to about one-sixth of all PAE lawsuits.⁹¹ Bessen and Meurer find that payments to individual inventors come to only 7% of NPE licensing revenues and that less than one-quarter of these NPEs’ revenues flow to innovative activity, which Bessen and Meurer define as purchases of other patents or direct R&D expenses.⁹² Before addressing Bessen and Meurer’s argument, we note that financial data about NPEs themselves is extremely difficult to obtain. Nearly all NPEs are private companies, and private companies rarely disclose internal corporate details. If the concern is that settlement dollars transferred to NPEs are not provided to R&D or inventors, we suggest that these private NPEs be surveyed, preferably on a random basis. Similar to the RPX survey of NPE defendants, a survey of NPEs on issues such as litigation costs, settlements, transfers to inventors, and other issues could be of tremendous value. A survey of NPEs has the additional advantage of exploring both sides of the issue. It could reveal a more complete and balanced picture of patent litigation than one can obtain from surveying only one side, the accused infringers.

⁸⁷ *Id.* at 411.

⁸⁸ *See id.*

⁸⁹ We are not accountants, but we suspect that many settlements include payouts over time involving installment payments, which Bessen and Meurer’s method may not count properly.

⁹⁰ Bessen & Meurer, *supra* note 10, at 403. In the original draft of their article, Bessen and Meurer indicated that they used 12 publicly traded NPEs for the analysis. *See* Bessen & Meurer, *Draft*, *supra* note 57, at 20–21. In their event study, they used 14 publicly traded NPEs for the analysis. *See* Bessen et al., *supra* note 4, at 32 tbl.4. The final version of their current essay apparently uses data from 10 publicly traded NPEs, although footnote 99 only identifies the precise year ranges for 9 companies. *See* Bessen & Meurer, *supra* note 10, at 410 n.99.

⁹¹ *See* Bessen & Meurer, *supra* note 10, at 403.

⁹² *See id.* at 411.

Currently, publicly traded NPEs, which Bessen and Meurer relied entirely upon, may provide the only publicly available data. We suspect that the publicly traded NPEs are different from the run-of-the-mill NPEs. For instance, these publicly traded NPEs may be more likely to sue larger defendants. We also suspect that publicly traded NPEs are less likely to engage in nuisance suit–type litigation.

To evaluate Bessen and Meurer’s claims about publicly traded NPEs, we asked them for their raw data. After receiving no response, we recreated the data ourselves from the underlying 10-Ks. After reviewing the data, it appears that three of these companies drive almost all of their results: InterDigital, Tessera, and Rambus account for over 75% of the licensing revenues from 2005 until 2010.⁹³ We believe that these three companies have filed less than 100 lawsuits in total during that time period. These 100 lawsuits represent less than a half of one percent of the NPE lawsuits filed in the time period, far below the one-sixth of cases that Bessen and Meurer report. With such a tiny sample, we urge caution before extrapolating results from effectively three companies to the thousands of non–publicly traded NPEs.

Thus, we have significant concerns about whether Bessen and Meurer’s findings, which essentially are from three companies, reflect the activities of the average NPE. Even putting aside the small sample size issue, we have additional concerns because of the identity of these three companies. These three publicly traded companies, InterDigital, Tessera, and Rambus, are similar in a key aspect: they all attempted to compete in the marketplace as operating companies before turning to aggressive enforcement of their patent portfolios.⁹⁴ While people may debate whether these three companies should be categorized as NPEs, there should be no debate that they are quite distinct from speculators who purchase patents from others with the intent to enforce. The patents that these three companies monetized in the 2000s were largely “home grown,” developed by their own engineers in the 1990s.⁹⁵ As such, it is not surprising that these three companies have not paid large sums of monies to individual inventors to purchase patent rights. These companies paid the inventors of their patents with wages, stock options, benefits, etc., during the course of

⁹³ See *id.* at 410 tbl.5.

⁹⁴ See InterDigital Commc’ns Corp., Annual Report (Form 10-K) at 13 (Apr. 1, 1996) (showing that InterDigital employed 96 employees in Research and Development and only 2 employees in Patent Licensing); Rambus Inc., Annual Report (Form 10-K) at 5 (Dec. 15, 1997) (showing that Rambus employed 99 employees in R&D and 27 in Marketing); Tessera Techs. Inc., Annual Report (Form 10-K) at 13 (Mar. 8, 2004) (showing that Tessera employed 53 engineers in R&D and only 16 employees in Sales & Marketing).

⁹⁵ See, e.g., InterDigital Commc’ns Corp., Amended Annual Report (Form 10-K/A) at 11 (Jan. 28, 2004) (describing InterDigital’s patent-licensing activities in the 2000s).

their employment.⁹⁶ These costs do not appear on their 10-Ks from the 2000s, however, as they were accrued years earlier. Thus, we do not believe that Bessen and Meurer's data on publicly traded NPEs shows that the average NPE only returns 7% to individual inventors. Instead, we believe it tells us something much less interesting, and something very specific to the histories of these companies.

Separately, we question whether comparing licensing revenues to R&D expenditures in the same year is appropriate. It takes many years for research to translate into inventions and patents. Research takes time, the patenting process takes time, and markets take time to develop. Consequently, we should expect to see a lag of many years between investment in R&D and extraction of value from the patents resulting from the R&D. For instance, for many years in the 1990s, Rambus's R&D expenditures exceeded the licensing revenues that they generated.⁹⁷ In the 2000s, these values reversed: the licensing revenues exceeded the R&D expenditures.⁹⁸ We believe that this is consistent with the lag in the patenting process. These companies invested heavily in R&D in the 1990s and exploited their patents in the 2000s. By comparing R&D expenditures only during the time period of enforcement, Bessen and Meurer's analysis only shows half of the picture.

Finally, we believe that payments by NPEs to the original patent holder should be compared to a baseline. Why is one-quarter too low? Without these payments, the inventors may receive zero compensation for their patents. NPEs may provide an avenue for those outside the marketplace, such as universities and individual inventors, to obtain payouts for valid and infringed patents. Those payouts theoretically incentivize others to innovate.

By creating options to generate rewards for innovators otherwise shut out of the marketplace, even publicly traded NPEs may play a valuable role. Together with contingency-fee lawyers whose business models depend on choosing the right patents and the right patentees, NPEs can create important avenues for appropriating rewards for valuable patent rights that are owned by non-market players. Even if other entities use their patented technologies, they may lack the resources to enforce their patent rights by hiring traditional patent at-

⁹⁶ See *Interdigital Commc'ns Corp.*, *supra* note 94, at 48 (describing compensation packages for employees); *Rambus Inc.*, *supra* note 94, at 33 (same); *Tessera Techs. Inc.*, *supra* note 94, at 48, 54 (same).

⁹⁷ See, e.g., *Rambus Inc.*, Annual Report (Form 10-K) at 27 (Dec. 12, 1998) (showing multiple years of financial data in which Rambus expended more on R&D than it earned in licensing).

⁹⁸ See *Rambus Inc.*, Annual Report (Form 10-K) at 46 (Feb. 21, 2006) (showing that Rambus earned more in licensing fees than it expended in R&D); *Tessera Techns., Inc.*, Annual Report (Form 10-K) at 31 (Mar. 16, 2006) (same for Tessera).

torneys who engage in hourly billing practices. The risk and uncertainty associated with representing patentees that do not have the ability to pay traditional hourly billing rates is prohibitive, and hence, most such patentees are shut out of the typical enforcement mechanisms that are available to large companies. Taking on the burden of enforcing patents through a contingency-fee representation is an option that is available primarily for a select group of innovators with patent rights that are perceived as valuable before litigation commences.⁹⁹

Ultimately, such an approach favors those who are capable of producing patented products or services and punishes those who cannot take their patented technologies to market without addressing the real legal question in all patent disputes—is there a valid patent claim that is infringed? In short, instead of focusing on the merits of the patent claim, the nature of the parties is used as a proxy for judging the merits of the patent claim—a fundamentally flawed and unfair result that will significantly distort the supply of inventions.

B. Recommended Additional Disclosures About Methodology

Before mentioning our suggestions for further disclosure, first we defend Bessen and Meurer from criticism that others have raised. Some have argued that Bessen and Meurer's results are "biased" because they received funding from a group, the Coalition for Patent Fairness, with an interest in the direction of the results.¹⁰⁰ These critics have also argued that the results are biased because RPX, the company who conducted the survey and provided other data, apparently has a similar interest in the direction of the results.¹⁰¹ We believe that this criticism misses the mark. We do not believe that receiving funding or using industry data is automatically indicative of biased data. Instead, we believe that when the appearance of potential bias is present, it is incumbent on the researchers to show that their data is valid, reliable, and transparent.¹⁰²

We contend that Bessen and Meurer should provide more information on the issues of validity, reliability, and transparency. As is,

⁹⁹ See Schwartz, *supra* note 16, at 356.

¹⁰⁰ See, e.g., Jerry Crimmins, *Intellectual Property Attorneys Quarrel with 'Patent Troll' Study*, CHI. DAILY L. BULL. (July 9, 2012) (explaining that some groups believe that financial assistance makes the patent-troll study biased while others do not).

¹⁰¹ See *id.*

¹⁰² Transparency means fully disclosing the precise methods used in a study. Reliability refers to whether the measurements can be reproduced if generated by others. Validity refers to how accurate the measurements are. See Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1, 83, 85, 87 (2002). See generally ROBERT M. LAWLESS, JENNIFER K. ROBBENOLT & THOMAS S. ULEN, *EMPIRICAL METHODS IN LAW* 26 (2010) ("[S]teps . . . taken in your research must be transparent and obvious enough so that another researcher can duplicate what you have done . . .").

Bessen and Meurer's study does not provide us enough information to evaluate the quality of the data and methods. Because Bessen and Meurer note that even they themselves do not have access to some and perhaps all of the underlying data,¹⁰³ the validity and reliability of RPX's data are critical.¹⁰⁴ This includes both the litigation-cost survey and the general NPE database. With respect to surveys, the norm in academic articles is to provide copies of the exact survey language and describe in detail any promotional materials.¹⁰⁵ This practice permits other researchers to verify that necessary and appropriate precautions were taken to avoid bias. Bessen and Meurer's study does not provide sufficient information, and the missing information could be critical. For instance, we understand that the documentation informed potential subjects that the results of the study would be used to lobby for changes in the patent laws.¹⁰⁶ Such an instruction could be read as encouraging exaggeration. It could also affect the response rate and increase the bias in the sample, with those more interested in patent reform (i.e., those with larger patent exposure) being more likely to complete the survey. Inclusion of this sort of statement in the documentation would cause survey experts to seriously discount the results. With respect to RPX's NPE database, the study reports that RPX classifies which patent holders are NPEs. Because there is some discretion in these classifications, we recommend providing some measure of reliability of coding.¹⁰⁷

Our Essay should not be understood to say that we know that the databases are unreliable or lack validity. It merely submits that we have insufficient information to evaluate. Bessen and Meurer defend their data by stating: “[i]n the two years since we first published our event study, no one has come forward with actual empirical evidence to suggest our estimates are substantially biased.”¹⁰⁸ While their state-

¹⁰³ See Bessen & Meurer, *supra* note 10, at 398 n.55. (“To preserve data confidentiality, statistical analysis was performed by RPX personnel working under our direction.”). Perhaps confidentiality obligations change the dynamic, but we note that this arrangement—legal academics authoring a study without even having access to the underlying data—is highly unconventional.

¹⁰⁴ See Lee Epstein & Charles E. Clarke, Jr., *Academic Integrity and Legal Scholarship in the Wake of Exxon Shipping*, *Footnote 17*, 21 STAN. L. & POL’Y REV. 33, 43 (2010) (noting that it is appropriate to treat funded research with skepticism and that validity, reliability, and transparency are the keys to accessing such scholarship).

¹⁰⁵ See, e.g., Epstein & King, *supra* note 102, at 46 (noting the convention on reporting responses to surveys).

¹⁰⁶ RPX, NPE Cost Study: Invitation to Participate, at 10 (Jan. 2012) (on file with authors).

¹⁰⁷ Reliability is typically reported by using measures such as Cohen’s Kappa. See Mark A. Hall & Ronald F. Wright, *Systematic Content Analysis of Judicial Opinions*, 96 CALIF. L. REV. 63, 113–14 (2008) (stating that the best practice for relaying reliability information is to report a coefficient such as Cohen’s Kappa).

¹⁰⁸ Bessen & Meurer, *supra* note 10, at 416.

ment has some truth, we believe that the burden of persuasion should fall on the researcher, especially when proprietary data is being relied upon. Given that the survey data contains third parties' confidential information, we recognize the difficulty in full disclosure. However, these shortcomings limit the data's usefulness.

Before concluding our discussion of Bessen and Meurer's study, we want to respond briefly to one other item in their "Response to Critics" section.¹⁰⁹ Bessen and Meurer argue that "we already know that the aggregate value of patent-based incentives is smaller than the aggregate value of negative incentives in the sectors affected by NPE litigation."¹¹⁰ They base this assertion—that patents provide a tax on innovation—on an event study that they previously conducted.¹¹¹ Their event study investigated movements in stock prices around an event, namely, the filing of patent lawsuits.

While responding to this previous study is beyond the scope of this Essay, we offer two observations. First, others have harshly criticized this methodology.¹¹² It is limited to litigation involving publicly traded companies, which comprise a minority of parties in patent litigation. It focuses only around the filing dates of lawsuits, not the issue date of patents or the resolution dates of lawsuits.¹¹³ Further, many of the losses purportedly identified after the filing of a lawsuit are paper losses; the market may cause the stock to drop somewhat irrationally since there is some risk posed by the lawsuit. As more information becomes available, the stock may bounce back.¹¹⁴ The model completely ignores such a bounce back.

Second, even a cursory review of the results of the event study cause us to have great concern about the validity of the findings. That study reports that, using their event-study methodology, they calculated that each NPE lawsuit caused each defendant a drop in market capitalization between \$122 million and \$140.6 million at the mean,

¹⁰⁹ *Id.* at 412–22.

¹¹⁰ *Id.* at 418.

¹¹¹ See Bessen et al., *supra* note 4, at 26.

¹¹² See Glynn S. Lunney, Jr., *On the Continuing Misuse of Event Studies: The Example of Bessen and Meurer*, 16 J. INTEL. PROP. L. 35, 37, 49–56 (2008) (arguing that academics cannot trust Bessen and Meurer's argument that the patent system has discouraged innovation). For a thoughtful blog post on the limits of event studies, see Lisa Larimore Ouellette, *Patent Costs & Benefits*, WRITTEN DESCRIPTION (July 2, 2013), <http://writtendescription.blogspot.com/2013/07/costs-benefits.html> (arguing that when reading event studies, readers should keep in mind exactly what authors are estimating and stating that it may be valuable to have a more thorough discussion about authors' results on the merits).

¹¹³ For an interesting paper that finds that correlations between patent-holder trial-court victories and stock increases, see Alan C. Marco & Saurabh Vishnubhakat, *Certain Patents*, 16 YALE J.L. & TECH. (forthcoming 2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2324538.

¹¹⁴ Ron D. Katznelson, *Questionable Science Will Misguide Patent Policy*, (Oct. 27, 2013) (unpublished manuscript), available at <http://j.mp/Junk-Science>.

and between \$20.4 million and \$23.6 million at the median.¹¹⁵ Both of us have substantial practice experience in patent litigation in various capacities, and one of us has interviewed over fifty lawyers involved in patent contingent practice.¹¹⁶ Based on our experiences, such huge losses are facially implausible in our opinion, and they cause us to question the applicability of the methodology to NPE litigation.¹¹⁷ More importantly, with all due respect to Bessen and Meurer, we are not persuaded that the event study alone supports such a broad and sweeping claim that the patent system is completely failing.

II

SUGGESTIONS FOR EMPIRICAL ANALYSIS OF NPEs

Despite the difficulties, we believe that the role of NPEs in the patent system can be studied empirically. Toward that end, below we offer some suggestions on how to properly analyze NPEs in litigation.

First, we believe that it is important to tease out differences, if any, between NPE patent litigation and general patent or civil litigation. Clearly, the litigation system in the United States is expensive. The discovery process in all civil litigation is laborious and costly, and patent litigation is some of the most expensive of all civil litigation.¹¹⁸ Thus, we must take pains to ensure that we do not blame NPE patent litigation for issues that are present in all patent litigation or complex civil litigation. Similarly, we need to guard against mixing the effects of patents in general and NPE patents. Many have complained that patent scope sometimes lacks clarity and that the Patent Office has granted weak or invalid patents.¹¹⁹ To tease out the specific effects of NPE patent litigation, we need a baseline to which to compare.

Second, we believe it is important to evaluate the *distribution* of lawsuits when studying a large and complicated system like NPE litigation. By that, we mean that we should evaluate all (or a random sample of) NPE lawsuits. In all litigation, there must be some clearly frivolous cases, some clearly meritorious cases, and cases in between.

¹¹⁵ Bessen et al., *supra* note 4, at 30 tbl.3, 32 tbl.5.

¹¹⁶ See Schwartz, *supra* note 16, at 357.

¹¹⁷ Bessen and Meurer dismiss our complaints, characterizing them as merely our personal views as patent lawyers. Bessen & Meurer, *supra* note 10, at 413–14. We disagree, as our views are informed by the contingent of lawyers who represent the patentees in many of the cases. Moreover, in our view, when one method of analyzing data provides results that seem inconsistent with common sense, researchers should be cautious in making broad inferences from those results.

¹¹⁸ See Schwartz, *supra* note 16, at 360 n.138.

¹¹⁹ See generally *id.* at 370–71 (discussing how lawyers feel that patent lawsuits are weak, ridiculous, and lead to the stretching of the patent); Mark A. Lemley, Essay, *Rational Ignorance at the Patent Office*, 95 Nw. U. L. REV. 1495, 1495 (2001) (discussing how the Patent Office has come under fire for not thoroughly examining patents).

Patent litigation and NPE patent litigation must also have these types of cases. To us, what is critical is how many there are of each type of case. If 1% of NPE patent cases are clearly frivolous, that may still be too much. But we note that the problem and solution would be quite different if 1% are clearly frivolous than if 50% are clearly frivolous. Again, the distribution of cases is critical.

There are limits to looking merely at the number of cases. It seems likely that the number of NPE lawsuits has risen in recent years. However, that fact alone tells us very little. There are many different potential explanations, and they are not mutually exclusive. It could be that NPEs are asserting more nuisance lawsuits. It could be that the PTO issued some bad patents—vaguely worded, broad, and likely invalid—in the mid- to late 1990s and we are seeing those enforced only now; those patents may be concentrated in the e-commerce and consumer-electronics fields. It could be that patents held by NPEs are being infringed more often. The norms at some large manufacturers in this space may differ from other industries, and patent clearance *ex ante* may be utilized less. Or it could be that NPEs, to the extent that they are not the original owner, are buying patents that are already infringed. The change could be due to individual inventors or small companies who had been excluded from enforcement due to the high costs of litigation. Whether because of contingent-fee lawyers, alternative litigation financing, or patentees' ability to sell their patents, these patents are now available for litigation. More lawsuits may be a good thing because it encourages people to respect patent rights. The benefits, if any, from the lawsuits need to be balanced against the costs. But focusing merely on the number of lawsuits does not tell us which of these stories is most true.

And before we conclude that widespread opportunistic conduct is occurring, we need better data on the merits of NPE patent cases, settlement amounts in those cases, the length of time NPE cases last, and the amount of attorneys' fees paid by defendants and NPEs to get a true picture of what the reality is. We also need better data to assess a different common criticism: that certain types of NPEs—those who are unrelated to the original inventors—pocket a large part of the settlement amounts received and pass little on to the inventors who initially developed the patented technology. We need more data to assess this, but what we currently know appears to point to the opposite conclusion. For instance, Acacia Research Group, perhaps the largest publicly traded NPE, reported that in 2011, it paid more in royalties to inventors than it did to the contingent-fee attorneys who enforced their patents in litigation.¹²⁰

¹²⁰ Press Release, Acacia Research Corp., Acacia Research Reports First Quarter Financial Results (Apr. 20, 2011), <http://www.acaciaresearch.com/pr/042011.pdf>.

In sum, the empirical study of NPE patent litigation is at an early stage. Part of the reason is because NPE patent litigation has rapidly grown in the very near past. Empirical research takes time to be completed, and it requires sufficient past data to evaluate. We look forward to evaluating more research as it is released.

III

POLICY RECOMMENDATIONS

We believe that further empirical information, including that described in the previous Part, would be useful to analyze the role of NPEs in the patent system. We note, however, that most of the press and academic commentary recite Bessen and Meurer's study and other academic studies as if they are unimpeachable facts. For instance, an August 2012 report by the Congressional Research Service largely adopts Bessen and Meurer's results, without any critical analysis. In fact, the report, entitled "*An Overview of the 'Patent Trolls' Debate*," actually overstates their results.¹²¹ The report states that "PAEs [Patent Assertion Entities] generated \$29 billion in revenues from defendants and licensees in 2011."¹²² Of course, Bessen and Meurer did not make this claim. They claimed that NPEs "cost" accused infringers \$29 billion,¹²³ about a quarter of which comprised legal fees.¹²⁴ The accused infringers' legal fees are not revenue to patent holders. The remainder of the report is notably deficient on solid empirical evidence on key points. For instance, the report mentions support for the claim that the benefits of PAEs are "significantly outweighed by the costs."¹²⁵ This claim's validity hinges on a truly empirical question. The support for this broad claim includes a citation to another report that involved Bessen and Meurer.¹²⁶ Apparently, the Congressional Research Service reissued its report in April 2013 to correct these shortcomings.¹²⁷ We submit that others should be cautious before making such broad claims based on Bessen and Meurer's study and that more rigorous work is needed. Bessen and Meurer's study was cited approvingly in the report *Patent Assertion and U.S. Innovation*

¹²¹ See BRIAN T. YEH, CONG. RESEARCH SERV., R42668, AN OVERVIEW OF THE "PATENT TROLLS" DEBATE, summary (2012), available at http://assets.opencrs.com/rpts/R42668_20120820.pdf.

¹²² *Id.* (emphasis added).

¹²³ Bessen & Meurer, *supra* note 10, at 389.

¹²⁴ *Id.* at 400 n.62.

¹²⁵ YEH, *supra* note 121, at 2.

¹²⁶ *Id.* at 2 n.13.

¹²⁷ See BRIAN T. YEH, CONG. RESEARCH SERV., R42668, AN OVERVIEW OF THE "PATENT TROLLS" DEBATE, summary, 2 (2013), available at <http://www.fas.org/sgp/crs/misc/R42668.pdf>.

by the Executive Office of the President, issued in June 2013.¹²⁸ We hope that the Executive Branch carefully considers the limitations of the study, such as those presented in this Essay, in its consideration of NPEs.

In sum, we believe that Bessen and Meurer have not provided sufficient valid data to make a full diagnosis of the problem. They have not adequately studied the problem, and therefore we believe that their conclusions are premature and perhaps even unfounded. Currently, there is a lack of scientific evidence that widespread and systematic problems exist with NPEs, and if they do, what the magnitude of the problems is.

One common criticism of NPEs (however that term is defined) is that they initiate patent infringement lawsuits seeking to enforce patents of dubious quality or with questionable infringement claims and then settle for amounts far less than the defendants' litigation costs.¹²⁹ The story is that NPEs take strategic advantage of the notoriously high cost of patent litigation, which requires several million dollars in attorneys' fees to litigate through the close of discovery.¹³⁰

There is little firm empirical evidence supporting this scenario of the combination of dubious patent assertions and low settlement demands. There is some evidence that NPEs settle more quickly compared to other patent holders, which could indicate the possibility of nuisance settlements.¹³¹ Better data on this point is needed. But there is also empirical evidence that the patents asserted by NPEs are similar to patents asserted by practicing entities.¹³² There is some evidence that the most litigious NPEs lose more often when the cases are taken to a final judgment,¹³³ however, like other types of complex civil litigation, the vast majority of patent cases settle before judgment.¹³⁴

For a moment, let us assume that solid data confirms that NPEs in general are a problem for the patent system. Let us assume that wide-

¹²⁸ See EXEC. OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION 9–10 & n.5 (2013), available at http://www.whitehouse.gov/sites/default/files/docs/patent_report.pdf.

¹²⁹ See, e.g., Lu, *supra* note 13, at 56, 58 (describing the work of Bronwyn H. Hall & Rosemarie Ham Ziedonis, An Empirical Analysis of Patent Litigation in the Semiconductor Industry (Jan. 2007) (unpublished manuscript), and emphasizing the use of “patents of dubious merit” as well as the study by Ranganath Sudarshan, *Nuisance-Value Patent Suits: An Economic Model and Proposal*, 25 SANTA CLARA COMPUTER & HIGH TECH. L.J. 159 (2008), analyzing the offer of settlements that are much lower than litigation costs (internal quotation marks omitted)).

¹³⁰ See, e.g., Risch, *supra* note 2, at 467 (noting legal fees of \$500,000 through the summary judgment stage up to legal fees of \$4 million or more through trial).

¹³¹ See Lu, *supra* note 13, at 58.

¹³² See Risch, *supra* note 2, at 458 (“[T]he patents enforced by so-called trolls—and the companies that obtained them—look a lot like other litigated patents and their owners.”).

¹³³ See Allison et al., *supra* note 41, at 687 tbl.3.

¹³⁴ Kesan & Ball, *supra* note 41, at 271–72 & n.212.

spread opportunistic behavior is occurring. If so, we believe that the antidote is finding ways to lower transaction costs in the patent system. In other words, the fact that the patent-litigation system is so expensive provides a potential for mischief. Lowering the costs of patent litigation would significantly reduce any actual mischief. There are numerous ways to lower transaction costs. Even if one were to make the extreme assumption that all NPE lawsuits are meritless, then what are needed are low-cost mechanisms to challenge the validity of asserted patents. In an ideal world, disputes would be resolved costlessly. Invalid patents could easily be wiped away. Infringers could be forced to pay adequate compensation instantaneously. However, the civil-litigation system in the United States is expensive, and patent litigation is extremely expensive. Because patent litigation is so expensive, there is the potential for mischief. Patent holders or accused infringers may assert weak claims or defenses knowing that the high cost of litigation shields these actions from scrutiny.

The new *inter partes* review (IPR) and post grant review (PGR) proceedings authorized by the America Invents Act¹³⁵ may present opportunities for low-cost patent invalidation. The final rules were set in late 2012, and thus we do not yet know whether this will reduce the wasteful transaction costs in challenging low-quality patents. Perhaps, as some have contended, the estoppel provision governing both IPR and PGR may prove to be too heavy a burden for challengers to bear, but perhaps not.¹³⁶ Nevertheless, it is critical that we develop low-cost and effective mechanisms to challenge patents. To do so, we need to evaluate these new procedures as they are utilized in practice to ensure that they are adequate for their intended purpose. We must be mindful of whether the estoppel provision in the statutes inordinately deters pursuing potential challenges. At the same time, we must also be appreciative that without an adequate estoppel or other provision, patentees may be subject to repeated filings of patent challenges, with the consequent delays. With some additional reform to the IPR statute, if necessary, we remain confident that the goal of creating a relatively cheap, relatively swift, and accurate (as determined by affirmance by the Federal Circuit on appeal) patent-challenge regime can be realized.

Other than these administrative mechanisms to invalidate patents, perhaps a small-claims court could be created for patents below a threshold value to cheaply and quickly resolve patent infringement

¹³⁵ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

¹³⁶ We recognize that the estoppel issue is complicated because of a concern that small patent holders may be harassed by serial oppositions.

claims.¹³⁷ A task force of the American Bar Association's IP Section is currently investigating this option, and the U.S. Patent Office formally requested comments on such a proposal.¹³⁸ A small-claims court could reduce the cost of adjudicating patent assertions with modest damages claims. In turn, this would hopefully tie settlement values more closely to the merits of the underlying disputes and remove them farther from the costs of litigation.

Perhaps early-stage ADR may be effective, or curtailing substantial discovery until after *Markman* hearings. Alternatively, the district court judges can use their inherent power to manage litigation to reduce costs. Guidance could be provided to judges to aid in identifying cases in which the stakes are likely small or the merits of the patentee's case initially appear weak. In these cases, the district court judges can curtail discovery to make the cost of litigation commensurate with the risks and stakes of the case. In other words, if the real policy concern is high transaction costs, then we need alternative, low-cost mechanisms to invalidate patents or to prove noninfringement.

Marketplace solutions for reducing transaction costs are also possible. These include reducing the legal fees to accused infringers on lower-value cases by alternative fee arrangements (i.e., capped fees per phase of the case), engagement of less expensive counsel, and perhaps RPX's defensive-acquisition model. Alternatively, pro bono services, such as those currently being considered by the Application Developers Alliance, may be a positive development for small accused infringers in cases containing indicia of nuisance-style patent assertions.

We note that our proposal is the opposite of what Congress is currently considering in the Saving High-tech Innovators from Egregious Legal Disputes, or "SHIELD," Act.¹³⁹ In that proposed bill, Congress is considering one-way fee shifting against patent owners in patent cases.¹⁴⁰ Instead of lowering the costs of patent litigation, this raises the costs, although only for one party. We believe that lowering the costs is a preferred solution.

Under the proposed bill, fees must be paid to the accused infringer if the patent owner does not prevail, even without any allegation or proof of baseless or frivolous litigation or some litigation

¹³⁷ See Robert P. Greenspoon, *Is the United States Finally Ready for a Patent Small Claims Court?*, 10 MINN. J.L. SCI. & TECH. 549, 551 (2009).

¹³⁸ Request for Comments on a Patent Small Claims Proceeding in the United States, 77 Fed. Reg. 74,830 (Dec. 18, 2012).

¹³⁹ Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013, H.R. 845, 113th Cong. (2013).

¹⁴⁰ See *id.* § 2(a).

misconduct.¹⁴¹ In other words, losing a case is the basis for fee shifting. Perhaps more important is that patentees in these cases would be required to post a bond to cover the cost of the potential fee shifting in order to assert their underlying claims of infringement.¹⁴² Thus, the SHIELD Act would increase the costs of enforcing patents.

The SHIELD Act apparently is intended to cover only patent trolls.¹⁴³ The Act excludes from its reach practicing entities, individual inventors, and universities.¹⁴⁴ However, the definitions used in the Act to cover only “trolls” are too broad and sweep in many others. For instance, if a company assigns its patent to its own subsidiary holding company that does not make a product, then it likely will be subject to the automatic fee-shifting and bond provisions. Second, the fee-shifting and bond provisions appear to apply to an inventor who assigns his patents to a company that he has formed for legitimate business reasons and that he entirely owns and controls.

In sum, if passed in its current form, the proposed bill will have the effect of undermining the value of all patents and significantly impacting the U.S. innovation economy and ecosystem. Because pure NPEs will face fee shifting in litigation, patents they acquire will be less valuable than the same patents owned by others. Many NPEs will be unable to afford the cost of the bond to pursue litigation and will instead be forced to stay out of the market. Without these potential purchases, individual inventors and failed start-ups will find it more difficult to dispose of their patents. With fewer parties willing to purchase their patents, the patents will have lower values.

Furthermore, the SHIELD Act will likely have a variety of unintended consequences. For one, the Act will encourage individual inventors to utilize alternative litigation financing rather than selling their patent to a pure non-practicing entity. Alternative litigation-financing companies, in exchange for a percentage of the litigation recoveries, provide loans to patent holders to enable engagement of hourly fee billing lawyers.¹⁴⁵ Because an individual inventor enforcing her own patent will not be subject to the fee shifting provisions of the SHIELD Act while pure non-practicing entities will, we suspect that the Act will encourage more alternative litigation financing.

¹⁴¹ See *id.*

¹⁴² See *id.*

¹⁴³ See *id.*

¹⁴⁴ See *id.*

¹⁴⁵ See Schwartz, *supra* note 16, at 373 (citing Larry E. Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749, 801–02 (2010)); see also STEVEN GARBER, RAND INST. FOR CIVIL JUSTICE, ALTERNATIVE LITIGATION FINANCING IN THE UNITED STATES: ISSUES, KNOWN, AND UNKNOWN 37 (2010), available at http://www.rand.org/content/dam/rand/pubs/occasional_papers/2010/RAND_OP306.pdf (“[Alternative litigation financing] can be a fairly close substitute for selling the patent to an NPE.”).

In general, we believe that focusing on whether the patent holder is an NPE or practicing entity is the wrong question. Our point is not to extol or criticize NPEs. We believe that the correct inquiry requires a focus on the *actions* of the parties and not on the nature or identity of the parties. There surely are some NPEs that are bad actors and some that are good actors. Instead, our goal is to focus the conversation on the right questions, namely, what are the merits of the cases and what are ways to reduce patent-litigation expenses by creating or improving institutional mechanisms to address patent validity and patent infringement. Our approach would help address a common argument: that NPEs are not true innovators but rather they wait for another to expend resources to commercialize a product with the patented technology and then demand a “tax” on it. We think that existing patent law doctrines can be used to analyze this criticism: Are the asserted patent claims invalid as obvious? Does the accused product embody the asserted claims? Is there some other defense to infringement that has merit? What is the appropriate amount of damages for infringement? And does equity support the entry of an injunction?

CONCLUSION

In sum, as patent scholars, we strongly believe that data is critical to the study of the patent system. The patent system is too important to evaluate without data. Data can help us make informed policy choices. Bessen and Meurer’s study provides some new data for discussion. However, limitations in the data suggest to us that their findings should be viewed skeptically, as an outer boundary of the costs of NPE litigation, and one that is likely to be substantially overstated.

With respect to the debate about NPEs, we believe that focusing on costs and transfers from NPEs are somewhat beside the point. The bigger picture, and the better question, is whether the lawsuits are being brought because the defendants are infringers of a valid patent or whether the defendants are merely easy targets for a nuisance lawsuit. That requires looking beyond the identity of the patentee. It means that we need to evaluate the patents being asserted to see if there are credible patent claims that are valid, enforceable, and infringed. Making all NPEs a scapegoat for the costs associated with patent enforcement will end up hurting inventors who are solely focused on creating valuable technologies without addressing the real policy options for improving the patent system.

To the extent that changes to the patent system are needed, we suggest focusing on reducing transaction costs (e.g., lawyers’ fees) in patent litigation, offering cheaper mechanisms to challenge issued patents (the AIA’s post-grant challenges and other administrative pro-

cedures for challenging validity appear to be a step in the right direction), and providing cheaper and quicker adjudication through a new small-claims court for patent lawsuits, instead of focusing solely on whether the patent holder is a non-practicing entity.

To us, we should not focus on the identity of the patent holder; instead, we should examine the actions of the patent holder and the merits of their patent assertions. The questions we should be asking are: Are the claims likely invalid? Is the allegation of infringement untethered to the original invention? And is the quantum of damages sought based upon a sound damages theory?