

***“Troll” Check?***

***A Proposal for Administrative Review of Patent Litigation***

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**Abstract**

The patent system is commonly justified on grounds of promoting social welfare and, most specifically, technological progress. For years, however, there has been concern that patent litigation is undermining, rather than furthering, these goals. Particularly in the United States, the time, cost, and complications of patent suits provide openings for opportunistic assertions of patent infringement. Whether originating with a so-called “patent troll” or another form of patent holder, such opportunistic assertions can generate outcomes, through settlement or court judgments, that represent more a distortion than a fulfillment of patents’ purpose.

This article proposes a means to address information problems that facilitate opportunistic assertion. This means is an automatic process of administrative review at the threshold of new patent-infringement lawsuits filed in U.S. district courts. Whether conducted by an independent Patent Litigation Review Board or a division of the U.S. Patent and Trademark Office, such review would (1) help discourage—or bring to an earlier and less costly end—relatively weak patent-infringement lawsuits; (2) strengthen the hands and likely fates of both patentees and accused infringers with especially robust cases; (3) flag weaknesses in litigation positions to the benefit of private parties and the courts; and (4) provide policymakers with more readily aggregated information that will facilitate evaluation of patent system performance. The article uses multiple economic models to indicate the likely benefits of pre-litigation administrative review. Nonetheless, because of the fluid and complex nature of the patent litigation landscape, the article proposes that the results of administrative review be non-binding with respect to later district court litigation and that the review process be adopted initially only on a pilot basis. A sunset provision would help ensure prompt reevaluation of such review’s status and shape.

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## INTRODUCTION

Patent litigation reform is coming. Many signs point to this. As in the years leading up to the 2011 America Invents Act (AIA),<sup>1</sup> the United States Congress has entertained a host of patent reform bills over the past few years, many focused on patent litigation.<sup>2</sup> The House of Representatives passed one of these litigation reform bills by a 325-to-91 vote in 2013,<sup>3</sup> and supermajorities of the House and Senate Judiciary Committees each approved separate versions of such bills in 2015.<sup>4</sup> Policymakers have promised a renewed push for reform in 2017.<sup>5</sup> A July 2016 report by the Government Accountability Office helped prepare the way for this push by highlighting recent growth in patent litigation and the remarkable concentration of patent suits “in the predominantly rural Eastern District of Texas.”<sup>6</sup> Meanwhile, outside pressure for reform has grown, not only from usual industry stakeholders<sup>7</sup> but also in the popular press. In December 2013, the *New York Times* editorial board cheered congressional consideration of “sound proposals to restrict abusive patent litigation.” In August 2015,

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<sup>1</sup> Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part I of II*, 21 FED. CIR. B.J. 435, 438-47 (2012) (chronicling the more than six years of legislative activity that culminated in the AIA).

<sup>2</sup> See *infra* notes 10-14 and accompanying text.

<sup>3</sup> House Judiciary Committee, *The Innovation Act*, <http://judiciary.house.gov/index.cfm/the-innovation-act> (visited Aug. 31, 2015) (noting House passage of the Innovation Act in 2013).

<sup>4</sup> On June 4, 2015, the Senate Judiciary Committee voted 12-4 in favor of the Protecting American Talent and Entrepreneurship Act (“the PATENT Act”), S. 1137. Kevin E. Noonan, *Senate Judiciary Committee Passes PATENT Act*, <http://www.jdsupra.com/legalnews/senate-judiciary-committee-passes-85294/> (June 5, 2015). On June 11, 2015, the House Judiciary Committee voted 24-8 in favor of the Innovation Act, H.R. 9. House Judiciary Committee, *supra* note 3 (reporting the House Committee’s approval of the Innovation Act).

<sup>5</sup> Joseph Marks, *Flake Looks to Next Year on Patent Venue Bill*, 92 PAT. TRADEMARK & COPYRIGHT J. (Aug. 12, 2016) (reporting that Sen. Jeff Flake indicated “high hopes for [a patent venue reform bill’s] success in a new Congress, with a new administration”).

<sup>6</sup> U.S. GOV’T ACCOUNTABILITY OFFICE, GAO-16-490, *INTELLECTUAL PROPERTY: PATENT OFFICE SHOULD DEFINE QUALITY, REASSESS INCENTIVES, AND IMPROVE CLARITY* 14-16 (2016) (observing that, in 2015, nearly 50 percent “of all patent infringement defendants were named in cases filed in the Eastern District of Texas”).

<sup>7</sup> Cf. Greg Reilly, *Linking Patent Reform and Civil Litigation Reform*, 47 LOYOLA U. CHI. L.J. 179, 238 (2015) (“[I]t is hard to dispute that procedural reform [of civil litigation] is inevitable given the political influence of the large corporate interests most burdened ....” (emphasis omitted)).

editors of the *Economist* made patent reform their cover story<sup>8</sup> and came close to advocating the patent system's abolition.<sup>9</sup>

Reform proposals have tended toward the dramatic. Some proposed legislation has advocated litigation rules that especially target so-called “patent trolls”<sup>10</sup>—a disparaging moniker for patent-assertion entities (PAEs) that specialize in the ownership, licensing, and enforcement of patent rights.<sup>11</sup> In certain respects, reform proposals have threatened a revolution in patent litigation—for example, by proposing general adoption of attorney fee shifting along a European “loser pays” model as opposed to the dominant U.S. practice of only shifting fees in exceptional cases, if at all.<sup>12</sup> Although the reform proposals endorsed by the House and Senate Judiciary Committees in 2015<sup>13</sup> were more modest than some of their predecessors, they were still draconian by the standards of U.S. litigation reform.<sup>14</sup>

These reform efforts reflect concern that patent assertion activity is undermining patent law's purpose to promote technological progress and

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<sup>8</sup> See *ECONOMIST*, Aug. 8, 2015 (cover with heading “Set innovation free!” and subheading “Time to fix the patent system”).

<sup>9</sup> *Time to Fix Patents*, *ECONOMIST*, Aug. 8, 2015, at 11 (“One radical answer would be to abolish patents altogether ....”); cf. *Intellectual Property: A Question of Utility*, *ECONOMIST*, Aug. 8, 2015, at 50, 52 (“None [of six current U.S. patent reform bills] seeks abolition: any lawmaker brave enough to propose doing away with them altogether ... would face an onslaught from the intellectual-property lobby.”).

<sup>10</sup> See Adam Smith, Note, *Patent Trolls—An Overview of Proposed Legislation and a Solution That Benefits Small Businesses and Entrepreneurs*, 9 OHIO ST. ENTREPRENEURIAL BUS. L.J. 201, 217 (2014) (discussing a bill, the Saving High-Tech Innovators from Egregious Legal Disputes Act of 2013 (SHIELD Act), that would have “require[d] a plaintiff to post bond covering attorney's fees before trial if the plaintiff is not an original inventor or assignee, did not make a substantial investment in practicing the invention

<sup>11</sup> Cf. John M. Golden, “Patent Trolls” and Patent Remedies, 85 TEX. L. REV. 2111, 2112 (2007) (noting criticism of “the ‘patent troll’—apparently one of a class of patent owners who do not provide end products or services themselves, but who demand royalties as a price for authorizing the work of others”).

<sup>12</sup> *Id.* at 218 (observing that the SHIELD Act “essentially switches the traditional assumption of American legal jurisprudence” that parties pay their own attorney fees); cf. 35 U.S.C. § 285 (providing that, in patent-infringement cases, “[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party”).

<sup>13</sup> See Innovation Act, H.R. 9, 114th Cong., § 3(a) (2015); Protecting American Talent and Entrepreneurship Act (“PATENT Act”), S. 1137, 114th Cong., § 3 (2015); Prachi Agarwal, *Patent Troll: The Brewing Storm of Patent Reform in the United States of America*, 15 JOHN MARSHALL REV. INTELL. PROP. L. 63, 76-81 (2015) (describing provisions of the Innovation and PATENT Acts).

<sup>14</sup> See generally Jared A. Smith & Nicholas R. Transier, *Trolling for an NPE Solution*, 7 HASTINGS SCI. & TECH. L.J. 215, 238-39 (2015) (listing various bills with “direct and indirect anti-troll provisions”).

social welfare more generally.<sup>15</sup> A high overall caseload, high litigation costs, and apparently rampant forum shopping provide fodder for concern. Despite the emergence of new proceedings to challenge patents before the U.S. Patent and Trademark Office (USPTO),<sup>16</sup> district court filings of patent-infringement suits are proceeding at record or near-record rates of several thousand per year.<sup>17</sup> These suits are not cheap. High-stakes patent litigation tends to cost each side millions of dollars in attorney fees, and even litigation of a case in which less than \$1 million is at stake tends to involve several hundred thousand dollars in attorney fees per side.<sup>18</sup> Further, the concentration of new suits in a single one of the nation's 94 federal judicial districts,<sup>19</sup> the Eastern District of Texas,<sup>20</sup> has become astounding. According to a representative tally, 44% of the 5,821 new patent suits filed in 2015 were filed in the Eastern District of Texas.<sup>21</sup> Perhaps even more

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<sup>15</sup> See, e.g., Agarwal, *supra* note 13, at 64 (“[P]atent trolls stifle, discourage, and threaten innovation.”); Smith, *supra* note 10, at 201 (“Lately, the rise of certain patent-assertion entities, colloquially termed ‘patent trolls,’ has renewed discussion on many levels ... about the state and effectiveness of current patent law.”).

<sup>16</sup> With two months left in fiscal year 2015, the number of new petitions for the USPTO to launch inter partes post-grant proceedings—1,579—already exceeded the fiscal year 2014 total and was nearly three times larger than the total for fiscal year 2013. U.S. Patent & Trademark Office, Patent Trial and Appeal Board Statistics (July 31, 2015), available at <http://www.uspto.gov/sites/default/files/documents/2015-07-31%20PTAB.PDF>.

<sup>17</sup> Joe Mullin, *Trolls Made 2015 One of the Biggest Years Ever for Patent Lawsuits*, ARS TECHNICA, <http://arstechnica.com/tech-policy/2016/01/despite-law-changes-2015-saw-a-heap-of-patent-troll-lawsuits/> (Jan. 5, 2016) (“2015 saw more patent lawsuits filed than any other year save one.”).

<sup>18</sup> AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, 2015 REPORT OF THE ECONOMIC SURVEY 37 (2015) [hereinafter “AIPLA 2015 SURVEY”] (reporting median costs to pursue a patent suit to completion of \$600,000 when less than \$1 million is at stake, \$2 million when between \$1 million and \$10 million is at stake, and over \$3 million when more than \$10 million is at stake).

<sup>19</sup> Administrative Office of U.S. Courts, Court Role and Structure, <http://www.uscourts.gov/about-federal-courts/court-role-and-structure> (last visited Aug. 28, 2016) (“The nation’s 94 district or trial courts are called U.S. District Courts.”).

<sup>20</sup> See Daniel Klerman & Greg Reilly, *Forum Selling*, S. CAL. L. REV. (forthcoming) (contending “that judges in the Eastern District [of Texas] have consciously sought to attract patentees ... by departing from mainstream doctrine in a variety of procedural areas in a pro-patentee (pro-plaintiff) way”), available at <http://ssrn.com/abstract=2538857>.

<sup>21</sup> Lex Machina, Cases, PTAB Trials, and ITC Investigations (last visited Aug. 28, 2016) (listing numbers of patent suits filed in leading districts), available at <https://law.lexmachina.com>.

remarkably, 1,686 of these new patent suits, 29% of the national total, landed on the docket of a single Eastern District judge.<sup>22</sup>

In recent years, Congress and the courts have made multiple tweaks to patent law, with many being at least partly responsive to concerns with patent litigation in general and PAEs in particular. In a 2006 decision in *eBay Inc. v. MercExchange, L.L.C.*,<sup>23</sup> the U.S. Supreme Court adopted a four-factor test for the issuance of permanent injunctions that has made it difficult for PAEs to pursue a “hold-up” strategy.<sup>24</sup> Later decisions by the U.S. Court of Appeals for the Federal Circuit have tightened the standards for awarding reasonable royalty damages, thereby reducing the probability of massive damage awards for patent holders who cannot claim or prove lost profits separate from licensing fees not paid by an infringer.<sup>25</sup> Other court decisions have strengthened patentability requirements of subject-matter eligibility and nonobviousness, thereby making many suits or potential suits more likely to fail in response to a motion to dismiss or motion for summary judgment.<sup>26</sup> A 2014 Supreme Court decision appears to have made attorney fee shifting more likely.<sup>27</sup> Meanwhile, various district courts have adopted local rules that, in principle, should speed and streamline patent litigation.<sup>28</sup> Through the 2011 AIA, Congress restricted joinder in patent cases in a way that effectively sought to thwart PAEs by requiring a form of litigation inefficiency.<sup>29</sup> In 2015, the Supreme Court approved amendments to the

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<sup>22</sup> *Id.* (listing judges taken on the largest numbers of new patent suits).

<sup>23</sup> 547 U.S. 388 (2006).

<sup>24</sup> See Thomas F. Cotter & John M. Golden, *Empirical Studies Relating to Patents—Remedies*, in RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW (Peter Menell, David Schwartz & Ben Depoorter eds., forthcoming) (describing studies indicating that injunctions have become rare in patent-infringement suits brought by PAEs).

<sup>25</sup> Golden, *supra* note 177, at 605 (citing cases through which the Federal Circuit has tightened reasonable royalty standards).

<sup>26</sup> *Cf. id.* (mentioning Supreme Court decisions that “tightened the requirement of patentable subject matter ... and the requirement of nonobviousness”).

<sup>27</sup> See *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1754 (2014) (abrogating a Federal Circuit rule requiring both “subjective bad faith” and “objective baseless[ness]” for a court to award attorney fees as a result of the weakness of a plaintiff’s case (internal quotation marks omitted)).

<sup>28</sup> It seems arguable, however, whether the facilitation of efficient litigation generally helps or hurts PAEs of most concern. *Id.* at 607 (“Like highway improvements that attract too many drivers and make traffic congestion worse, litigation reforms can aggravate, rather than alleviate, tendencies toward excessive litigation.”).

<sup>29</sup> In response to complaints about PAEs’ simultaneously suing “numerous unrelated accused infringers in inconvenient venues,” Congress overrode the Federal Rules of Civil Procedure’s more liberal approach to joinder and enacted patent-specific rules that “impos[e]

Federal Rules of Civil Procedure abrogating a model form for patent cases that had effectively permitted many patent holders to bring suit with complaints that featured “little more ... than the name and number of the patent and an allegation of infringement.”<sup>30</sup>

Nonetheless, the flood of PAE activity and accompanying complaints have continued.<sup>31</sup> Moreover, there are other important systemic deficiencies that these tweaks have failed to correct. First, the patent system’s continuing high litigation costs can still create real concerns about excessive frequency of nuisance settlements and effective access to justice. Second, the general inability of business entities to appear pro se means that, if a startup or other small business cannot afford a lawyer and no pro bono or contingent-fee representation is available, that business effectively cannot appear to present arguments—with the result likely being forfeit of an opportunity to enforce a patent or a default judgment of patent infringement.<sup>32</sup> A secondary concern—at least for policymakers—is difficulty in assessing the nature and general merits of patent litigation being brought in district courts across the country. The fracturing of the national patent docket across a wide array of district courts complicates assessment of the national state of patent litigation and thus also complicates the effective imposition and policing of national standards on substance or procedure.

In response to persistent concerns with patent litigation, this article proposes a general system for preliminary review of patent-infringement lawsuits by a Patent Litigation Review Board (PLRB), possibly located within the USPTO and its existing Patent Trial and Appeal Board (PTAB) but alternatively existing as a separate administrative entity. In general, the results of PLRB administrative review would not be substantively binding on courts, but as long as the courts and private parties give the results substantial

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upon courts and patent owners the prospect of litigating the same factual and legal questions numerous times.” David O. Taylor, *Patent Misjoinder*, 88 N.Y.U. L. REV. 652, 655 (2013).

<sup>30</sup> Matthew Bultman, *Stricter Pleading Requirements Take Effect Dec. 1*, Law360 (Nov. 30, 2015); cf. Patricia W. Hatamyar Moore, *The Anti-Plaintiff Pending Amendments to the Federal Rules of Civil Procedure and the Pro-Defendant Composition of the Federal Rulemaking Committees*, 83 U. CIN. L. REV. 1083, 1126 (2015) (criticizing “[t]he pending abrogation of Rule 84 and all thirty-six of the official forms following the [Federal Rules of Civil Procedure]”).

<sup>31</sup> See *infra* text accompanying notes 255-259.

<sup>32</sup> John M. Golden, *Litigation in the Middle: The Context of Patent-Infringement Injunctions*, 92 TEX. L. REV. 2075, 2093 (2014) (“[T]here is no pro se option for many potential litigants because U.S. courts have ruled that business entities generally cannot be represented pro se ....”).

weight,<sup>33</sup> there is reason to hope that such a preliminary review can do the following: (1) help discourage—or bring to an earlier and less costly end—relatively weak patent-infringement lawsuits; (2) strengthen the hands and likely fates of both patentees and accused infringers with especially robust cases; (3) flag weaknesses in litigation positions to the benefit of both private parties and the courts; and (4) provide policymakers with more readily aggregated information that facilitates evaluation of patent system performance. The primary mechanism by which PLRB review would further these goals would be by increasing the information on case quality and likely outcomes at and with respect to the relatively early stages of new patent-infringement lawsuits. Through such informational contributions, a system of preliminary administrative review might help answer both PAE-related and PAE-independent concerns about patent litigation either directly or indirectly—for example, by providing the basis for a better-tailored policy solution through the information that PLRB review generates.

The article proceeds as follows. Part I provides a primer on patents and existing processes of administrative review of patents and patent applications at the USPTO. Part II describes aspects of the current landscape of patent litigation in the United States, including social welfare concerns that include concerns raised by PAEs specifically. Part III presents economic models that provide support for preliminary administrative review of patent litigation by considering its informational contributions and effects on party incentives. Part III also describes details of a suggested framework for administrative review, including a proposal that such review be adopted initially on a pilot basis only so that a statutory sunset provision effectively requires policymakers to reassess such review and its alternatives based on information developed through the pilot. Finally, Part III discusses how the proposed administrative review framework operates as an alternative or complement to other potential or already implemented adjustments of the patent system. A brief conclusion follows.

## I. PRIMER ON PATENTS AND USPTO REVIEW

As a prelude to a detailed description of this article’s proposal for a new process of administrative litigation review, this Part provides a brief discussion of the basic nature of patent rights, the current process for examining patent applications before patent issuance, and realities of modern

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<sup>33</sup> Cf. Irina D. Manta, *Bearing Down on Trademark Bullies*, 22 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 853, 867 (2012) (describing “[t]he primary purpose” of proposed USPTO review of trademark cease-and-desist letters as “impos[ition of] some cost on the trademark owner to incentive him to make careful choices as to when to attempt to enforce his mark”).



patent litigation. This background motivates the administrative review proposal and informs details of its suggested structure.

#### A. PATENT RIGHTS AND THEIR ENFORCEMENT

Patents provide their owners with territorially limited rights to exclude others from the making, use, sale or offer for sale, or importation of covered subject matter.<sup>34</sup> Under the current standard patent term, these rights last from the time a patent issues until twenty years from the first relevant filing of an application with the USPTO or a qualifying foreign patent office.<sup>35</sup> For a party to be liable for patent infringement, that party need not know of the infringed patent.<sup>36</sup> Nor need the party have derived the covered subject matter in any way from the inventors or owners associated with the patent.<sup>37</sup> Hence, if a consumer uses in the United States a smartphone purchased in the United States from a retail store and imported by a manufacturer who independently developed all the technology associated with the smartphone, the consumer, retail store, and manufacturer could all be liable for direct infringement of a U.S. patent covering technology in the smartphone. Although knowledge of a relevant patent is generally required for liability for indirect infringement that is more in the nature of aiding and abetting,<sup>38</sup> direct infringement by engaging in such acts as manufacture, use, sale, or importation occurs regardless of whether any of the parties have knowledge of the pertinent patent and regardless of the fact that the manufacturer independently developed all the relevant technology.

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<sup>34</sup> See 35 U.S.C. § 154(a)(1) (“Every patent shall contain ... a grant to the patentee ... of the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States ...”); *id.* § 271(a) (defining as a patent infringer “whoever without authority makes, uses, offers to sell, or sells any patented invention during the term of the patent therefor”).

<sup>35</sup> See 35 U.S.C. § 154(a)(2) (“Subject to the payment of fees under this title, [a patent] grant shall be for a term beginning on the date on which the patent issues and ending 20 years from the date on which the application for the patent was filed in the United States or ... from the date on which the earliest [qualifying] application was filed.”).

<sup>36</sup> *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1926 (2015) (observing that “[d]irect infringement is a strict-liability offense” for which “a defendant’s mental state is irrelevant”).

<sup>37</sup> See John M. Golden, *Principles for Patent Remedies*, 88 TEX. L. REV. 505, 515 (2010) (“[U]nlike copyright infringement, patent infringement does not ‘require’ copying and, as a general rule, does not excuse independent creation.”).

<sup>38</sup> *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011) (concluding that “knowledge of the relevant patent” is required for indirect infringement under both subsection 271(b) and 271(c) of the U.S. Patent Act).

When a patent owner suspects that its rights are being infringed, it can bringing suit in a U.S. district court<sup>39</sup> to seek relief such as lost-profit or reasonable-royalty damages,<sup>40</sup> enhanced damages,<sup>41</sup> or an injunction.<sup>42</sup> The patent owner who brings such a suit need not be the inventor of the patented technology. Nor need the patentee be the owner of the rights at the time the patent issues. The Patent Act explicitly provides that “patents, or any interest therein, shall be assignable in law by an instrument in writing.”<sup>43</sup> This assignability permits not only the sale or exchange of patent rights between persons or entities that actively make, use, or sell the subject matter covered by the patents, but also the sale of patent rights to associated forms of entities—called by names such as “patent aggregators,” “patent assertion entities,” “non-practicing entities,” or “patent trolls”<sup>44</sup>—that specialize in the acquisition and assertion of patent rights without any special involvement in the development, sale, or use of the covered subject matter itself.<sup>45</sup>

## B. THE PATENT DOCUMENT AND USPTO REVIEW

The scope of an individual set of patent rights is indicated and supported by the patent document. This document consists of drawings, a written description of the alleged invention, and patent claims that are drafted by the patent applicant or its agents, submitted to the USPTO, and commonly amended during the process of USPTO examination.<sup>46</sup> The written

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<sup>39</sup> See 28 U.S.C. § 1338(a) (“The district courts shall have original jurisdiction of any civil action arising under an Act of Congress relating to patents .... No State court shall have jurisdiction over any claim for relief arising under any Act of Congress relating to patents ....”); 35 U.S.C. § 281 (“A patentee shall have remedy by civil action for infringement of his patent.”).

<sup>40</sup> See 35 U.S.C. § 284 (“Upon finding for the claimant the court shall award the claimant damages adequate to compensate for the infringement but in no event less than a reasonable royalty for the use made of the invention by the infringer ....”).

<sup>41</sup> *Id.* (“[T]he court may increase the damages up to three times the amount found or assessed.”).

<sup>42</sup> *Id.* § 283 (granting courts the power to “grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent”).

<sup>43</sup> 35 U.S.C. § 261.

<sup>44</sup> LANNING G. BRYER, SCOTT J. LEBSON & MATTHEW D. ASBELL, *INTELLECTUAL PROPERTY STRATEGIES FOR THE 21ST CENTURY CORPORATION: A SHIFT IN STRATEGIC AND FINANCIAL MANAGEMENT* 145 (2011) (listing “various monikers” for so-called “[p]atent trolls”).

<sup>45</sup> See *supra* note 11 and accompanying text.

<sup>46</sup> See ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 13-26 (6th ed. 2013) (describing the patent document and observing that, generally speaking, “the final issued patent is largely identical to the patent application drafted by the inventor’s attorney or agent”).

description is required to disclose the alleged invention and “the manner and process of making and using it” in a manner sufficient (1) to show that the inventor was “in possession” of the invention at the time of filing a patent application<sup>47</sup> and (2) “to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.”<sup>48</sup> Patent claims are numbered clauses at the end of the patent document<sup>49</sup> that are required to “particularly poin[t] out and distinctly clai[m] the subject matter which the inventor or a joint inventor regards as the invention.”<sup>50</sup> The claims are the primary reference points for the courts, USPTO, and interested public in determining the scope of what a patent covers<sup>51</sup> although, under the “doctrine of equivalents,” there is typically some room for the patent to cover matter substantially equivalent to what is claimed even though not within the claims’ literal scope.<sup>52</sup>

Before the USPTO grants a patent application and issues a legally enforceable patent, the agency subjects the application to substantive review by one or more patent examiners, a process called “examination” when the focus is on the USPTO’s activities and “prosecution” when the focus is on those of the applicant.<sup>53</sup> An examiner checks whether a patent application’s claims satisfy statutory requirements for patentability—namely, whether they recite an invention that has at least minimal functionality,<sup>54</sup> is novel and nonobvious to one of skill in the relevant art,<sup>55</sup> is adequately described by the

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<sup>47</sup> *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (“[T]he test for sufficiency [under the so-called ‘written description requirement’] is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.”).

<sup>48</sup> 35 U.S.C. § 112(a).

<sup>49</sup> John M. Golden, *Construing Patent Claims According to Their “Interpretive Community”*: A Call for an Attorney-Plus-Artisan Perspective, 21 HARV. J.L. & TECH. 321, 322 (2008) (noting that patent claims are “numbered clauses at the end of a patent”).

<sup>50</sup> *Id.* § 112(b).

<sup>51</sup> See Golden, *supra* note 49, at 322.

<sup>52</sup> See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002) (“The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described.”).

<sup>53</sup> See F. Scott Kieff, *The Case for Registering Patents and the Law and Economics of Present Patent-Obtaining Rules*, 45 B.C. L. Rev. 55, 70-71 (2003) (noting that the “examination process” is “also called patent prosecution”).

<sup>54</sup> See JANICE MUELLER, PATENT LAW 321 (4th ed. 2013) (“[T]he substantive threshold for satisfying the utility requirement is relatively low.”).

<sup>55</sup> 35 U.S.C. §§ 101-03 (setting out requirements of novelty and nonobviousness).

patent document,<sup>56</sup> and is delineated in a way that “inform[s] those skilled in the art about the scope of the invention with reasonable certainty.”<sup>57</sup>

Examiners generally have expertise associated with the subject matter that they review,<sup>58</sup> but they operate within severe constraints that limit the effectiveness of their review. First, in large part because the USPTO receives hundreds of thousands of patent applications each year—in recent years half a million or more<sup>59</sup>—examiners are severely limited in the time available for examining individual applications. Even if one heroically assumes that each of the USPTO’s approximately 9,000 examiners<sup>60</sup> works like a law-firm associate and spends 2,000 hours per year solely on examining applications, one ends up with an estimate of 30 hours for an individual examiner to review each of the roughly 600,000 new applications filed in calendar year 2014.<sup>61</sup> In these 30 hours, the examiner must read the application and understand its technical subject matter, search and review antecedent material (“prior art”) that could indicate that the claimed invention fails the requirements of novelty and nonobviousness, evaluate satisfaction of other patentability requirements, write up any relied-upon bases for rejecting the application, and possibly engage in telephone or in-person interviews with the applicant or its agents.<sup>62</sup> More realistic, as opposed to heroic, estimates of available examiner time per application would likely put the average time available for

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<sup>56</sup> See *supra* text accompanying notes 47-48.

<sup>57</sup> *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2139 (2014).

<sup>58</sup> See MERGES & DUFFY, *supra* note 46, at 52 (noting “the specialization of examiners, who are assigned to a particular technology”); KIEFF ET AL., *supra* note 155, at 99 (“When an application reaches an examining group, it is assigned to the appropriate art (i.e., technology) unit and then to a particular examiner.”).

<sup>59</sup> See U.S. Patent & Trademark Office, U.S. Patent Statistics Chart: Calendar Years 1963-2014, [http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us\\_stat.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm) [hereinafter “Calendar Year Patent Statistics”] (listing calendar year statistics for numbers of patent applications and patent grants).

<sup>60</sup> U.S. PATENT & TRADEMARK OFFICE, FISCAL YEAR 2015 PERFORMANCE AND ACCOUNTABILITY REPORT 14 (2015) (indicating that, at the end of fiscal year 2015, the USPTO employed 9,161 patent examiners), *available at* <http://www.uspto.gov/sites/default/files/documents/USPTOFY15PAR.pdf>.

<sup>61</sup> Cf. John M. Golden, *Proliferating Patents and Patent Law’s “Cost Disease”*, 51 HOUS. L. REV. 455, 496-97 (2013) (employing a similar calculation for then prevailing numbers of patent examiners and annual patent applications).

<sup>62</sup> See KIEFF ET AL., *supra* note 155, at 99-102 & nn.38-43 (describing the examination process); Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1500 (2001) (describing examiner tasks).

these activities at something more like 20 hours per application, rather than 30.<sup>63</sup>

Particularly for those who have ever attempted to read and understand a patent document, the limits on examiner time might alone suffice to indicate that the USPTO's pre-issuance review can act as only a rough screen for patent application quality. But there are other reasons to believe that the USPTO almost necessarily issues a large number of patents or, at least, individual patent claims that fuller investigation and assessment would reveal to fail the law's putative requirements for patentability.<sup>64</sup> Not only are the examiners limited in the time that they can search prior art, they are generally limited in their ability to consult outside experts<sup>65</sup> and also to use certain other potential sources of information, such as the Internet, during the 18 months that applications generally remain confidential.<sup>66</sup> Moreover, in addition to the various practical constraints under which examiners operate, they are also saddled with the legal burden of proof. From the moment a patent application is filed, an entitlement to an issued patent is effectively presumed: the burden is on the examiner to show non-patentability by a preponderance of

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<sup>63</sup> See Chris J. Katopis, *Perfect Happiness?: Game Theory as a Tool for Enhancing Patent Quality*, 10 YALE J.L. & TECH. 360, 373 (2008) ("It is estimated that, on average, an examiner must examine eighty-seven applications per year, spending approximately nineteen hours on each application."); Lemley, *supra* note 62, at 1500 ("The total average time the examiner spends on all these tasks over the two- to three-year prosecution of the patent is eighteen hours.").

<sup>64</sup> See Joseph Farrell & Robert P. Merges, *Incentives to Challenge and Defend Patents: Why Litigation Won't Reliably Fix Patent Office Errors and Why Administrative Patent Review Might Help*, 19 BERKELEY TECH. L.J. 943, 944-45 (2004) (discussing grounds for believing that the USPTO "issues many patents that should not be enforced, either on economic or on legal grounds").

<sup>65</sup> Cf. Doug Lichtman & Mark A. Lemley, *Rethinking Patent Law's Presumption of Validity*, 60 STAN. L. REV. 45, 62 (2007) (advocating congressional action to establish "a new, much more rigorous patent review process" with associated fees "sufficiently high that examiners would have the funding necessary not only to spend at least one full month researching each purported invention, but also to hire relevant outside experts").

<sup>66</sup> See MANUAL OF PATENT EXAMINING PROCEDURE § 904.02(c), at 900-44 (rev. 9th ed., Nov. 2015) ("All use of the Internet by examiners must be conducted in a manner that ensures compliance with confidentiality requirements ...."); Golden, *supra* note 49, at 336 (noting that, under confidentiality requirements, "examiners face tight restrictions on their ability to consult any outside evidence, never mind outside experts"); David O. Taylor, *Clear but Unconvincing: The Federal Circuit's Invalidity Standard*, 21 FORDHAM INTELL. PROP., MEDIA & ENTERTAINMENT L.J. 293, 314-15 (2011) (noting that examiners "do not necessarily have the best access to prior art databases" and that "[p]atent prosecution is mostly an ex parte procedure that excludes public participation").

evidence.<sup>67</sup> On top of all this, the USPTO's arguable culture of over-attentiveness to the concerns of its fee-paying "customers"<sup>68</sup> and the agency's system of performance incentives, which has historically awarded credit for closing cases through patent grants,<sup>69</sup> might further tilt the balance against high-quality pre-issuance examination.

Given the deficiencies of pre-issuance review of patents, the patent system unsurprisingly provides opportunities for challenging or checking the validity of issued patents or, more specifically, individual claims in issued patents. First, a party sued for infringement or confronting an immediate threat of suit for infringement can challenge the validity of the relevant patent or its patent claims in district court.<sup>70</sup> If the party is sued for infringement, this challenge can be asserted as a defense to charges of infringement or as a counterclaim for a judgment of invalidity.<sup>71</sup> Even if the party has not yet been sued for infringement, the party may institute a declaratory judgment

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<sup>67</sup> Sean B. Seymore, *The Presumption of Patentability*, 97 MINN. L. REV. 990, 1023 (2013) ("From an evidentiary standpoint, the biggest problem facing an examiner who seeks to challenge patentability is the dual burden of building a prima facie case of patentability and carrying the ultimate burden of persuasion on the issue by a preponderance of the evidence.").

<sup>68</sup> See, e.g., U.S. PATENT & TRADEMARK OFFICE, 2010-2015 STRATEGIC PLAN 33 (listing management goals including "[m]ak[ing] USPTO data easily accessible to USPTO customers, partners, industry, and the public" and "[e]stablishing partnerships with customers, industry and other IP Offices"), available at [http://www.uspto.gov/sites/default/files/about/stratplan/USPTO\\_2010-](http://www.uspto.gov/sites/default/files/about/stratplan/USPTO_2010-2015_Strategic_Plan.pdf)

2015\_Strategic\_Plan.pdf; Jonathan S. Masur, *Costly Screens and Patent Examination*, 2 J. LEG. ANAL. 687, 692-93 (2010) ("The patent office describes itself as existing to provide a service to patent applicants, who are its 'customers' ..., and states quite plainly that its mission is 'to help our customers get patents' ...."); cf. Michael D. Frakes & Melissa F. Wasserman, *Does Agency Funding Affect Decisionmaking?: An Empirical Assessment of the PTO's Granting Patterns*, 66 VAND. L. REV. 67, 121 (2013) ("[O]ur findings suggest that the inadequacies of the examination fees and the existence of post-allowance fees may bias even a benevolent PTO toward granting patents.").

<sup>69</sup> Patrick A. Doody, *How to Eliminate the Backlog at the Patent Office*, 37 AIPLA Q.J. 395, 411-13 (2009) (discussing a USPTO "quota or 'count' based system that allocates credits to the examiner depending on the particular action taken" and noting that a patent examiner "receives a count" for the allowance of an application).

<sup>70</sup> See, e.g., *Arkema Inc. v. Honeywell Int'l, Inc.*, 706 F.3d 1351, 1359 (Fed. Cir. 2013) (holding that a declaratory judgment plaintiff had standing where it "allege[d] a present intent to supply automobile manufacturers in the United States with [matter] for potentially infringing uses").

<sup>71</sup> See 35 U.S.C. § 282(b) (identifying potential "defenses in any action involving the validity or infringement of a patent").

action seeking a declaration of invalidity, assuming Article III requirements for standing are met.<sup>72</sup>

Although a district court challenge to validity must be proven by clear and convincing evidence, success in such challenges is not particularly rare. In cases in which questions of novelty or nonobviousness are litigated to a final judgment, challengers apparently win about half of the time.<sup>73</sup> Selection effects in litigation—products of parties’ presumed selectivity in determining which issues are litigated to final judgment and which are settled, dropped, or never even asserted before such a judgment—mean that such rates for invalidation in litigation do not provide a great sense of the underlying percentage of issued patent claims that are in fact invalid.<sup>74</sup> But given the relatively standard-like nature of validity challenges on grounds such as nonobviousness, the possibilities for using a sympathetic expert to bolster such challenges, the virtual ubiquity of validity challenges in actual patent-infringement litigation, and the seeming conventionality of decisions to litigate at least some validity issues to judgment, one might reasonably intuit that, for the typical patent, there is a substantial chance that a significant validity challenge could be mounted to at least some of the patent’s claims.<sup>75</sup> Indeed, the common existence of substantial questions of validity with respect to individual patent claims is credited with being one of the reasons for which preliminary injunctions tend to be difficult to obtain in patent-infringement suits.<sup>76</sup>

In the early 1980s, Congress began a pattern of responding to uncertainty about issued patent claims’ validity by establishing administrative post-issuance proceedings through which the validity of patent

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<sup>72</sup> See KIMBERLY A. MOORE, PAUL R. MICHEL & TIMOTHY R. HOLBROOK, *PATENT LITIGATION AND STRATEGY* 50 (3d ed. 2008) (“Declaratory judgment actions can be a sword for the alleged infringer as well as a shield.”).

<sup>73</sup> See Michael D. Frakes & Melissa F. Wasserman, *Does the U.S. Patent and Trademark Office Grant Too Many Bad Patents?: Evidence from a Quasi-Experiment*, 67 *STAN. L. REV.* 613, 621 (2015) (noting “the frequently cited statistic that courts invalidate nearly half of all litigated patents that make it to final judgment”).

<sup>74</sup> See *id.* at 621-22 (observing “that litigated patents are a highly select sample of patents whose characteristics vary substantially from allowed patents in general”).

<sup>75</sup> Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 *J. ECON. PERSP.*, Spring 2005, at 75, 76 (“The risk that a patent will be declared invalid is substantial.”).

<sup>76</sup> See *Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1165 (Fed. Cir. 2014) (“An accused infringer can defeat a showing of likelihood of success on the merits by demonstrating a substantial question of validity or infringement.”); Emmette F. Hale, III, *Civil RICO and Intellectual Property After Sedima*, 56 *MISS. L.J.* 567, 619 (1986) (“Preliminary injunctive relief is difficult to obtain, since the courts require the patent validity be ‘clearly’ established prior to the issuance of a preliminary injunction.”).

claims might be challenged or clarified at the USPTO. The available types of such proceedings and the frequency of their overall use have grown over the past three decades. Now there are four such types, with thousands of individual USPTO post-issuance proceedings being launched each year.<sup>77</sup> The four types of such proceedings are as follows: (1) *ex parte* reexaminations to evaluate new questions of novelty or nonobviousness relative to prior art in the form of “patents or printed publications”;<sup>78</sup> (2) *inter partes* review proceedings, in which a private party can effectively litigate novelty or nonobviousness relative to patents or printed publications in an administrative trial at the USPTO;<sup>79</sup> (3) post-grant review proceedings in which a party can raise and litigate essentially any kind of validity question before the USPTO as long as the request for review comes within nine months of the relevant patent’s issuance;<sup>80</sup> and (4) covered business method review proceedings whose procedure and potential substance track those of post-grant review but which need not be requested within nine months of the relevant patent’s issuance.<sup>81</sup>

Post-issuance review proceedings have become a booming business.<sup>82</sup> But the limited scope of *ex parte* reexamination and *inter partes* review, the limited time window for requesting post-grant review, and the limited subject matter coverage of covered business method review<sup>83</sup> mean that there are still large gaps in the USPTO’s power to reevaluate patentability after a patent issues. Further, *ex parte* proceedings are often viewed as too

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<sup>77</sup> See, e.g., U.S. Patent & Trademark Office, Patent Trial and Appeal Board Statistics 7 (Nov. 30, 2015) (reporting that the PTAB had instituted about 900 *inter partes* review, post-grant review, and covered business method review proceedings in fiscal year 2015, not including joinders), available at <http://www.uspto.gov/sites/default/files/documents/2015-11-30%20PTAB.pdf>.

<sup>78</sup> 35 U.S.C. § 303 (describing potential grounds for instituting an *ex parte* reexamination); see also MERGES & DUFFY, *supra* note 46, at 1040 (describing *ex parte* reexamination proceedings).

<sup>79</sup> See 35 U.S.C. § 311 (describing potential bases for a petition for *inter partes* review); MERGES & DUFFY, *supra* note 46, at 1050-51 (describing *inter partes* review proceedings).

<sup>80</sup> See *id.* at 1047 (describing post-grant review proceedings).

<sup>81</sup> See Eric C. Cohen, *A Primer on Inter Partes Review, Covered Business Method Review, and Post-Grant Review Before the Patent Trial and Appeal Board*, 24 FED. CIR. B.J. 1, 22 (2014) (“The transitional proceeding [for covered business method patents] employs the standards of post-grant review, except that there is no nine-month deadline for filing and the estoppel provisions of post-grant review do not apply to civil actions.”).

<sup>82</sup> See John M. Golden, *Working Without Chevron: The PTO as Prime Mover*, 65 DUKE L.J. (forthcoming) (“From mid-2014 through the third quarter of 2015, filings for *inter partes* post-issuance proceedings before the [USPTO’s Patent Trial and Appeal Board] arrived at a rate of about 150 per month.”).

<sup>83</sup> See *supra* text accompanying notes \_\_.



likely to generate results favorable to the patent owner to be a reliable defense against questionable patent rights.<sup>84</sup> The three other types of inter partes proceedings are often seen as more promising for challengers<sup>85</sup> but are also generally more expensive. Between USPTO fees and fees for attorneys and experts, the cost of litigating any of these inter partes proceedings is likely to be in the nature of a couple hundred thousand dollars if the dispute runs at least through the end of motion practice.<sup>86</sup> Although such amounts are substantially less than the amounts on the order of \$1 million or more typically expected for litigation in the district courts,<sup>87</sup> they are much greater than the \$12,000 or so characteristic of the cost of ex parte reexamination,<sup>88</sup> and the characteristic cost of adversarial post-issuance review at the USPTO can therefore be formidable to cash-strapped startups or even to large firms that feel awash in letters suggesting that they might be infringing others' patent rights. In short, although the current flotilla of post-issuance administrative proceedings might represent an improvement over a situation in which the only avenue to challenge patent claims is in the district courts, many facing a threat of an infringement suit remain without a readily available and relatively inexpensive avenue for obtaining a government checkup on patent claims' validity and scope.

This article proposes a new type of administrative proceeding designed to fill at least some of the remaining gaps. To understand the prospects for such a proceeding, however, it is important to understand some details about how patent litigation in the district courts works. This is the subject of the next section.

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<sup>84</sup> See Dale L. Carlson & Robert A. Migliorini, *Patent Reform at the Crossroads: Experience in the Far East with Oppositions Suggests an Alternative Approach for the United States*, 7 N.C. J.L. & TECH. 261, 270 (2006) ("The underutilization of ex parte reexamination to challenge patent validity is primarily based on the fact that the procedure is unduly favorable to the patentee because of the very limited involvement of the third-party requester in the proceeding.").

<sup>85</sup> See, e.g., William Hannah, *Major Change, New Chapter: How Inter Partes Review and Post Grant Review Proceedings Created by the America Invents Act Will Shape Litigation Strategies*, 17 INTEL. PROP. L. BULL. 27, 28 (2012) ("Although initiating an Ex Parte reexamination is still available, statistics show that an Inter Partes Review is much more likely to cancel or modify the claims.").

<sup>86</sup> See AIPLA 2015 SURVEY, *supra* note 18, at 38 (listing median litigation costs for inter partes proceeding of \$200,000 at the end of motion practice and \$350,000 through an appeal to the Federal Circuit).

<sup>87</sup> See *supra* text accompanying notes \_\_.

<sup>88</sup> AIPLA 2015 SURVEY, *supra* note 18, at 38 (listing \$12,000 as the median expected cost of law services for ex parte reexamination).

## II. THE PATENT LITIGATION MORASS

Although wealth transfers associated with patent litigation might be viewed as inconsequential from a first-order economic perspective,<sup>89</sup> typical economic arguments for and against patent rights are premised on the belief that the second-order effects of such transfers have great significance—i.e., that such payments play an important role in setting incentives for investment in innovation, which is broadly defined here to encompass activities relating both to invention and to follow-on development and commercialization.<sup>90</sup> In accordance with this belief, patent litigation can shift incentives for innovative activity away from the social optimum if litigation generates an improper allocation of economic rewards or if litigation costs act as a tax on innovation without providing sufficient countervailing benefit, for example, by improving the allocation of economic rewards and therefore economic incentives over what would otherwise prevail. Many critics of the patent system believe that patent litigation indeed produces problematic incentives either in general or at least in circumstances involving patent assertion entities (PAEs). This Part describes aspects and social-welfare implications of what many perceive as the current patent litigation morass.

### A. INGREDIENTS IN THE LITIGATION MORASS

A patent-infringement suit in district court is a form a complex litigation that typically features technical subject matter, multiple stages, and high costs.<sup>91</sup> The Judicial Conference of the United States has attested to the burden that patent-infringement suits impose on courts by assigning these suits the fourth highest case weight for civil suits in district courts, trailing only death-penalty habeas, environmental, and civil RICO cases.<sup>92</sup> Three aspects of the patent-litigation landscape are particularly worth highlighting:

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<sup>89</sup> See Louis Kaplow, *Multistage Adjudication*, 126 HARV. L. REV. 1179, 1242-43 (2013) (“Monetary payments are transfers: the prospect of payment contributes to deterrence, and also to chilling, but the payment itself is not socially consequential.”).

<sup>90</sup> MICHAEL A. CARRIER, *INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW* 19 (2009) (“Innovation consists of the discovery, development, and commercialization of new and improved products and processes.”).

<sup>91</sup> See *infra* text accompanying notes \_\_.

<sup>92</sup> 2003-2004 DISTRICT COURT CASE-WEIGHTING STUDY: FINAL REPORT TO THE SUBCOMMITTEE ON JUDICIAL STATISTICS OF THE COMMITTEE ON JUDICIAL RESOURCES OF THE JUDICIAL CONFERENCE OF THE UNITED STATES 5 tab. 1 (2005) (listing case weights for categories of civil cases).

(1) high litigation costs; (2) the complexity and, absent settlement, likely longevity of litigation; and (3) the apparent prevalence of forum shopping.

### 1. High Litigation Costs

Patent litigation has commonly been called a “sport of kings,” the sense being that it is so expensive that only extraordinarily well-heeled plaintiffs and defendants can afford to pursue it.<sup>93</sup> Much of the cost is associated with the process of discovery, in which sides frequently exchange huge quantities of documents relating to the claimed invention, the nature of the accused product or process, and the developmental histories of both.<sup>94</sup> Testifying and non-testifying experts are commonly employed to analyze and explain aspects of such material,<sup>95</sup> and the two sides can invest further amounts in the development of instructional or illustrative graphics meant to help render the relevant technology comprehensible to generalist judges and juries.<sup>96</sup> According to the results of a biannual survey by the American Intellectual Property Lawyers Association, such activities lead to litigation costs per side that tend to rise with perceived stakes and often total to millions of dollars.<sup>97</sup>

Almost needless to say, such high litigation costs can have negative social effects. First, they can attract nuisance suits in which patent holders file suit with hopes not focused on a victory on the merits or even a settlement reflecting the expected value of a victory on the merits, but instead on the prospect of obtaining a settlement of, say, a few hundred thousand dollars or less from a defendant who simply wishes to avoid several hundred thousand dollars or even millions of dollars in litigation costs.<sup>98</sup> Second, high litigation costs can have a chilling effect on technological activity and competition,

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<sup>93</sup> Golden, *supra* note 32, at 2077 (“Patent litigation’s tendency toward great expense has caused it to be called the ‘sport of kings’ ....”).

<sup>94</sup> See AIPLA 2015 SURVEY, *supra* note 18, at 37 (showing estimated median “End of discovery” costs for patent litigation that tend to equal or exceed estimated total costs for patent litigation).

<sup>95</sup> Edward G. Poplawski, *Selection and Use of Experts in Patent Cases*, 27 AIPLA Q.J. 1, 3 (1999) (“[E]xpert testimony is virtually essential in assisting the trier of fact to understand the evidence and to resolve factual issues in [patent] litigation.”).

<sup>96</sup> See Lisa C. Wood, *Making Your Case with Graphics: An Interview*, 22-SUM ANTITRUST 103, 104-05 (2008) (noting the potential use of graphics in “a technical tutorial” for a judge prior to patent claim construction).

<sup>97</sup> See *supra* text accompanying note 18.

<sup>98</sup> Colleen Chien et al., *Santa Clara Best Practices in Patent Litigation Survey*, 42 AIPLA Q.J. 137, 180-81 (2014) (“Nuisance suits are suits for patent infringement that the defendant is motivated to settle due to the high cost of litigation, even if the patent is weak or its economic value is low.”).

with private parties avoiding innovative activities that might attract a patent-infringement suit even when not in fact infringing.<sup>99</sup> Alternatively or additionally, fear of suit for patent infringement can lead private parties to stockpile patents of their own in hopes that they can respond to a patent-infringement suit with a countersuit, with the common result being cross-licensing that avoids the cost of extended patent litigation but perhaps only at the substitute cost of otherwise unnecessary patenting.<sup>100</sup>

## 2. Litigation Complexity and Longevity

Patent-infringement litigation in the district courts shares many characteristics common in complex civil litigation or even litigation more generally. After a patent holder files suit and the defendant answers and potentially countersues, “[t]he parties proceed to fact and expert discovery, motion practice, pretrial briefing, and trial.”<sup>101</sup>

But patent litigation in the district courts typically features a relatively distinct claim construction phase in which a judge determines the meaning of contested patent claim language.<sup>102</sup> The claim construction phase of patent cases ordinarily precedes summary judgment filings and occurs after much, if not all, discovery.<sup>103</sup> In a conventional version of this phase, the parties brief disputed claim terms<sup>104</sup> and provide a technology tutorial,<sup>105</sup> the trial judge holds an oral hearing, and the trial judge then issues a claim construction order—often called a “*Markman* order”—that interprets relevant terms.<sup>106</sup> Claim construction can significantly clarify the strength of

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<sup>99</sup> Cf. Rebecca S. Eisenberg, *Noncompliance, Nonenforcement, Nonproblem? Rethinking the Anticommons in Biomedical Research*, 45 HOUS. L. REV. 1059, 1079 (2008) (noting survey results in which “respondents indicated that numerous patents would be more likely to deter a firm from pursuing a project at the outset than to cause it to abandon a project once it was underway”).

<sup>100</sup> See Golden, *supra* note 11, at 2154 (“Patent portfolios can be expensive to develop, and patent détente is neither costless nor uninterrupted.”).

<sup>101</sup> PETER S. MENELL ET AL., PATENT CASE MANAGEMENT JUDICIAL GUIDE 2-4 (3d ed. 2016).

<sup>102</sup> See *id.* at 5-3 (describing claim construction as “one of the most distinctive aspects of patent litigation”).

<sup>103</sup> See *id.* at 5-5 to 5-6 (discussing practices with respect to discovery both before and after claim construction).

<sup>104</sup> Ronald J. Schutz & Jonathan D. Goins, *Case Management Issues in Patent Litigation*, 5 SEDONA CONF. 1, 2 (2004) (“Markman briefs and hearings are a critical part of patent litigation proceedings ...”).

<sup>105</sup> MENELL ET AL., *supra* note 101, at 5-15 (discussing the use of technology tutorials).

<sup>106</sup> See *id.* at 2-4 to 2-5 (discussing the claim construction process); Pauline M. Pelletier, *The Impact of Local Patent Rules on Rate and Timing of Case Resolution Relative to Claim*

parties' positions<sup>107</sup> but often comes only after much time and money has already been expended. According to a study using data from Lex Machina, for the approximately ten percent of patent suits initiated and terminated between 2000 and 2010 that resulted in a claim-construction order, the average time from case filing to claim construction was 1.8 years.<sup>108</sup>

In addition to further discovery, a variety of litigation phases can follow claim construction. As indicated above, the district court's claim construction is often followed by a summary judgment phase, in which parties file, support, and dispute motions for summary judgment and the court rules in response.<sup>109</sup> If a case is not resolved by summary judgment or by settlement before or soon after the rulings on summary judgment, the case typically proceeds with further pretrial developments such as the development of jury instructions.<sup>110</sup> Courts have recognized a right to a jury trial in patent cases involving a claim for damages, rather than merely an injunction,<sup>111</sup> and most present-day trials occur before a jury.<sup>112</sup> These jury trials may be followed by post-trial motions for a new trial or judgment as a matter of law.<sup>113</sup> The district courts might conduct additional post-jury-verdict proceedings relating to such concerns as a call for attorney fee shifting, for enhanced damages, or for injunctive relief.<sup>114</sup> A party may appeal a district court's final judgment to the U.S. Court of Appeals for the

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*Construction: An Empirical Study of the Past Decade*, 8 J. BUS. & TECH. L. 451, 467 (2013) (noting that the "Markman order" is "so called after the seminal case on claim construction").

<sup>107</sup> See Schutz & Goins, *supra* note 104, at 3 ("[T]he court's rulings on claim construction and interpretation often determine the outcome of the case.").

<sup>108</sup> Pelletier, *supra* note 106, at 477 (describing results from study of 28,377 patent cases).

<sup>109</sup> See MENELL ET AL., *supra* note 101, at 6-10 (discussing relative timing of claim construction and summary judgment).

<sup>110</sup> *Id.* at 7-2 (discussing aspects of pretrial case management).

<sup>111</sup> Devon Curtis Beane, Note, *Whose Right Is It Anyway?: The Evisceration of an Infringer's Seventh Amendment Right in Patent Litigation*, 2011 U. ILL. L. REV. 1853, 1858 (noting courts' differential treatment of cases "where plaintiffs seek damages" and those where "the patentee seeks only injunctive relief").

<sup>112</sup> Mark A. Lemley, *Why Do Juries Decide If Patents Are Valid?*, 99 VA. L. REV. 1673, 1674 & n.1 (2013) ("Lawyers, scholars, and judges take for granted that when a patent case goes to trial, that trial will almost always be before a jury.").

<sup>113</sup> MENELL ET AL., *supra* note 101, at 9-2 (discussing common post-trial motions).

<sup>114</sup> *Id.* (same).

Federal Circuit in Washington, D.C.,<sup>115</sup> and such appeals frequently result in cases being remanded to district courts for further proceedings.<sup>116</sup>

Key aspects of this process of multistage litigation are (1) that it tends to take years and (2) that much of its overall cost tends to occur during discovery phases that are relatively early compared to trial. From filing to trial, district court proceedings commonly span at least about two years, with even a district known for “quick case schedules,” the Eastern District of Texas, having a median time to trial of 1.8 years during the period from 2000 to 2007.<sup>117</sup> The long run-up to trial generally comes at substantial cost. According to the AIPLA’s survey data, pretrial discovery typically accounts for at least about half of a party’s out-of-pocket litigation costs.<sup>118</sup>

Of course, the true costs of litigation likely exceed out-of-pocket costs, and these overall costs might be even more heavily weighted toward pretrial discovery. A defendant’s business might operate under a cloud of uncertainty until it can implement a “design-around” of asserted patent rights, a redesign of the defendant’s products or processes that the defendant can claim steers well clear of any charges of infringement. Further, patent litigation can be most disruptive to a defendant’s business during discovery, during which the number of key employees that are subjected to general questioning, depositions, and document production requests can far exceed the number of employees called as witnesses at trial.<sup>119</sup>

In sum, patent litigation in the district courts tends to be an expensive multistage process that, in the absence of settlement, takes years to conclude. As discussed in section I.C below, these aspects of patent litigation provide opportunities for abusive and strategic behavior that this Article’s reform proposal promises to damp.

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<sup>115</sup> See John M. Golden, *The Supreme Court as “Prime Percolator”: A Prescription for Appellate Review of Questions in Patent Law*, 56 UCLA L. REV. 657, 664 (2009) (“Since October of 1982, a single United States court of appeals, the Court of Appeals for the Federal Circuit, has had jurisdiction over all appeals from district courts in cases ‘arising under an Act of Congress relating to patents.’”); John M. Golden, Response, *Too Human? Personal Relationships and Appellate Review*, 94 TEX. L. REV. SEE ALSO 70, 77 (2016) (discussing the location and “national jurisdiction” of the Federal Circuit).

<sup>116</sup> MENELL ET AL., *supra* note 101, at 9-21 (noting that remands for nontrivial further proceedings are common).

<sup>117</sup> Klerman & Reilly, *supra* note 20, n.121 & accompanying text (“Nationwide the median time to trial [in patent cases from 2000 to 2007] was 2 years.”).

<sup>118</sup> AIPLA 2015 SURVEY, *supra* note 18, at 37-38 (listing median litigation costs through discovery that either approximately equal or exceed one half total median litigation costs).

<sup>119</sup> Cf. Colleen Chien, *Startups and Patent Trolls*, 17 STAN. TECH. L. REV. 461, 472 (2014) (noting that surveyed entrepreneurial companies commonly reported that “resolving [a patent] demand required founder time (73%) and distracted from the core business (89%)”).

### 3. Rises in Patent Litigation and PAE Activity

Patent suit filings have increased dramatically in recent years.<sup>120</sup> Although the uptick in the number of litigation events between 2010 and 2012 was driven in part by a rule change imposed by the 2011 America Invents Act (AIA), the trend of general growth continued even following the AIA.<sup>121</sup> Evidence shows that PAEs have driven most of the recent growth in patent litigation.<sup>122</sup>

Evidence on whether overly broad or otherwise invalid (“bad”) patents substantially explain growth in PAE activity is ambiguous, but recent large-sample empirical evidence suggests that entities such as PAEs, on average, buy and litigate lower-quality patents. Initial studies based on relatively small samples indicated that patents held or asserted by PAEs are of higher than normal quality, in the sense that they were more highly-cited and had wider technical breadth than was typical of patents overall.<sup>123</sup> Such small-sample studies are often particularly liable to selection biases, however, with respect to the data collected.<sup>124</sup> Large-sample empirical studies have provided various indications of comparatively low quality for PAE-owned patents. For example, such studies have indicated the following: (1) PAE patent portfolios disproportionately comprise patents whose claims were allowed by patent examiners who spend relatively less time reviewing and narrowing claims;<sup>125</sup> (2) PAEs are significantly more likely than

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<sup>120</sup> See, e.g., Lauren Cohen, Umit G. Gurun & Scott Duke Kominers, *The Growing Problem of Patent Trolling*, Harvard University Working Paper (2015) [hereinafter Cohen et al., *Growing Problem*]; Lauren Cohen, Umit G. Gurun & Scott Duke Kominers, *Patent Trolls: Evidence from Targeted Firms*, NBER Working Paper No. 20322 (2015) [hereinafter Cohen et al., *Patent Trolls*].

<sup>121</sup> See Christopher A. Cotropia, Jay P. Kesan, and David L. Schwartz, *Unpacking Patent Assertion Entities (PAEs)*, 99 MINN. L. REV. 649 (2014); see also Cohen et al., *Growing Problem*, supra note 120.

<sup>122</sup> See Lauren Cohen, Umit G. Gurun & Scott Duke Kominers, *Empirical Evidence on the Behavior and Impact of Patent Trolls: A Survey 3* (2015), available at <http://ssrn.com/abstract=2708224>.

<sup>123</sup> See, e.g., Timo Fischer & Joachim Henkel, 41 RESEARCH POL’Y 1519 (2012); Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457 (2012); Sannu K. Shrestha, *Trolls or Market-Makers? An Empirical Analysis of Nonpracticing Entities*, 110 COLUM. L. REV. 114 (2010).

<sup>124</sup> Cohen et al., supra note 122, at 11.

<sup>125</sup> Josh Feng & Xavier Jaravel, *Patent Trolls and the Patent Examination Process*, Harv. Univ. Working Paper (2015).

practicing entities (PEs) to have patent claims invalidated;<sup>126</sup> (3) PAEs tend to litigate patents that are older and closer to expiration than PEs do.<sup>127</sup>

There is also evidence that PAEs engage in distinctive forum-shopping behavior, a possibility suggesting that the practices of a select number of judicial districts, perhaps mainly one pair of districts, are, for better or worse, particularly favorable to PAEs. Forum shopping is the subject of the next subsection.

#### 4. Forum Shopping and Selling

A patent owner commonly has a wide choice of fora in which to file suit, often including all or nearly all of the nation's ninety-four district courts and sometimes including a further administrative forum, the International Trade Commission (ITC). By act of Congress, "[a]ny civil action for patent infringement may be brought in the judicial district where the defendant resides, or where the defendant has committed acts of infringement and has a regular and established place of business."<sup>128</sup> Congress has included in another section of the same title of the U.S. Code a definition of "residency" "[f]or all venue purposes."<sup>129</sup> This definition provides in part that "an entity with the capacity to sue and be sued in its common name under applicable law" resides "in any judicial district in which such defendant is subject to the court's personal jurisdiction with respect to the civil action in question."<sup>130</sup> The U.S. Court of Appeals for the Federal Circuit has held that this definition determines the scope of residency for purposes of patent venue.<sup>131</sup> As a result, companies that produce consumer products sold throughout the United States are typically able to be sued in any district in the country in which a plaintiff chooses to bring suit.<sup>132</sup>

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<sup>126</sup> John R. Allison, Mark A. Lemley & David L. Schwartz, *How Often Do Patent Assertion Entities Win Patent Suits?*, Working Paper (2015).

<sup>127</sup> Cohen et al., *Patent Trolls*, *supra* note 120; Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls Without Harming Innovators?*, 161 U. PENN. L. REV. 1309 (2014).

<sup>128</sup> 28 U.S.C. § 1400(b).

<sup>129</sup> 28 U.S.C. § 1391(c).

<sup>130</sup> *Id.*

<sup>131</sup> See *VE Holding Corp. v. Johnson Gas Appliance Co.*, 917 F.2d 1574, 1578 (Fed. Cir. 1990) (describing personal jurisdiction as "the first test for venue"); Elizabeth P. Offen-Brown, Note, *Forum Shopping and Venue Transfer in Patent Cases: Marshall's Response to TS Tech and Genentech*, 28 BERKELEY TECH. L.J. 61, 64-65 (2010) (discussing the interpretation of 28 U.S.C. § 1400(b)).

<sup>132</sup> See Jeanne Fromer, *Patentography*, 85 N.Y.U. L. REV. 1444, 1451 (2010) ("[A] patent plaintiff may frequently choose to initiate a lawsuit in virtually any federal district court."); Liang, *supra* note 131, at 39 (noting that patentees commonly can sue in essentially any



For at least some patentees, there is an alternative forum beyond the district courts—namely, the International Trade Commission (ITC), an independent agency created “[t]o protect domestic industry from unfair trade practices.”<sup>133</sup> Under § 337 of the Tariff Act, a patent holder engaged in U.S.-based activities that are threatened by patent infringement<sup>134</sup> can file a complaint alleging an unfair trade practice based on patent infringement and, after a bench trial before an administrative law judge,<sup>135</sup> obtain injunctive relief in the form of an exclusion order prohibiting the importation of specified articles or a cease-and-desist order prohibiting domestic activities involving already imported matter.<sup>136</sup> The ITC cannot provide remedies directed at patent infringement unconnected to importation, and it generally lacks power to award damages.<sup>137</sup> But the ITC generally offers complaining parties the advantage of speed: although ITC litigation apparently tends to cost about as much as district court litigation,<sup>138</sup> ITC litigation tends to be much faster. The average length of ITC proceedings is generally under 20 months<sup>139</sup>—a span approximately equal to or less than the typical time to obtain a claim construction order in district court proceedings.<sup>140</sup> A further advantage for prevailing parties is a near certainty of injunctive relief: whereas, in the wake of *eBay Inc. v. MercExchange, L.L.C.*,<sup>141</sup> district courts

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district “[b]ecause many patents find use in everyday commercial products sold nationwide”).

<sup>133</sup> Sapna Kumar, *The Other Patent Agency: Congressional Regulation of the ITC*, 61 FLA. L. REV. 529, 544 (2009).

<sup>134</sup> *Id.* at 534 (discussing the domestic-industry requirement for ITC complainants).

<sup>135</sup> Sapna Kumar, *Expert Court, Expert Agency*, 44 U.C. DAVIS L. REV. 1547, 1557 (2011)

<sup>136</sup> 19 U.S.C. § 1337(d)-(f); Thomas F. Cotter & John M. Golden, *Empirical Studies Relating to Patents—Remedies*, in 2 THE ECONOMICS OF INTELLECTUAL PROPERTY LAW (B. Depoorter, P. Menell & D. Schwartz eds., forthcoming) (noting the ITC’s power to issue exclusion and cease-and-desist orders).

<sup>137</sup> See Cotter & Golden, *supra* note 136 (describing remedies available in the ITC).

<sup>138</sup> AIPLA 2015 SURVEY, *supra* note 18, at 37-38 (listing median estimated litigation costs for all patent-infringement suits and for § 337 proceedings before the ITC).

<sup>139</sup> U.S. INTERNATIONAL TRADE COMMISSION, ANNUAL PERFORMANCE PLAN, FY 2015-2016 AND ANNUAL PERFORMANCE REPORT, FY 2014, at 11 tab.1 [hereinafter “ITC PERFORMANCE PLAN AND REPORT”] (indicating that the average length of a § 337 investigation was between 13.7 and 19.7 months in each of fiscal years 2010-2014), *available at* [https://www.usitc.gov/documents/usitc\\_2015-2016\\_app\\_and\\_2014\\_apr\\_final.pdf](https://www.usitc.gov/documents/usitc_2015-2016_app_and_2014_apr_final.pdf).

<sup>140</sup> See *supra* text accompanying notes \_\_.

<sup>141</sup> 547 U.S. 388 (2006).

have declined to grant permanent injunctions with some regularity,<sup>142</sup> the award of injunctive relief by the ITC remains substantially automatic.<sup>143</sup>

The greater availability of injunctive relief has apparently helped make the ITC an increasingly popular forum for patent-infringement litigation initiated by PAEs, which commonly have difficulty obtaining injunctive relief in district courts.<sup>144</sup> Nonetheless, the overall number of ITC patent-infringement proceedings remains low compared to the number of district court cases. Whereas several thousand patent suits are initiated annually in district courts,<sup>145</sup> the ITC lists less than 80 total § 337 proceedings as having been instituted in every fiscal year from 2010 on.<sup>146</sup> Consequently, this article focuses on concerns with district court litigation.

With respect to the district courts, the evidence of rampant forum shopping is strong. The broad provision for venue in patent cases has enabled a remarkable level of concentration of new patent suits in two federal districts commonly lying far from the centers of infringers' operations, the District of Delaware and the Eastern District of Texas.<sup>147</sup> According to data compiled by Lex Machina,<sup>148</sup> more than 40% of the 5,000 or more new patent-

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<sup>142</sup> See Cotter & Golden, *supra* note 136 (observing that various empirical “studies have tended to show that post-*eBay* courts have granted motions for permanent injunctions about 75% of the time”).

<sup>143</sup> Kumar, *supra* note 135, at 1557 (“Once the ITC determines that a complainant’s patent has been infringed, it very rarely denies an exclusion order.”); see also Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 16 (2012) (showing a 100% grant rate for injunctions in ITC proceedings from 2000 to 2011 in which the complainant prevailed). *But cf.* Cotter & Golden, *supra* note 136 (noting the decision of the President, acting through the U.S. Trade Representative, to abrogate a set of ITC exclusion and cease-and-desist orders on policy grounds).

<sup>144</sup> See Cotter & Golden, *supra* note 136 (reporting that empirical studies have found that, in the wake of *eBay*, “a patent owner’s status as a patent assertion entity was substantially associated with denial of injunctive relief”).

<sup>145</sup> See *supra* text accompanying notes \_\_.

<sup>146</sup> ITC PERFORMANCE PLAN AND REPORT, *supra* note 139, at 72 tab.C.2 (listing numbers of unfair import investigations and ancillary proceedings for fiscal years 2010 to 2016).

<sup>147</sup> See J. Jonas Anderson, *Court Competition for Patent Cases*, 163 U. PA. L. REV. 631, 632 (2015) (“[N]early half of the six thousand patent cases filed in 2013 were filed in just two [of 94 districts]: the District of Delaware and the Eastern District of Texas.”); Klerman & Reilly, *supra* note 20 (noting that “the Eastern District of Texas emerged in the mid-2000s as the favored forum [for patent suits], despite lacking major population, corporate, or technology centers”); *id.* (“The District of Delaware’s share of patent cases has long exceeded what one would expect based on its general civil case filings or its location in relation to technology centers.”).

<sup>148</sup> Lex Machina is a company that compiles and makes available data on intellectual property litigation in the United States, with information being made freely available to “qualifying

infringement suits filed in each year from 2012 through 2015 have been filed in one or the other of these districts, and in 2015 nearly 45% of such suits were filed in the Eastern District of Texas alone.<sup>149</sup> Procedural and administrative differences between districts, such as local rules that help speed cases toward trial, the relative predictability of which judges will hear a patent suit within the chosen district, and the perceived nature of the jury pool,<sup>150</sup> are commonly thought to account for much of the attraction of the districts favored by plaintiffs. Some commentators have argued that districts like Delaware and the Eastern District of Texas have deliberately engaged in “forum selling” by adopting local rules and practices that are specifically designed to make their courts appealing to patent-owning plaintiffs.<sup>151</sup>

Evidence suggests that PAEs and other nonpracticing entities (NPEs) behave differently from other patent owners in their choices of districts in which to bring suit. Three of this Article’s coauthors have found that patent suits brought by NPEs are differentially more concentrated in Eastern District of Texas.<sup>152</sup> Likewise, John Allison, Mark Lemley, and David Schwartz have found that, among suits litigated to judgment, only 8% of such cases brought by PEs were filed in the Eastern District of Texas, whereas 27% of such cases brought by NPEs were.<sup>153</sup>

While the practice of forum selection is often defended as a legitimate legal practice,<sup>154</sup> the apparent intensity of forum shopping at the district-court

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public interest users” such as government officials and university scholars. Lex Machina, Public Interest, <https://lexmachina.com/public-interest/> (last visited Dec. 21, 2015).

<sup>149</sup> Data from Lex Machina, <https://law.lexmachina.com> (current through Dec. 21, 2015).

<sup>150</sup> An unusually high win rate for patentees in jury trials in the Eastern District of Texas might help explain its popularity with plaintiff patentees. See Leychkis, *supra* note 147, at \_\_\_ (reporting a 90% win rate for patentees in jury trials in the Eastern District of Texas, as opposed to the national win rate of 68%).

<sup>151</sup> See Anderson, *supra* note 147, at 634-35 (hypothesizing that “forum shopping in patent law is driven, at least in part, by federal district courts competing for litigants ... primarily through procedural and administrative differentiation”); Daniel Klerman & Reilly, *supra* note 20 (contending that “judges in the Eastern District [of Texas] have consciously sought to attract patentees and have done so by departing from mainstream doctrine in a variety of procedural areas”); *id.* (“The District of Delaware has many of [procedural] indicators of forum selling ...”); Liang, *supra* note 131, at 43-45 (pointing to procedural factors such as “filing-to-trial time” and low summary-judgment grant rates in explanation of the popularity of venues such as the Eastern District of Texas and District of Delaware).

<sup>152</sup> Cohen et al., *Patent Trolls*, *supra* note 120.

<sup>153</sup> Allison et al., *supra* note 126.

<sup>154</sup> See, e.g., Debra Lynn Bassett, *The Forum Game*, 84 N.C. L. REV. 333, 335 (2006) (contending that “forum shopping is a legitimate, expressly authorized action when more than one forum satisfies the requisite legal criteria”); Mary Garvey Algero, *In Defense of Forum Shopping: A Realistic Look at Selecting a Venue*, 78 NEB. L. REV. 79, 111 (1999) (concluding that “forum shopping should be recognized as a legitimate practice”).

level is at the very least ironic in light of patent law’s use of a centralized court of appeals, the Federal Circuit, specifically to limit forum differentiation.<sup>155</sup> Unlike most civil litigation in the district courts, an appeal in a patent case generally is not heard by the court of appeals for the regional circuit in which the district court sits.<sup>156</sup> Instead, Congress has provided the Federal Circuit with exclusive jurisdiction over cases “arising under” the Patent Act or involving “a compulsory counterclaim arising under” that act.<sup>157</sup> But as indicated above, the relative harmonization of interpretations of substantive patent law that the Federal Circuit has helped promote has left district courts with considerable freedom to differentiate themselves through procedural rules and practice, thereby arguably undermining the goal of uniformity that the creation of the Federal Circuit was meant to promote.<sup>158</sup>

## B. SOCIAL WELFARE CONCERNS WITH PATENT LITIGATION

The patent system is commonly justified on grounds that it advances utilitarian goals of promoting technological progress or of increasing social welfare more generally.<sup>159</sup> But there has long been concern that patents, like other forms of intellectual property rights, can undermine their own asserted aims by acting more as an innovation-sapping tax or rent-seeker’s delight than as a beneficent stimulus for those individuals and businesses that truly move innovation forward.<sup>160</sup> Such concern has become particularly sharp with respect to modern patent litigation.

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<sup>155</sup> F. SCOTT KIEFF ET AL., *PRINCIPLES OF PATENT LAW* 25 & n.101 (6th ed. 2013) (crediting “a spree of forum shopping” as a motivation for the Federal Circuit’s creation); Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 7 (1989) (noting that proponents of the Federal Circuit’s creation contended that “channeling patent cases into a single appellate forum would create a stable, uniform law and eliminate forum shopping”).

<sup>156</sup> See Paul R. Gugliuzza, *Rethinking Federal Circuit Jurisdiction*, 100 GEO. L.J. 1437, 1451 (2012) (“In the vast majority of cases, an appeal from a district court decision will be heard by the court of appeals for the circuit in which the district court is located.”).

<sup>157</sup> 28 U.S.C. § 1295(a)(1).

<sup>158</sup> *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 390 (1996) (“It was just for the sake of such desirable uniformity [in treatment of individual patents] that Congress created the Court of Appeals for the Federal Circuit . . .”).

<sup>159</sup> Golden, *supra* note 37, at 509 (noting the “utilitarian goal that is standard in modern accounts”).

<sup>160</sup> See, e.g., Fritz Machlup & Edith Penrose, *The Patent Controversy in the Nineteenth Century*, 10 J. ECON. HIST. 1, 1 (1950) (“In actual fact, the controversy about the patent of invention is very old . . .”).

## 1. General Social Welfare Concerns

Patent litigation's vagaries, costs, length, and opportunities for forum shopping generate a number of concerns. First, there are concerns raised by high litigation costs. Such costs can encourage so-called nuisance or strike suits whose expected value for patent holders is driven primarily by the accused infringer's expected litigation costs, rather than any estimate of the value of the patented invention.<sup>161</sup> Because of the disconnect between the value of such litigation-cost-driven enforcement activities and the value of the patented invention, there is little reason to believe that such litigation will provide awards to patent holders that are well-tailored to provide proper social incentives. Meanwhile, such suits depress the effective value of innovative activities undertaken by their targets, potentially resulting in inadequate forward-looking incentives for innovation.

On the flip side, anticipated litigation costs can generate an excessive barrier to patent enforcement. Certain patent holders, such as many startup companies, might find that their patents are effectively unenforceable as a result of the patent holders' limited access to capital and limited prospects of having their case cherry-picked for enforcement through contingent-fee representation. Even capital-rich patent holders might find that litigation costs effectively block enforcement of patents of moderate estimated value.<sup>162</sup> As with nuisance suits' effect on the value of others' innovative activities, the resulting depression of patents' effective value is likely to be substantially untethered to the associated inventions' social value.

Aside from litigation costs, there are reasons for concern with the vagaries of litigation outcomes. These concerns seem particularly strong where evidence of forum shopping suggests that some jurisdictions are significantly biased either for or against patent holders relative to others and therefore attract a disproportionately high or low number of patent-infringement filings. But even without such evidence of forum shopping, there could be concern that courts, perhaps particularly courts that use juries to assess patent-infringement damages,<sup>163</sup> are not well equipped to ensure that

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<sup>161</sup> See *supra* text accompanying note 98.

<sup>162</sup> Of course, patent holders might try to bluff their way to a license or settlement in such situations, threatening suit or even sometimes initiating suit with hopes that the claims of infringement can be resolved profitably before the attorney-fee meter runs for too long. But even if such strategies sometimes succeed, they seem unlikely wholly to prevent at least partial loss of patent value as a result of litigation costs and their erosion of the credibility of enforcement threats.

<sup>163</sup> See Thomas F. Cotter, *Reining in Remedies in Patent Litigation: Three (Increasingly Immodest) Proposals*, 30 SANTA CLARA HIGH TECH. L.J. 1, 21 (2013) (expressing a belief

their awards of monetary or injunctive relief reflect proper assessments of relative social value.<sup>164</sup> When economic experts struggle to assign a fraction of an overall product's value to an invention that might constitute only one of hundreds of that product's innovative components, one might justifiably worry that a court's estimate of that fractional value might end up being far too high or far too low.<sup>165</sup> Likewise, one might worry that courts will have difficulty determining when injunctions should be refused or delayed for fear of a windfall from "patent holdup" and when injunctions are necessary to ensure that infringers are sufficiently deterred from eroding patent rights' general value.<sup>166</sup> Although such vagaries might wash out in averages over the mine run of cases,<sup>167</sup> they can raise the level of unpredictability and therefore risk that the patent system creates. To the extent parties or their agents are risk prone or risk averse, such unpredictability generates another source of potential distortion of private-party incentives.<sup>168</sup>

Software-related patents might be a particular focal point for concerns about patent litigation. According to a 2013 report by the Government Accountability Office, software-related patents were at issue in nearly half of the patent-infringement suits filed from 2007 through 2011, with suits over software-related patents accounting for nearly two thirds of defendants in new patent-infringement suits and just under ninety percent of "the increase

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that "the right to trial by jury contributes to the high cost of patent litigation and to overinflated damages awards").

<sup>164</sup> Golden, *supra* note 37, at 580 ("[P]rice setting for patent rights is a difficult, if not substantially unmanageable, task for which courts are likely to be particularly ill equipped."); John M. Golden, "Patent Trolls" and Patent Remedies, 85 TEX. L. REV. 2111, 2150 (2007) (noting that "monetary compensation for patent rights is problematic even when the outlook is not prospective").

<sup>165</sup> See John M. Golden, *Reasonable Certainty in Contract and Patent Damages*, HARV. J.L. & TECH. (forthcoming) (discussing how experts can "generate assessments for reasonable royalties [for patent infringement] that differ by more than a factor of ten and sometimes even more than a factor of hundred").

<sup>166</sup> Further, limitations in the doctrinal bases for refusing remedies under patent law or for limiting anticompetitive behavior under antitrust law could mean that courts are in many cases relatively powerless to prevent patents from being used to generate barriers to entry disproportionate to the social value of incentives for innovation that those barriers create for the patent holders. But this is a problem more with the substantive law than with vagaries of patent litigation itself.

<sup>167</sup> Golden, *supra* note 37, at 580 (noting "classic arguments that [courts'] average correctness suffices to provide proper incentives").

<sup>168</sup> See *id.* at 581 (noting potential relevance of risk aversion).

in defendants over this period.”<sup>169</sup> Consistent with preliminary empirical results from a study by one of this article’s co-authors,<sup>170</sup> GAO also found that suits involving software-related patents had an unusual tendency to persist before the courts, thereby presumably tending to run up higher litigation costs. Specifically, GAO found “a statistically significant difference between suits involving software-related patents, of which 82 percent settled compared with 89 percent of suits that did not involve software-related patents.”<sup>171</sup> Commentators have argued that software-related patents tend to raise particular problems for assessments of patent scope, the validity of patent claims, and the proper value of patent damages.<sup>172</sup> Moreover, a recent Supreme Court decision has cast considerable doubt on the subject-matter eligibility—and thus validity—of many software-related patent claims.<sup>173</sup> As a result, the general concerns with patent litigation and patent examination discussed above are likely to be particularly well justified for software-related patents.<sup>174</sup>

In short, even without considering stresses on the patent system resulting from the activities of PAEs, there are ample causes for concern that patent litigation’s high costs, difficult subject matter, and susceptibility to error or manipulation might undermine patent law’s aim to promote technological progress or social welfare more generally. The next subsection highlights how PAEs have arguably aggravated a number of these causes for concern.

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<sup>169</sup> U.S. GOVERNMENT ACCOUNTABILITY OFFICE, INTELLECTUAL PROPERTY: ASSESSING FACTORS THAT AFFECT PATENT INFRINGEMENT LITIGATION COULD HELP IMPROVE PATENT QUALITY, GAO-13-465, at 21 (2013) [hereinafter “GAO REPORT”].

<sup>170</sup> See John M. Golden, *Software Patents and the Litigation Funnell: The Worst of All Worlds?* (2014) (on file with authors).

<sup>171</sup> GAO REPORT, *supra* note 169, at 25 n.46.

<sup>172</sup> See, e.g., JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 187 (2008) (contending that, because “software is an abstract technology,” software patents are especially likely to “have unclear boundaries and give rise to opportunistic litigation” (emphasis omitted)).

<sup>173</sup> See *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347, 2352 (2014) (holding “that merely requiring generic computer implementation fails to transform [a specified] abstract idea into a patent-eligible invention”).

<sup>174</sup> GAO REPORT, *supra* note 169, at 45 (suggesting that software-related patents might be a better focus of patent reform efforts than any particular class of patent owners, while also noting that “most of the suits brought by [patent monetization entities from 2007 through 2011] involved software-related patents”).

## 2. Concerns with Patent Assertion Entities

To a great extent, concerns with the litigation and licensing activities of PAEs are no more than extensions of concerns about patent litigation more generally. PAEs can act as helpful intermediaries, identifying potential licensees and infringers and providing a means by which patent holders unable to afford litigation can obtain recompense for otherwise unenforceable rights.<sup>175</sup> But many believe PAEs abuse the patent system, exploiting litigation costs, legal vagaries, and hold-up potential to “tax” the work of innovators or consumers of innovation while failing to provide substantial, counterbalancing compensation to patent holders whose rights they acquire.<sup>176</sup> Non-PAE patent holders can abuse the system in similar ways. But at least on average, PAEs might be more effective at exploiting many of the patent system’s rough edges—in part because, compared to patent holders less focused on patent enforcement and licensing, PAEs tend to be less liable to patent-infringement countersuit, less likely to be bothered by a reputation for litigiousness, and possibly more efficient at patent enforcement.<sup>177</sup>

Generally speaking, there seem at least four basic storylines for PAE activity that is abusive or, at least, substantially socially detrimental:

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<sup>175</sup> See EXECUTIVE OFFICE OF THE PRESIDENT, PATENT ASSERTION AND U.S. INNOVATION 3 (2013) (discussing how “[p]atent intermediaries can play a useful social role”); Brian T. Yeh, *An Overview of the “Patent Trolls” Debate*, CRS REPORT FOR CONGRESS R42668, at 6 (2013) (noting defense of PAEs “on the grounds that they actually promote invention by adding liquidity, absorbing some of the risk otherwise borne by investors, and getting more royalties for small inventors”); Golden, *supra* note 37, at 559 (“Even the type of entity that might be viewed as an archetypal ‘patent troll’ ... might be understood ... as a commonly, or at least potentially, useful intermediary in a market for technology.”).

<sup>176</sup> See, e.g., Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2125 (2013) (discussing potential costs imposed by patent assertion entities and contending that “there is little evidence that trolls significantly increase rewards to inventors”); Yeh, *supra* note 175, at 6 (“PAEs have frequently been accused of imposing a ‘tax on innovation’ and undermining or impairing the incentives that patent law aims to create.”). *But cf.* Lemley & Melamed, *supra*, at 2151 n.148 (finding evidence inconclusive on the extent to which “trolls increase or decrease the amounts that fund” innovation and suggesting that trolls’ success might “bid up the prices to patents” and thus increase future returns to innovators).

<sup>177</sup> John M. Golden, *Patent Privateers: Private Enforcement’s Historical Survivors*, 26 HARV. J.L. & TECH. 545, 598 (2013) (discussing potential explanations for “a past tradition of relative restraint in patent rights’ enforcement and acquisition”); see also Christopher A. Cotropia, Jay P. Kesan & David L. Schwartz, *Unpacking Patent Assertion Entities*, 99 MINN. L. REV. 649, 650 (2014) (noting arguments that PAEs “are fundamentally different” from other plaintiffs because “asymmetric stakes” resulting from their general lack of liability to patent-infringement countersuit)



- 1) *“Hold-Up”*: An early concern with PAEs was that, like a mythological troll emerging from under a bridge, PAEs could use patent rights to “ambush” a technology into which a supplier or user had become “locked in,” thereby extracting a ransom that had little to do with the merits of the patented invention.<sup>178</sup> For example, suppose that a computer-chip manufacturer invests \$5 billion in building a facility to produce a computer chip having a specific, arguably patent-infringing design.<sup>179</sup> Suppose also that, after building the facility, the manufacturer would need to spend an additional \$1 billion in “switching costs” to redesign the facility to safely avoid any likelihood of infringement. On the other hand, if the manufacturer had known of the relevant patent before settling on its initial chip design, it could have designed the factory at no extra cost to produce a clearly non-infringing but functionally equivalent chip. In this hypothetical case, the patented invention apparently has added no value, but if asserted after “lock in,” the patent might allow its holder, armed with the threat of an injunction to shut down the plant, to extract as much as \$1 billion from the manufacturer.
- 2) *Exploiting System Vagaries for Unmerited Windfall*: Related to the classic hold-up story but somewhat distinguishable is a “lottery ticket” model under which PAEs exploit vagaries of the patent system to pursue a big and socially unmerited payoff.<sup>180</sup> The value of patent rights can be very difficult to assess, and thus, even if one makes the heroic assumption that present rules regulating patentability are generally socially optimal, there is good reason to believe that courts will err in a substantial number of cases and perhaps by orders of magnitude in assessing patent value. The problem of determining the literal scope of

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<sup>178</sup> See, e.g., Paul J. Heald, *Optimal Remedies for Patent Infringement: A Transactional Model*, 45 HOUS. L. REV. 1165, 1189 (2008) (observing that situations involving high “switching costs” “may cover many scenarios involving patent ‘trolls’”); Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1590-91 (2009) (“The patent troll strategy is to take advantage of ‘lock-in’ that occurs as a result of [sunk cost] investments.”).

<sup>179</sup> Cf. Noel Randewich, *Intel Shelves Cutting-Edge Arizona Chip Factory*, REUTERS, <http://www.reuters.com/article/2014/01/14/us-intel-arizona-idUSBREA0D1F920140114> (Jan. 14, 2014) (noting that an Intel manufacturing plant in Arizona was “originally slated as a \$5 billion project that in late 2013 would start producing Intel’s most advanced chips”).

<sup>180</sup> Lemley & Melamed, *supra* note 176, at 2126 (describing “‘lottery-ticket’ trolls ... playing an uncertain shot at a big payout” in the form of “a big jury award against one or more entrenched players”).

patent claims has tied courts in knots for decades,<sup>181</sup> and juries may need to assess an arguably even trickier question of infringement by equivalence if an accused product or process does not literally infringe.<sup>182</sup> Likewise, questions of patentability often combine hard technical inquiries with fuzzy standards.<sup>183</sup> Finally, in part because of difficulty in apportioning value between technologies that only appear commercially in larger bundles (e.g., the technology permitting one to switch “pages” on a smartphone by swiping a finger from left to right across the screen), expert opinions on “reasonable royalty” amounts for patent damages frequently differ by more than a factor of 10 or even 100.<sup>184</sup>

- 3) “*Bottom Feeding*”: In accordance with a third storyline, at least some PAEs—characterized by Mark Lemley and Douglas Melamed as “‘bottom feeder’ trolls”<sup>185</sup>—specialize in exploiting costs of litigation, legal advice, or legal uncertainty to extort value that is insufficiently tied to the merits of the patented inventions. A PAE could target a company at a particularly vulnerable moment: conventional wisdom holds “that companies are often sued for patent infringement shortly before their initial public offering.”<sup>186</sup> Under an alternative approach, PAEs can sue

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<sup>181</sup> John M. Golden, *Construing Patent Claims According to Their “Interpretive Community”*: A Call for an Attorney-Plus-Artisan Perspective, 21 HARV. J.L. & TECH. 321, 323 (2008) (noting that, despite “[s]everal developments ... intended to bring greater predictability and rationality to claim construction,” “claim construction jurisprudence continues to bear hallmarks of unpredictability”).

<sup>182</sup> See Timothy R. Holbrook, *Equivalency and Patent Law’s Possession Paradox*, 23 HARV. J.L. & TECH. 1, 46 (2009) (observing that the doctrine of equivalents increases uncertainty about patent scope).

<sup>183</sup> Cf. Jason Rantanen, *The Federal Circuit’s New Obviousness Jurisprudence: An Empirical Study*, 16 STAN. TECH. L. REV. 709, 717 (2013) (discussing “the real challenge” involved in determining what inventions fail to satisfy patent law’s nonobviousness requirement).

<sup>184</sup> Golden, *supra* note 11, at 2151 (noting party positions on reasonable royalties that differed by factors of about 120 and 200); see also, e.g., *Apple, Inc. v. Motorola, Inc.*, No. 1:11-cv-08540, 2012 WL 1959560, at \*3-7 (N.D. Ill. May 22, 2012) (reporting expert opinions for reasonable royalty damages differing by a factor of 140 for one patent and by a factor of 350 for another), *rev’d in irrelevant part and vacated in irrelevant part*, 757 F.3d 1286 (Fed. Cir. 2014). To the extent infringement has not yet occurred, the potential for an unmerited windfall might be effectively capped—at least in terms of average expectations—by the switching costs discussed in relation to “hold-up.” But if a PAE simply seeks past damages, the PAE has a purer play in the litigation “lottery.”

<sup>185</sup> Lemley & Melamed, *supra* note 176, at 2126.

<sup>186</sup> Tom Ewing, *Indirect Exploitation of Intellectual Property Rights by Corporations and Investors: IP Privateering and Modern Letters of Marque and Reprisal*, 4 HASTINGS SCI. & TECH. L.J. 1, 70 (2012).

or send “demand letters” to hundreds and even thousands of potential targets, including relatively small firms and startups that are only end users of the relevant technology.<sup>187</sup> Notoriously, PAEs have threatened suit against several thousand restaurants and hotels for providing wireless Internet service to customers<sup>188</sup> and also against various small businesses for “attaching a document scanner to an office computer system.”<sup>189</sup> By offering a license for an amount at or substantially less than the expected cost of litigation—or perhaps even at or substantially less than the cost of obtaining a trustworthy attorney opinion on the relevant accusation<sup>190</sup>—such PAEs can induce licensing or settlement payments from substantial numbers of targeted entities. The credibility of threats to sue can be bolstered by the systemic vagaries described above, and accused parties might be disadvantaged by an asymmetry in litigation costs. Patent suits might tend to be substantially cheaper for PAEs than their targets because PAEs can enjoy economies of scale in litigation and PAEs’ business models can make them less susceptible to substantial discovery or other common litigation costs. Moreover, there is a “public goods” problem associated with defense against patent assertions. A decision that invalidates a patent or significantly restricts its scope can generate “external benefits” for an accused infringer’s competitors and for consumers. Thus, collusive settlements with patentees are possible, and defenses against patent infringement might be expected to occur less than is socially optimal.<sup>191</sup>

- 4) *Sponsored Harassment*: A final story, related to the point about collusive settlements, is that PAEs can be sponsored by parties who benefit from the PAEs’ demands or suits against others regardless of whether those actions are legally successful. One example of a suspected case of “commissioned” patent assertion involves MobileMedia Ideas LLC, a company that acquired over 100 patents and

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<sup>187</sup> See Edward Wyatt, *Obama Orders Regulators to Root Out ‘Patent Trolls’*, N.Y. TIMES, June 4, 2013 (noting that one PAE “threatened to sue 8,000 coffee shops, hotels and retailers for patent infringement because they had set up Wi-Fi networks for their customers”).

<sup>188</sup> *Id.*; see also Paul R. Gugliuzza, *Patent Litigation Reform: The Courts, Congress, and the Federal Rules of Civil Procedure*, 95 B.U. L. REV. 279, 280 (2015) (discussing suits against hotels, restaurants, and “popular podcasters”).

<sup>189</sup> Wyatt, *supra* note 187.

<sup>190</sup> Smith, *supra* note 10, at 208 (discussing patent assertion entities “sen[t] mass threatening letters targeting franchised hotels, coffee shops, stores, and restaurants” for their use of wireless technology and offered licensing fees of “\$2,300 to \$5,000”).

<sup>191</sup> Golden, *supra* note 177, at 616-17 (describing various “factors ... than can plausibly tend to depress patent challenges below the socially optimal level”).

patent applications from part owners Nokia and Sony within months of its formation, and shortly thereafter began suing smartphone competitors such as Apple and Research in Motion.<sup>192</sup>

The actual nature of the impact of PAEs on the patent system has been a matter of heated debate in both academic and policy-making circles, particularly in relation to calls for litigation reform. In March 2015, fifty-one scholars signed onto a letter to members of Congress stating that “a large and increasing body of evidence indicates that the net effect of patent litigation is to raise the cost of innovation and inhibit technological progress.”<sup>193</sup> The letter noted that various existing studies indicated, *inter alia*, that (1) “the majority of lawsuits are now filed by so-called ‘patent assertion entities’”; (2) “PAE litigation has been costing firms tens of billions of dollars per year since 2007”; (3) “[s]tartups and venture-backed firms, especially, report significant operational impacts from PAE lawsuits”; and (4) PAE lawsuits are associated “with a decline of billions of dollars of venture capital investment.”<sup>194</sup> Later that same month, a counter-letter from forty scholars disputed many of the earlier letters’ contentions, arguing that (1) “[t]he claim that patent trolls bring the majority of patent lawsuits is profoundly incorrect”; (2) “the claim that patent trolls cost U.S. businesses \$29 billion a year in direct costs has been roundly criticized”; and (3) “[s]tudies cited for the proposition that [non-practicing entity] litigation is harmful to startup firms, that it reduces R&D, and that it reduces venture capital investment are likewise deeply flawed.”<sup>195</sup> While expressing openness “to sensible, targeted reforms that consider the costs created by both plaintiffs and defendants in patent litigation,” the letter warned that “tinkering with the engine of innovation—the U.S. patent system—on the basis of flawed and incomplete evidence threatens to impede this country’s economic growth.”<sup>196</sup>

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<sup>192</sup> Ewing, *supra* note 186, at 63. Outside the patent space but still in the realm of intellectual property, Microsoft is thought by some to have deliberately used agreement on a \$16.6 million Unix license from the SCO Group as a way to support a copyright campaign by SCO against Linux, IBM, and other open-source-software targets in the early 2000s. *Id.* at 56-57 (observing that Microsoft’s payment to SCO apparently occurred “shortly after the litigation against IBM began”).

<sup>193</sup> Letter to Congress 1 (Mar. 2, 2015), *available at* [http://www.utdallas.edu/~ugg041000/IPScholarsLettertoCongress\\_March\\_2\\_2015.pdf](http://www.utdallas.edu/~ugg041000/IPScholarsLettertoCongress_March_2_2015.pdf). Three of this article’s co-authors were signators of this letter. *Id.* at 3-4 (listing signators).

<sup>194</sup> *Id.* at 1.

<sup>195</sup> Letter to Chairman Grassley, Ranking Member Leahy, Chairman Goodlatte, and Ranking Member Conyers 1 (Mar. 20, 2015), *available at* <http://cpip.gmu.edu/wp-content/uploads/2015/03/Economists-Law-Prof-Letter-re-Patent-Reform.pdf>.

<sup>196</sup> *Id.* at 1-2.

This article does need to resolve hotly debated questions about whether PAEs are a plague on innovation. For purposes here, it seems enough to note two things. First, there is the generally accepted fact that PAE suits and the number of targets of PAE suits have grown substantially over the last two decades, with the annual numbers of new PAE suits and PAE-suit defendants now tending to number in the thousands and to account for something on the order of half of all new patent suits and suit defendants.<sup>197</sup> Second, concerns about PAE activities highlight various weaknesses of the patent system that exist independently of PAEs:<sup>198</sup> (1) very limited pre-issuance review at the USPTO that leaves substantial doubt about the validity and scope of many issued patents;<sup>199</sup> (2) high litigation costs, out-of-pocket or otherwise, that can attract use of patent litigation for purposes of harassment and, on the other hand, can prevent plaintiffs from seeking relief in district courts or deter defendants from mounting a defense even when it would be socially desirable for them to do so;<sup>200</sup> and (3) vagaries with respect to the likely outcomes of patent litigation that can (a) deter risk-averse parties from suit or defense even when such would be socially desirable, (b) frustrate settlement efforts even when there are likely social gains from trade, and (c) encourage certain patent holders to play the “patent litigation lottery” in a rent-seeking pursuit of windfalls disproportionate to the social value of the patented invention.

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<sup>197</sup> See, e.g., Cotropia, Kesan & Schwartz, *supra* note 177, at 649 (observing that, “[i]n the last decade, the landscape of patent litigation has radically shifted” toward enforcement by PAEs); James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 390-91 (2014) (reporting that, “while [non-practicing entities (NPEs)] have been around for a long time, over the last few years, NPE litigation has reached a wholly unprecedented level,” with “2150 unique companies ... mount[ing] 5842 defenses in lawsuits initiated by NPEs” in 2011); David S. Olson, *On NPEs, Holdups, and Underlying Faults in the Patent System*, 99 Cornell L. Rev. Online 140, 140 (2014) (noting that the authors of two opposing articles relating to debates over non-practicing patent entities (NPEs) “agree that there has been very rapid growth in NPE patent assertion”);

<sup>198</sup> Cf. David S. Olson, *On NPEs, Holdups, and Underlying Faults in the Patent System*, 99 CORNELL L. REV. ONLINE 140, 149 (2014) (“[I]n some ways, patent assertions by [non-practicing entities] do not raise unique problems ... so much as they increase the severity of pre-existing problems.”).

<sup>199</sup> See *supra* text accompanying notes \_\_.

<sup>200</sup> See *supra* text accompanying notes \_\_. AIPLA data indicates that the costs of defending patent-infringement suits brought by PAEs are generally roughly comparable to those of defending against suits by other forms of patentees, even though frequently somewhat less than the latter when similar amounts are at stake. See AIPLA 2015 SURVEY, *supra* note 18, at 37-38 (listing median estimated litigation costs for infringement suits with various amounts at stake).

Regardless of the existence or nonexistence of PAEs, such general weaknesses of the patent system might themselves be understood to justify this article's proposal for patent litigation administrative review. After all, as early as 1813, Thomas Jefferson proposed that, to "better guard our citizens against harassment by law-suits," questions about the validity of patents might best be turned over to "a board of Academical professors," instead of the courts.<sup>201</sup> The later institution of pre-issuance examination by professional patent examiners was a step toward realization of Jefferson's vision but, given the severe limitations on such examination,<sup>202</sup> a far from complete one. This article's proposal can be understood as taking a further step toward Jefferson's vision.<sup>203</sup>

### III. PROPOSAL FOR ADMINISTRATIVE REVIEW

This Part of the article motivates and then describes a proposed framework for administrative review of patent litigation. Section III.A discusses the basic economic theory for how a process of early-stage administrative review can promote dispute resolution and help screen out weak claims and arguments, supporting belief in the information-generating value of such review through a high-level economic model. Section III.A then presents a more specific economic model for how such administrative review can increase the expected value of higher-quality claims and decrease the expected value of lower-quality claims, thereby promoting more desirable patterns of behavior for the non-pursuit, settlement, and termination of litigation. Section III.B lays out the particular framework for administrative review proposed here, outlining its processes and consequences as well as proposed limitations. Section III.B also features a third economic model showing how parties' own interests in limiting the private costs of administrative review can help ensure that this review has a net positive effect on overall social welfare. Section III.C then explains how various recent or proposed adjustments to the patent system do not obviate the desirability of early-stage administrative review.

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<sup>201</sup> 6 Thomas Jefferson, *The Papers of Thomas Jefferson: Retirement Series* 384 (J. Jefferson Looney ed., 2009)

<sup>202</sup> *See supra* text accompanying notes \_\_.

<sup>203</sup> *See infra* text accompanying notes \_\_.

## A. ECONOMIC ANALYSIS OF ADMINISTRATIVE REVIEW

### 1. Basic Economic Theory

As discussed in Part II, hallmarks of U.S. patent litigation are high costs, delay, and uncertainty that have helped create a perceived litigation morass. Compared to a socially optimal situation, patent holders likely experience substantially too frequent and great difficulty in vindicating valid claims of infringement. Likewise, innovators and technology users likely experience far too frequent and great difficulty in clearing others' patent rights and defeating unjustified charges of infringement.

If preliminary administrative review of patent litigation meets even relatively minimal standards of substantive accuracy, the alteration of incentives that it effects can limit distortions, relative to patent law's fundamental objectives, created by high litigation costs, delay, and uncertainty. First, such administrative review can facilitate parties' early exchange of relatively high "diagnosticity/cost" information as a result of one or the other's pursuit of a preliminary judgment.<sup>204</sup> Such review can also provide parties with a relatively quick, cheap, and informative preview of how adjudication in the courts might proceed. Both of these effects can in turn promote early convergence of parties' assessments of a case's economic potential and thus, presumably, the likelihood of early case termination or settlement.<sup>205</sup> Further, administrative review can alter the balance of post-review incentives by informing parties' continuing assessments of litigation value and by likewise informing later judicial decision-making. More specifically, under a version of our administrative-review proposal, an affirmative determination by the administrative review panel triggers a presumption of attorney fee shifting for further litigation relating to that determination. This presumption can change quite directly the parties' assessments of the value of continued litigation.

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<sup>204</sup> See Kaplow, *supra* note 89, at 1225 (suggesting, "[a]s an initial, rough cut at the problem [of ordering steps in multistage adjudication], it seems that the step with a higher diagnosticity/cost ratio should be earlier"); cf. Reilly, *supra* note 7, at 239 (advocating "staged litigation" in which "[d]iscovery is limited to one or a few issues, preferably less discovery-intensive issues, until the plaintiff demonstrates a meritorious case by prevailing on the initial issue(s)").

<sup>205</sup> Bert I. Huang, *Trial by Preview*, 113 COLUM. L. REV. 1323, 1335 (2013) (discussing "the familiar economic model, in which an increase in information sharing leads to convergence in the parties' forecasts about the outcome—and hence to a greater chance of settlement"); see also Golden, *supra* note 32, at 2087 (noting how an economic model of party incentives captures the "common understanding" that "discrepancies in parties' assessments of the probability of a litigation win or loss can frustrate possibilities for settlement"); cf. Robert G. Bone, *Modeling Frivolous Suits*, 145 U. PA. L. REV. 519, 593 (1997) (suggesting a process of "early judicial screening of frivolous suits based on a preliminary review of the merits").

Of course, there can be concerns that social costs of administrative review will swamp its social benefits. But if private parties must generally pay for that review, we can hope that they will restrain their use of the process so that its social benefits tend to outweigh its costs. Preliminary calculations suggest that this is likely to be the case, at least as long as either (1) the review process deters a sufficiently nontrivial fraction of lawsuits or legal contentions that are of low quality or (2) the review process properly identifies a sufficiently nontrivial fraction claims or defenses as low quality and thereby facilitates their more socially desirable resolution.

## 2. A First Economic Model for Administrative Review

A high-level economic model highlights the potentially large benefits of preliminary administrative review and suggests that such benefits are likely to be substantially robust against decision-making errors as long as relatively minimal requirements for favoring stronger claims over weaker ones are met. The model operates as follows:

1. A plaintiff  $P$  considers suing a defendant  $D$ .
2. The true underlying suit quality is represented by  $\theta$ , a quantity known to  $P$  and  $D$ , but not directly verifiable by a court. The probability that the court finds for the plaintiff is  $\pi(\theta)$ , and this probability is increasing in  $\theta$ . If the court finds for the plaintiff, it awards damages  $\delta > 0$  to the plaintiff; otherwise, it enforces a “penalty”  $\gamma \geq 0$  on the plaintiff that is transferred to the defendant in the manner of a court award of attorney fees. The plaintiff faces an administrative review cost  $c_p^1$  and incurs an additional cost  $c_p^2$  for litigating through a full court decision. The defendant must pay  $c_d$  to see the suit through a decision by the court.
3. If the plaintiff files suit, the defendant expects to receive:

$$-\pi(\theta)\delta + (1 - \pi(\theta))\gamma - c_d = -\pi(\theta)(\delta + \gamma) - (c_d - \gamma)$$

if it pursues a court decision. We assume that the defendant settles for  $\delta'$  otherwise. Hence, the defendant pursues a decision if and only if

$$\delta' \geq \pi(\theta)(\delta + \gamma) + (c_d - \gamma).$$

4. The plaintiff will choose the settlement amount  $\delta' = \pi(\theta)(\delta + \gamma) + (c_d - \gamma)$ , so that the defendant is indifferent between settling and going to court. Assuming for simplicity that a party chooses against continued litigation when it is a matter of such economic indifference, we see that the plaintiff will bring suit if and only if



$$0 < \pi(\theta)(\delta + \gamma) + (c_d - \gamma) - c_p^1 = \pi(\theta)(\delta + \gamma) - (c_p^1 + \gamma - c_d).$$

Note that if the cost to the defendant,  $c_d$ , is higher than  $c_p^1 + \gamma$ , then the plaintiff will always bring suit.

5. Once suit is announced (i.e., after the payment of  $c_p^1$ , but before settlement negotiations), pre-litigation administrative review yields a signal  $\sigma$  that is informative about the probability that the court will find for the plaintiff; specifically, we assume that the probability density of  $\sigma$  given  $\theta$ ,  $f(\sigma | \theta)$ , increases in  $\theta$  in the sense of first-order stochastic dominance. Now, we have  $\pi = \pi(\sigma, \theta)$ , increasing in both arguments. We assume that  $\pi(\sigma, \theta)$  and  $\pi(\theta)$  are equally responsive to  $\theta$ , in the sense that their derivatives with respect to  $\theta$  are equal:  $\pi_{\theta}(\sigma, \theta) = \pi_{\theta}(\theta)$ . The defendant now expects to receive:

$$\begin{aligned} -E_{\sigma}[\pi(\sigma, \theta) | \theta]\delta + (1 - E_{\sigma}[\pi(\sigma, \theta) | \theta])\gamma - c_d = \\ -E_{\sigma}[\pi(\sigma, \theta) | \theta](\delta + \gamma) - (c_d - \gamma) \end{aligned}$$

if he pursues a court decision. Consequently, the plaintiff brings suit if and only if:

$$0 < E_{\sigma}[\pi(\sigma, \theta) | \theta](\delta + \gamma) - (c_p^1 + \gamma - c_d).$$

Under the above model, between a situation with the pre-litigation administrative review system and a situation in which pre-litigation administrative review is absent, the difference in expected return for the plaintiff is:

$$(E_{\sigma}[\pi(\sigma, \theta) | \theta] - \pi(\theta))(\delta + \gamma) = E_{\sigma}[\pi(\sigma, \theta) - \pi(\theta) | \theta](\delta + \gamma) \quad (1)$$

$$= (\delta + \gamma) \int [\pi(\sigma, \theta) - \pi(\theta)] f(\sigma | \theta) d\sigma \quad (2)$$

where we have used the fact that  $\int f(\sigma | \theta) d\sigma = 1$ .

Now, we note that, as  $\pi_{\theta}(\sigma, \theta) = \pi_{\theta}(\theta)$ , for fixed  $\sigma$  we must have  $\pi(\sigma, \theta) - \pi(\theta) = \pi(\sigma, \theta') - \pi(\theta')$  for all  $\theta, \theta'$ . Suppose that  $\theta > \theta'$ . It follows that:

$$\int [\pi(\sigma, \theta) - \pi(\theta)] f(\sigma | \theta) d\sigma = \int [\pi(\sigma, \theta') - \pi(\theta')] f(\sigma | \theta) d\sigma \quad (3)$$

$$\geq \int [\pi(\sigma, \theta') - \pi(\theta')] f(\sigma | \theta') d\sigma, \quad (4)$$

where the inequality follows from first-order stochastic dominance and the fact that the quantity  $[\pi(\sigma, \theta') - \pi(\theta')]$  is increasing in  $\sigma$ .

Thus, we see that administrative review generates a difference in expected return for the plaintiff that is increasing in  $\theta$ . As long as administrative review increases the likelihood of a plaintiff winning when its case is absolutely ironclad ( $\theta = 1$ ) and reduces that likelihood when the plaintiff's case is truly meritless ( $\theta = 0$ ), it follows that there is some  $\theta^*$  such that all plaintiffs with cases stronger than  $\theta^*$  return more (in expectation) after the addition of the review stage, while all plaintiffs with cases weaker than  $\theta^*$  do worse. Given the fixed costs of filing,  $c_p^1$ , this means that plaintiffs with cases of quality higher than  $\theta^*$  are more likely to file (in equilibrium) given the review, and plaintiffs with cases of quality lower than  $\theta^*$  are less likely to file. Moreover, even for suits that are brought under both regimes, the higher-quality suits return more in expectation in the presence of pre-litigation review, and the lower-quality suits return less.

The results are strengthened if pre-litigation administrative review reduces court costs for a side that prevails in review, as this further increases the gains that this side receives upon pursuing suit. The results are qualitatively unchanged if settlement is not possible, as in that case, too, the comparison across litigation regimes hinges on the sign of equation (1) above.

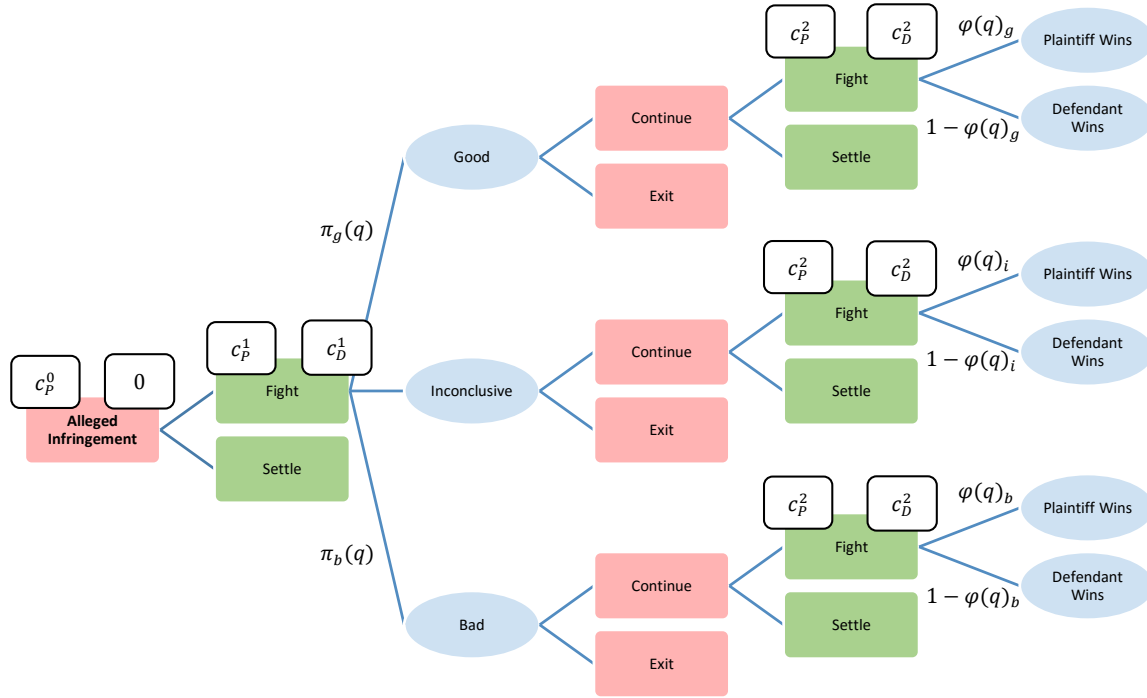
### 3. A Second, Calibrated Model for Administrative Review

We now calibrate a version of a discrete-time patent assertion model to assess in greater detail the potential costs and benefits of pre-litigation administrative review by a body we call the Patent Litigation Review Board (PLRB). Particularly in the illustrative examples featured here, parameter values for use in the model are intended to be plausible, real-world figures corresponding to values suggested by pre-existing research and data as well as what we believe to be reasonably conservative estimates of the degree to which PLRB decisions will shift subsequent district court results.

#### a. Model Structure

Consider a discrete-time, three-period setup where patent assertion and litigation decisions occur as indicated in the diagram below.

**Figure 1: Discrete-Time Assertion Model with Parameters**



**Model Parameters**

$c_P^0$  = cost of bringing suit (e.g., cost of pre – litigation preparation)

$c_P^1$

= plaintiff payment to PLRB

+ plaintiff cost of gathering limited supporting documentation and brief drafting

$c_D^1$  =

defendant cost of gathering limited supporting documentation and brief drafting

$c_P^2$  = cost of court process for plaintiff

$c_D^2$  = cost of court process for defendant

$\pi_g(q)$  =

probability the PLRB rules substantially in favor of the plaintiff's case – a function of patent claim quality  $q$

$\pi_b(q)$  =

probability the PLRB rules substantially in favor of the defendant's case – a function of patent claim quality  $q$

$1 - \pi_g(q) - \pi_b(q)$  = probability the PLRB deems the case inconclusive

$\varphi(q)_g$  = probability that the court rules in favor of the plaintiff following a positive PLRB determination  
 $\varphi(q)_i$  = probability that the court rules in favor of the plaintiff following an inconclusive PLRB determination  
 $\varphi(q)_b$  = probability that the court rules in favor of the plaintiff following a negative PLRB determination

$\delta$  = transfer from defendant to plaintiff if the plaintiff wins  
 $\gamma$  = transfer from plaintiff to defendant if the defendant wins

Settlement Amount  
= constant fraction  $s$  of  $E(\text{proceeds})$  if Fight at that node

The choice of assertion occurs at time  $T_0$ . If assertion is chosen by the patent holder ( $P$ ) at a cost  $c_P^0$ , the decision then comes to the alleged infringer ( $D$ ). At that point,  $D$  can decide whether to settle with  $P$  or to fight the infringement allegation. If  $D$  settles, she will pay out a quantity set by the model. In various variants of the model, this quantity is the product of a “settlement fraction”  $s$  and some measure of the stakes in the suit (e.g., the amount that the plaintiff would expect to receive through settlement or a court award if the case continues). If she chooses to fight, the case will automatically be reviewed by the PLRB. This will cost  $D$  the amount  $c_D^1$ , which is the cost to  $D$  of collecting and providing the limited supporting documentation, including appropriate briefing, to make her case to the PLRB. The PLRB process for  $P$  will cost  $c_P^1$ , which includes not only the cost of collecting and providing the limited supporting documentation to make his case for infringement to the PLRB, but also an additional fixed fee to at least partially cover the cost of the process.

The PLRB’s function will not be to provide an extensive preliminary judgment<sup>206</sup> in every case. Instead, in response to party filings, the PLRB will identify and flag particularly strong or weak positions on either side, delivering one of the following forms of judgment:

1. “Bad”: Judgment predominantly and substantially adverse to the patent holder—e.g., a judgment that one more assertions made by the patent holder are clearly incorrect (meritless), without substantially countervailing conclusions in favor of the patent holder. This happens with probability  $\pi_b(q)$ .

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<sup>206</sup> Cf. Geoffrey P. Miller, *Preliminary Judgments*, 2010 U. ILL. L. REV. 165, 167 (using the term “preliminary judgment” in a somewhat different sense to refer to a proposed form of “tentative assessment of the merits of the case, based on the same sorts of information that the courts already consider on motions for summary judgment”).

2. “Good”: Judgment predominantly and substantially favorable to the patent holder—e.g., a judgment that one more assertions made by the patent holder are clearly correct, without substantially countervailing conclusions in favor of the patent challenger. This happens with probability  $\pi_g(q)$ .
3. “Inconclusive”: An inconclusive judgment, which happens with probability  $1 - \pi_g(q) - \pi_b(q)$ , and can result when the PLRB draws no conclusions in favor of one side or the other or when the PLRB’s conclusions are essentially balanced in the sense that they give partial and substantially countervailing victories to each side.

Following the PLRB’s decision,  $P$  must decide whether to continue to formally pursue charges of alleged patent infringement, or exit from the process. If  $P$  chooses to continue with formal charges, then  $D$  must decide how to respond.  $D$  can choose to settle, which, if it occurs, will be at a value determined by the model. Alternatively,  $D$  can fight the infringement allegation in court. If she does, litigation will cost  $D$  the amount  $c_D^2$ .  $D$ ’s expected proceeds will depend on the information revealed by the decision of the PLRB along with underlying claim quality  $q$ . Were the PLRB to give a decision of “Bad” for instance,  $D$ ’s expected proceeds from a court procedure would be  $((1 - \varphi(q)_b) * \gamma - (\varphi(q)_b) * \delta)$ . Subtracting her cost of fighting in court of  $c_D^2$ , gives an expected payoff of fighting in court in the *Bad* case of  $-c_D^2 + ((1 - \varphi(q)_b) * \gamma - (\varphi(q)_b) * \delta)$ . The analog expected payoff for  $P$  of going to court in this *Bad* state is then  $-c_P^2 + ((\varphi(q)_b) * \delta) - (1 - \varphi(q)_b) * \gamma$ . The expected payoffs in cases of *Good* and *Inconclusive* PLRB decisions are constructed similarly using the respective probabilities in those states.

The discrete-time assertion model can be solved recursively, using each decision made by  $D$  and  $P$ , which decisions will depend on expected costs and payouts of each node with each player being assumed to be a rational profit maximizer. Consequently, the model will not only give the decision of each actor— $D$  and  $P$ —at each node, but conditional on these decisions and payoffs, the expected value of bringing a patent infringement claim of quality  $q$ . Further, the model allows us to calibrate all of these decisions varying each parameter value.

#### b. Illustrative Calibration Results

In this section, we take the model and run a battery of calibrations for different combinations of parameters. While we report a set of examples in the manuscript that we believe highlight the main drivers of the welfare gains from the PLRB, we have run various additional calibrations with differing

approaches to settlement, and we plan ultimately to present sensitivity analyses in an Online Appendix associated with this article. The Online Appendix will also include the Model Replication Code so that interested readers can explore the dynamics of the model and use it in their future work.

Our illustrative examples use parameter estimates to generate results for two regimes: one allowing for settlement between the plaintiff and defendant, and one disallowing settlement between the two once suit is brought. For purposes of the examples allowing settlement, we assume that parties settle for the expected value of the end payout in the case (e.g., the value of a court award if the parties are at the last settlement step in the case). Under this approach, settlement saves each party its own expected additional litigation costs. Eight tables for the calibrated scenarios are presented below. Discussion of those scenarios and their implications follows.

**Calibration I<sub>s</sub>:**  
**Weak Suits without the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	0
$c_D^1$	0
$c_P^2$	200,000
$c_D^2$	400,000
$\pi_g(q)$	0%
$\pi_b(q)$	0%
$1 - \pi_g(q) - \pi_b(q)$	100%
$\varphi(q)_g$	0%
$\varphi(q)_i$	15%
$\varphi(q)_b$	0%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$
<b>Settlement Fraction</b>	100%

**$E(\text{Payoff from bringing assertion}) = \$188,000.00$**

**Calibration II<sub>s</sub>:**  
**Weak Suits with the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	90,000
$c_D^1$	60,000
$c_P^2$	180,000
$c_D^2$	380,000
$\pi_g(q)$	1%
$\pi_b(q)$	60%
$1 - \pi_g(q) - \pi_b(q)$	39%
$\varphi(q)_g$	50%
$\varphi(q)_i$	15%
$\varphi(q)_b$	5%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$
<b>Settlement Fraction</b>	100%

**$E(\text{Payoff from bringing assertion}) = -\$20,000.00$**

**Calibration III<sub>s</sub>:**  
**Strong Suits without the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	0
$c_D^1$	0
$c_P^2$	800,000
$c_D^2$	800,000
$\pi_g(q)$	0%
$\pi_b(q)$	0%
$1 - \pi_g(q) - \pi_b(q)$	100%
$\varphi(q)_g$	0%
$\varphi(q)_i$	75%
$\varphi(q)_b$	0%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$
<b>Settlement Fraction</b>	100%

**$E(\text{Payoff from bringing assertion}) = \$1,095,000.00$**

**Calibration IV<sub>s</sub>:**  
**Strong Suits with the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	90,000
$c_D^1$	60,000
$c_P^2$	780,000
$c_D^2$	780,000
$\pi_g(q)$	50%
$\pi_b(q)$	1%
$1 - \pi_g(q) - \pi_b(q)$	49%
$\varphi(q)_g$	90%
$\varphi(q)_i$	75%
$\varphi(q)_b$	25%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$
<b>Settlement Fraction</b>	100%

**$E(\text{Payoff from bringing assertion}) = \$1,199,000.00$**



**Calibration  $V_{NS}$ :**  
**Weak Suits without the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	0
$c_D^1$	0
$c_P^2$	200,000
$c_D^2$	400,000
$\pi_g(q)$	0%
$\pi_b(q)$	0%
$1 - \pi_g(q) - \pi_b(q)$	100%
$\varphi(q)_g$	0%
$\varphi(q)_i$	15%
$\varphi(q)_b$	0%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$

**$E(\text{Payoff from bringing assertion}) = -\$12,000.00$**

**Calibration  $VI_{NS}$ :**  
**Weak Suits with the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	90,000
$c_D^1$	60,000
$c_P^2$	180,000
$c_D^2$	380,000
$\pi_g(q)$	1%
$\pi_b(q)$	60%
$1 - \pi_g(q) - \pi_b(q)$	39%
$\varphi(q)_g$	50%
$\varphi(q)_i$	15%
$\varphi(q)_b$	5%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$

**$E(\text{Payoff from bringing assertion}) = -\$20,000.00$**

**Calibration VII<sub>NS</sub>:**  
**Strong Suits without the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	0
$c_D^1$	0
$c_P^2$	800,000
$c_D^2$	800,000
$\pi_g(q)$	0%
$\pi_b(q)$	0%
$1 - \pi_g(q) - \pi_b(q)$	100%
$\varphi(q)_g$	0%
$\varphi(q)_i$	75%
$\varphi(q)_b$	0%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$

**$E(\text{Payoff from bringing assertion}) = \$295,000.00$**

**Calibration VIII<sub>NS</sub>:**  
**Strong Suits with the PLRB**

Model Parameter	Calibration Value
$c_P^0$	20,000
$c_P^1$	90,000
$c_D^1$	60,000
$c_P^2$	780,000
$c_D^2$	780,000
$\pi_g(q)$	50%
$\pi_b(q)$	1%
$1 - \pi_g(q) - \pi_b(q)$	49%
$\varphi(q)_g$	90%
$\varphi(q)_i$	75%
$\varphi(q)_b$	25%
$\delta$	1,500,000
$\gamma$	$0.05 * (c_D^1 + c_D^2)$

**$E(\text{Payoff from bringing assertion}) = \$336,805.00$**

## PLRB Screening of Cases with Settlements

We begin by analyzing the scope for the PLRB to effectively screen relatively low-merit cases (“Weak Suits”) that also have relatively low value by patent litigation standards and thus might be characterized by defendants as “nuisance cases.” In the absence of the PLRB, these cases carry with them an ex ante threat of legal action against *D*, commonly leading to a situation in which *D* must either enter the litigation process or pay to settle the dispute, perhaps simply to avoid anticipated litigation costs. For purposes of assigning appropriate, illustrative parameter values in the calibrations, the plaintiff is assumed to be a patent holder, and the defendant is assumed to be an accused infringer.

We analyze here four scenarios that illustrate important dynamics of the model for larger-stakes suits:

- I. Weak Suits—without PLRB but with settlement
- II. Weak Suits—with PLRB and with settlement
- III. Strong Suits—without PLRB but with settlement
- IV. Strong Suits—with PLRB and with settlement

Calibrations I<sub>s</sub> and II<sub>s</sub> provide illustrative numbers for Weak Suits of relatively low value. As the expected value numbers  $E(\text{Payoff } \dots)$  in Calibration I<sub>s</sub> indicate, despite only a 15% chance of an ultimate court judgment for the plaintiff, the illustrative low-merit suit has positive net present value (NPV) for *P* of \$188,000 without the PLRB. *D* is expected to choose to settle the case for that amount to avoid a costly and presumably lengthy court battle. In sharp contrast, when we introduce the Patent Litigation Review Board (PLRB) for Calibration II<sub>s</sub>, the existence and informational contributions of the PLRB help “screen” this case, discouraging its assertion by *P* by giving the case a negative NPV of **-\$20,000** even when *D*’s propensity to settle cases to avoid litigation costs is considered. This negative NPV illustrates one of the important benefits we believe the PLRB can bring to the patent litigation landscape—namely, reduction in the value of low-merit suits to a point where a rational potential claimant will not bring them and is less likely to be able to credibly threaten to bring them.

Next we turn to relatively high-merit assertions of patent infringement (“Strong Suits”) as illustrated by Calibrations III<sub>s</sub> and IV<sub>s</sub> for which inputs and results appear below. As might be expected in scenarios in which the plaintiff has a 75% chance of winning a court judgment of \$1.5 million without PLRB review, *P*’s expected payoffs both with and without the PLRB

are positive. Calibration III<sub>S</sub> shows that, without the PLRB, the Strong Suit has a positive NPV for  $P$  of \$1,095,000. Again, this figure represents the amount for which  $D$  is expected to choose to settle the case to avoid a costly and presumably lengthy court battle. Calibration IV<sub>S</sub> calculates the expected payoff when the same suit is subjected to prelitigation PLRB review. Unlike the case of the Weak Suit, the net present value of this Strong Suit is still positive when subjected to PLRB review. Indeed, at \$1,199,000, the NPV for the Strong Suit is nearly 10% larger than the NPV without the PLRB.

The increase in NPV for the illustrative Strong Suit under PLRB review highlights the second main benefit the PLRB can bring to the patent landscape. In addition to discouraging a substantial number of low-merits suits, PLRB should encourage enforcement activity and compliance with patent rights in a substantial number of cases in which patent holders have high-merit claims of patent infringement. This follows from the expectation that a positive ruling from the PLRB will increase the odds of winning in any later district court proceedings, thereby generating a rise in the NPV of suit that can more than pay for the costs to the patent holder of PLRB proceedings. Ex ante, this pro-patentee effect should incentivize relevant patent holders with high-merit claims to enforce them and should simultaneously disincentivize potential infringers. Of course, there will almost inevitably be some patent holders with what are viewed as high-merit claims who do not benefit so substantially from PLRB review, perhaps because the strengths of their claims are especially difficult to convey in relatively summary proceedings that precede full district court review. The point that Calibrations III<sub>S</sub> and IV<sub>S</sub> make, however, is that, as a reform designed to make the patent system work better by its own lights, PLRB review will be balanced in the sense that it will have pro-patentee effects in some situations and anti-patentee effects in others. The key question for PLRB review is not who is making a claim but how strong that claim can be shown to be at the outset of patent litigation.

### **PLRB Screening of Cases Without Settlements**

Next we investigate four scenarios that use identical parameter estimates as in the four studied above. But we use a different model that excludes the possibility of post-filing settlement between the parties. Examining these variants of the original scenarios not only provides one form of robustness check, but also enables us to explore the impact of settlement on the value of the PLRB. The four calibrations investigated here are the following:

#### **V. Weak Suits – without PLRB and without settlement**

- VI. Weak Suits—with PLRB but without Settlement
- VII. Strong Suits—without PLRB and without settlement
- VIII. Strong Suits—with PLRB but without settlement

Examination of the scenarios without a settlement option points to two primary conclusions. First, the possibility of settlement can highly inflate the NPV of a patent suit relative to a situation in which settlement is impossible. Second, the effect of PLRB review on the NPV of suit for a patent holder follows the same basic pattern regardless of whether settlement is allowed.

On the first point, note that  $P$ 's NPV for the suit is commonly much higher in the scenarios with settlement than in the corresponding no-settlement scenarios. The NPV of Calibration  $V_{NS}$  for a Weak Suit without settlement and without PLRB review is negative and equal to  $-\$12,000$ , whereas the NPV for Calibration  $I_s$ 's corresponding suit with settlement is positive and equal to  $\$188,000$ . For the Strong Suit without PLRB review, the comparative NPV figures are  $\$1,095,000$  with settlement and  $\$295,000$  without settlement. For the Strong Suit with PLRB review, the comparative figures are  $\$1,199,000$  and  $\$336,805$ , respectively. The only comparative situations for which removal of the settlement option does not change the NPV are those for a Weak Suit with PLRB review: both with and without settlement these situations have NPVs of  $-\$20,000$ . In short, settlement possibilities can greatly increase the value of a suit to the plaintiff, but PLRB review can curtail and even prevent this inflationary effect of settlement for at least a limited class of low-merit claims.

On the second point with respect to the larger pattern of effects from PLRB review, we see that, as was the case with a settlement option, PLRB review without settlement decreases the value to  $P$  of the illustrative low-merit suit and increases the value to  $P$  of the high-merit suit. The results for Calibrations  $V_{NS}$  and  $VI_{NS}$  show that the NPV from bringing the Weak Suit is roughly  $\$8,000$  lower with the PLRB than without it. The results for Calibrations  $VII_{NS}$  and  $VIII_{NS}$  reveal that introduction of PLRB review increases the value of the Strong Suit by over 14% from  $\$295,000$  to  $\$336,805$ .

### c. General Welfare and Policy Implications

Comparing the calibrations both with and without the settlement option shows that the option to settle does not alter the basic nature of the expected positive impact of the PLRB. With or without the ability to settle, the PLRB has a positive impact by both (1) decreasing the value of low-merit claims and (2) increasing the value of high-merit claims. The first effect, that

of decreasing the value of low-merit claims, can help to effectively screen out low-merit patent claims not only by causing assertions to be dropped after PLRB review but also, as the decreases in ex ante NPV indicate, by discouraging the initial filing of suit. The second effect, that of increasing the value of high-merit claims, can encourage enforcement of such claims, strengthen the bargaining position of relevant claim holders, and enhance the deterrent force of relevant patents.

Note that the illustrative results reported here cover (1) situations for which we have assumed 100% settlement and (2) situations for which we have assumed no settlement (i.e., 0% settlement). Thus, we have investigated both of two corner solutions with respect to settlement. As the ability to settle presumably lies somewhere between these two corners, we expect that the basic patterns for PLRB effects that we report above—in particular, relative tendencies to encourage high-merit suits and to discourage low-merit suits—will apply quite generally across the spectrum of real-world settlements and assertions.

Moreover, the possibility that PLRB review will affect enforcement and defense strategies suggests that the positive effects of PLRB review could substantially outpace what the examination of NPV effects in individual cases indicates. By decreasing the value of low-merit claims and increasing the chances of a relatively quick signal from an impartial adjudicator about the weakness of those claims, PLRB review might embolden defendants to pursue a no-settlement strategy or, at least, an approach to settlement tilted more toward refusal to settle than they would otherwise. As the comparative numbers for scenarios with and without settlement show, tilting approaches to low-merit claims toward no-settlement strategies can be expected to depress the ex ante expected value of such claims even further and perhaps very substantially further than does PLRB review alone. Likewise, PLRB review's tendency to increase the value of high-merit claims can be expected to increase deterrence from associated patents because this increase in value not only raises the expected cost of being an enforcement target but also, by encouraging enforcement, increases the likelihood of becoming such a target. Encouragement of compliance strategies with respect to high-merit claims could further benefit right holders by enabling them to obtain the practical benefit of their legal rights without having to spend substantially on enforcement.

The illustrative examples above demonstrate why many parties expecting to bring high-quality patent-infringement claims should support a proposal for the PLRB, while many of those expecting to bring low-quality claims are likely to be opposed. In the absence of the PLRB, low-quality claim asserters have effective gains from less information being known about their claims early in a suit and thus from their claims being at least partially

pooled with—i.e., not distinguished from—higher-quality claims. PLRB review reduces the extent and duration of such pooling. PLRB review might be particularly valuable for relatively low value suits and for relatively cash-constrained parties such as startups or individuals who might otherwise settle or fail to pursue claims even when their likelihood of prevailing in court, whether known to them or not, is very large.

A caveat to the above analysis is that, for purposes here, we have generally assumed, as Congress commonly appears to assume, that the patent system's substantive legal standards—i.e., the legal standards that determine whether a claim is of high or low quality—are well designed so that increased compliance with them tends to increase social welfare. A skeptic of the patent system might argue that a better reform would reduce the value of patents and patent-infringement claims across the board. One can, of course, debate the relative merits of a more radical reform such as this one. But for this Article, we are content to assume that social welfare is likely to be improved by institution of prelitigation administrative review that effectively pushes value from low-merit patent claims to high-merit ones. Whatever the flaws in patent-infringement and patentability doctrine, this body of law seems unlikely to be so policy backwards that a reform favoring patent claims having very high legal merit over those having very low legal merit is an obviously bad idea.

## B. FRAMEWORK FOR ADMINISTRATIVE REVIEW

Fundamental concerns with patent litigation are the high cost and substantial delay that it tends to entail before parties can obtain court rulings on claim construction, never mind a final determination on a question of whether an accused product or process infringes or whether one or another patent claim is invalid. Such cost and delay can frustrate both accused infringers and cash-poor patent holders. Cost and delay can combine with uncertainty about patent litigation's results to generate opportunities for socially undesirable litigation behavior—whether in the form of nuisance suits brought by patentees, holdout behavior by recalcitrant infringers, or otherwise. An early-stage administrative review process can counteract these effects of cost, delay, and uncertainty by providing relatively quick, cheap, and impartial guidance on a patent suit's merits during a time span, the first several months after a patent suit is filed, when decisive judgments from a court are generally hard to obtain. A further advantage of a centralized administrative review process is that it can provide a check on forum shopping as well as an opportunity to gather centralized information on the patent litigation system's performance, whether with respect to forum shopping or other concerns. This section discusses the nature of the proposed review process and how it might be implemented.

## 1. Proceedings Before the Patent Litigation Review Board

The proposed administrative review would be an automatic process that would occur immediately after the filing of a patent suit in a district court. This automatic review might be viewed as a variant of the required review of a *qui tam* False Claims Act complaint by the Department of Justice after the filing of the complaint in district court.<sup>207</sup> Although one can imagine any of a number of ways in which preliminary administrative review should proceed, this article proposes a specific potential framework as a starting point for discussion.

This article's specifically proposed process would unfold as follows. Upon the filing of a patent-infringement suit in a district court,<sup>208</sup> the "Patent Litigation Review Board" (PLRB or Board) would be notified. Unless all parties to the district court suit opted out, the Board would conduct a paper hearing in which parties would be allowed to file documentary arguments and evidence relating to questions of patent infringement, validity, and enforceability. Although attorney representation would be advised, the Board would allow parties to present materials believed to be relevant either *pro se* or through qualified non-attorney representatives such as, in a business entity's case, their chief officers or owners.<sup>209</sup>

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<sup>207</sup> See U.S. Department of Justice, False Claims Act Cases: Government Intervention in Qui Tam (Whistleblower) Suits, [www.justice.gov/sites/default/files/usao-edpa/legacy/2011/04/18/fcaprocess2\\_0.pdf](http://www.justice.gov/sites/default/files/usao-edpa/legacy/2011/04/18/fcaprocess2_0.pdf) (last visited on June 5, 2015) (noting that a complaint under the False Claims Act is filed under seal for "at least sixty days" to permit investigation of the allegations by the Department of Justice, with the DOJ needing to show "good cause" "if it wants the case to remain under seal" beyond 60 days). An alternative proposal under which a complainant first files directly with the USPTO might be viewed as a variant of the requirement of exhaustion of an initial administrative process for purposes of certain employment discrimination claims. See U.S. Equal Employment Opportunity Commission, Filing a Charge of Discrimination, <http://www.eeoc.gov/employees/charge.cfm> (last visited June 5, 2015) ("All of the laws enforced by EEOC, except for the Equal Pay Act, require you to file a Charge of Discrimination with us before you can file a job discrimination lawsuit against your employer.").

<sup>208</sup> Suits triggering administrative review would include declaratory judgment actions in which a party seeks a ruling of non-infringement or patent invalidity or unenforceability.

<sup>209</sup> Cf. 5 U.S.C. § 555(b) ("A person compelled to appear in person before an agency or representative thereof is entitled to be accompanied, represented, and advised by counsel or, if permitted by the agency, by other qualified representative."). Allowance for non-attorney representation will enable business entities that cannot afford an attorney (e.g., cash-poor startups) to present their case to the board and, if they obtain a favorable determination from that board, to potentially avoid an uncontested default judgment in court, where non-attorney representation of a business entity is generally not allowed, through the board's submission of its determination to the district court. See *infra* text accompanying notes \_\_\_\_.



Including time for party filings, the Board would have 180 days from the time of notification of suit to issue its determinations.<sup>210</sup> With consent from all parties, however, the Board would be able to extend the time for review. The district court would automatically stay proceedings during the administrative review process although, on a showing of good cause, the district court would have power to lift the automatic stay in order to consider a motion for a preliminary injunction, temporary restraining order, or dismissal under Federal Rule of Civil Procedure 12(b)(6). Under existing law, the Board might trigger a further stay of district court proceedings by causing the initiation of post-issuance review at the USPTO.<sup>211</sup>

For purposes of the preliminary administrative review, the parties would be expected to focus on issues with respect to which they believe they can establish a decisive case through already available documentary evidence, affidavits, and written argument. There would be no provision for discovery. In this way, the hope is that the administrative review can prioritize the presentation of what parties believe to be crucial and already available informative evidence on potentially decisive issues, rather than wait to present such evidence and associated argument after a general process of discovery.<sup>212</sup>

Within the original or extended stay period, the Board would either (1) register a conclusion that limits on time and evidence did not permit a substantive determination or, alternatively, (2) provide a substantive determination on whether, in its view, a reasonable patent attorney, presented with the evidence at hand, would conclude that, under existing law, one side or the other had established clearly and convincingly the correctness of its position, with there being no substantial question that additional evidence

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<sup>210</sup> The 180-day time period is modeled on the roughly 6-month period currently allowed for the USPTO to decide whether to initiate an inter partes review or post-grant review. *See* 35 U.S.C. § 314(b) (requiring a USPTO decision within three months of a preliminary response to a request for inter partes review); *id.* § 324(b) (requiring a USPTO decision within three months of a preliminary response to a request for post-grant review); 37 C.F.R. § 42.107(b) (providing essentially three months for a patent owner to file a preliminary response to a request for inter partes review); 37 C.F.R. § 42.207(b) (providing essentially three months for a patent owner to file a preliminary response to a request for post-grant review).

<sup>211</sup> Jonathan Stroud, Linda Thayer & Jeffrey C. Totten, *Stay Awhile: The Evolving Law of District Court Stays in Light of Inter Partes Review, Post-Grant Review, and Covered Business Method Post-Grant Review*, 11 BUFF. INTELL. PROP. L.J. 226, 237-38 (2015) (discussing statutory provisions and judicial practices with respect to stays of district court litigation pending inter partes review or post-grant review).

<sup>212</sup> *Cf.* Kaplow, *supra* note 89, at 1227 (arguing that “it often may make sense to organize staging by type of evidence,” perhaps “begin[ning] with key documents or only a few central witnesses”).

would lead to a different conclusion.<sup>213</sup> For example, a patent holder might produce documentary evidence of the workings of an accused infringing device that, in the absence of any substantial impeachment by the accused infringer, the Board would find conclusively established that the device infringed—or at least satisfied one or more key elements of relevant patent claims. In another case, an accused infringer might produce documentary evidence of the workings of an accused infringing device that, in the absence of any substantial impeachment by the patent holder, the Board would find conclusively established that the device did not infringe—i.e., did not satisfy at least one element of relevant patent claims. Because the Board would have the option of not issuing a substantive determination on an issue raised before it, parties would have an incentive to highlight and prioritize their best arguments. The Board could further encourage such prioritization by regulating the length of filings presented to it.

The Board's reasoning and determinations would generally be made publicly available<sup>214</sup> and would be admissible in court although, to avoid constitutional concerns with jury rights or the prerogatives of Article III courts, the Board's determinations on substantive matters would only be advisory, rather than binding. There would be no judicial review of the Board's determination independent of continuation of the original district court action or analogous proceeding. The trial court would conduct a trial de novo, but the courts would accord the Board's determinations weight in the manner of *Skidmore v. Swift & Co.*<sup>215</sup> for agency statutory interpretations—in other words, giving those determinations weight in accordance with the Board's expertise, its care in deliberation, and the quality of the evidence before it.<sup>216</sup>

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<sup>213</sup> The standard proposed here is meant to echo both the established practice of patent attorneys' providing opinion letters on whether a particular product or process infringes a valid and enforceable patent claim and an inquiry relevant to the current standard for whether a court will issue a preliminary injunction in patent cases—namely, whether there is a substantial question about infringement or patent claim validity, *Trebro Mfg., Inc. v. Firefly Equip., LLC*, 748 F.3d 1159, 1165 (Fed. Cir. 2014) (“An accused infringer can defeat a showing of likelihood of success on the merits by demonstrating a substantial question of validity or infringement.”).

<sup>214</sup> As with court opinions, in appropriate circumstances confidential information might be redacted from publicly available versions of the board's reasoning and determinations.

<sup>215</sup> 323 U.S. 134 (1944).

<sup>216</sup> *Id.* at 140 (“We consider that the rulings, interpretations and opinions of the administrator under this Act, while not controlling upon the courts ..., do constitute a body of experience and informed judgment to which courts and litigants may properly resort for guidance.”). Factors in such weight could include whether Board determinations were the unanimous determinations of a multi-member panel.

The Board's determinations would have some effects beyond their ability to influence later court decisions under a *Skidmore*-like standard. First, if the Board found that, under the "clear and convincing plus" standard, a patent claim is invalid based on grounds that are a permissible basis for USPTO post-issuance review, the Board's determination would automatically trigger a right to such reexamination or review at the option of the successful challenger to the claim's validity. Second, if a party proceeds to court in the face of an adverse "clear and convincing plus" determination by the Board and if the party loses on that same issue on grounds identical to those invoked by the Board, that party would presumptively have to pay court costs and reasonable attorney fees associated with the opposing side's contestation of that issue in the later proceedings. Third, and relatedly, if a party loses before the Board, the party might need to pay costs associated with the Board proceedings and, in exceptional cases, might be required to pay reasonable attorney fees to the other side in compensation for the cost of representation before the Board. Fourth, the Board's determinations could factor into later assessments of whether district court litigation has involved a violation of Rule 11 of the Federal Rules of Civil Procedure or whether patent infringement should be considered willful and thus a potential basis for enhanced damages. Finally, if the Board rules in favor of a party, such as a cash-poor business entity, that lacks the capacity to appear in court to defend itself, the Board would intervene in any continuation of the relevant district court proceeding to make its reasoning and determination part of the record before the district court.

Generally speaking, complainants who have initiated the relevant suit in district court would pay for the Board's preliminary review process through administrative fees determined by rule.<sup>217</sup> As with various USPTO fees, there would be substantially reduced fees for small entities and micro-

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<sup>217</sup> If fees for inter partes review and post-grant review serve as guides, standard administrative costs might be in the nature of \$10,000 to \$30,000. U.S. Patent & Trademark Office, America Invents Act (AIA) Frequently Asked Questions, <http://www.uspto.gov/patent/laws-and-regulations/america-invents-act-aia/america-invents-act-aia-frequently-asked> (Dec. 13, 2014) ("For petitions [for inter partes review] filed on or after March 19, 2013, the request fee is \$9,000 plus a fee of \$200.00 for each claim over 20, and the post-institution fee is \$14,000 plus a fee of \$400.00 for each claim over 15."); *id.* ("For petitions [for post-grant review] filed on or after March 19, 2013, the request fee is \$12,000 plus a fee of \$250.00 for each claim over 20, and the post-institution fee is \$18,000 plus a fee of \$550.00 for each claim over 15."). Because the USPTO could tailor preliminary review to the circumstances and because preliminary review would involve nonbinding assessment according to a summary judgment standard, as opposed to binding judgments according to a preponderance-of-evidence standard, costs for preliminary review might be significantly lower than fees for inter partes review and post-grant review might suggest.

entities who are not stand-ins for better-monetized entities.<sup>218</sup> Further, by request, parties, including business entities, might qualify for *in forma pauperis* treatment, under which the Board would waive fees and cover these parties' share of the costs through surplus from administrative fees collected from other parties or a "patent system cost" added to patent-issuance and maintenance fees for patent holders generally and collected on behalf of the Board. If there is concern that the fees required to pay for review would tend to be too high to serve interests in access to justice, the preliminary review procedure can be more generally supported through increases to existing fees associated with the obtaining and maintenance of patent rights, whether or not asserted in litigation. With the USPTO granting about 300,000 new patents each year,<sup>219</sup> an increase of only a couple hundred dollars in fees associated with patent issuance might do much, indeed perhaps more than enough, to pay for PLRB administrative costs.<sup>220</sup>

## 2. Reporting Responsibilities and Sunset Provision

Section III.A has argued that early-stage administrative review can add value by permitting early clarification of likely outcomes in patent litigation. For this to occur in practice, however, there must in fact be patent-infringement disputes in which parties are willing and able to raise issues for which there is a reasonable chance that the administrative body will deliver a definitive judgment. A large number of the complaints about current patent litigation indicate a belief that many patent-infringement disputes that result in the filing of suit are of this nature—i.e., featuring obviously weak and perhaps even bad-faith allegations of infringement or recalcitrant refusals to pay for a patent license even in a relatively clear case of infringement. If this belief is true, one would expect to see a significant number of litigants take advantage of the proposed administrative review process. If this belief is false, the PLRB would presumably deliver few administrative determinations that a side had prevailed under the "clear and convincing plus" standard, either because parties neglected even to argue for such a determination or because the Board found insufficient basis for it.

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<sup>218</sup> Frakes & Wasserman, *supra* note 68, at 120 (discussing potential implications of reduced USPTO fees for "small entities" and "microentities").

<sup>219</sup> U.S. Patent & Trademark Office, U.S. Patent Statistics, Calendar Years 1963-2014 (2015) (indicating that the USPTO granted 300,678 utility patents in 2014).

<sup>220</sup> See the discussion *infra* at text accompanying notes 222-223, providing a basis for estimating PLRB administrative costs at about \$60 million per year, an amount that might be raised by obtaining \$200 in additional fees for each of 300,000 issued patents.

Even if PLRB assessments that the “clear and convincing plus” burden of proof was satisfied turned out to be rare, the PLRB could make an important contribution to patent policy. Questions of whether, how, and to what extent our patent system is broken or in crisis have sharply divided academics and policymakers alike, and part of the difficulty in overcoming such division has been limited information on what is happening on the ground. Lack of information on the contents of private licensing and settlement agreements is a major stumbling block<sup>221</sup> and will remain one under this article’s proposal. Also problematic is difficulty in assessing the relative quality of individual patent-infringement suits, a difficulty complicated by differences between trial fora and by selection effects of settlement, which leaves only a relatively small and likely unrepresentative subset of disputes subject to decisive judgments. The PLRB will be in a centralized, start-of-litigation position uniquely suited for the gathering of information on the full cross-section of patent-infringement suits filed in district courts each year. Thus, at worst, experience with the PLRB should provide substantial insight into the nature of the current patent-litigation landscape, providing information that might help break at least a few of the information impasses that impeded the reaching of common ground in policy debates. With a view toward the PLRB’s information-gathering potential, the PLRB would be expected to provide annual reports to Congress on the state of U.S. patent litigation as seen from the PLRB’s perspective.

This is not to say that such information gathering would suffice to justify the PLRB’s indefinite continuation. If USPTO fees for post-issuance review proceedings are a reasonable guide, administrative costs associated with the operation of the PLRB might be expected to be in the nature of \$10,000 per case,<sup>222</sup> or in the nature of a total of about \$60 million per year if we assume something like the current 6,000 lawsuits per year. Given (1) the fact that attorney fees in individual patent disputes can exceed \$10 million and (2) concerns that U.S. patent litigation is costing businesses tens of billions of dollars per year, adding such an administrative cost to the system seems a reasonable short-term undertaking as an effort at a policy solution. But as indicated above, information gathered by the PLRB might indicate that widely indicated beliefs about the patent-litigation landscape are wrong. Further, parties might figure out how to game PLRB review in ways that undermine its intended social value—for example, by increasing patent suit filings in order to increase the odds of “winning the lottery” by obtaining at least one favorable assessment from PLRB administrative review.

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<sup>221</sup> Golden, *supra* note 37, at 550 (observing that “the terms of patent-licensing agreements ... are generally confidential”).

<sup>222</sup> See *supra* note 217.

Consequently, this article proposes that Congress initially adopt PLRB review only on a pilot basis. Absent additional congressional action, the PLRB pilot would terminate after a specified period—for example, three years—that allows a reasonable time for the maturation of practices within and before the PLRB, as well as for the gathering of information to aid future policymaking. If Congress wishes to restrict the impact and burden of PLRB review further, it might apply such review only to a subset of patent cases—for example, a subset of randomly selected cases or a subset of cases involving particular types of subject matter such as software or business methods.

### 3. Agency Location for the Patent Litigation Review Board

There seem at least two main candidates for the location of the proposed Patent Litigation Review Board (PLRB) within the administrative state. First, the Board could be folded into the USPTO, either as a new division or as a branch of an expanded Patent Trial and Appeal Board (PTAB). Through the USPTO's various post-issuance proceedings as well as appeals from examiner rejections of patent applications, the PTAB has experience with essentially the full range of validity questions that could face the PLRB. Because literal-infringement analysis parallels analysis of a patent claim for satisfaction of the requirement of novelty, many infringement questions would likely not be a major leap from questions that the PTAB already faces. Further, the most prominent basis for charging patent unenforceability has tended to be inequitable conduct in the process of obtaining the patent from the USPTO, an issue that USPTO judges might be particularly competent to assess. Moreover, the USPTO already has experience in recruiting and training administrative patent judges and in setting fees for associated review processes. Location of the PLRB within the USPTO might also make it easier to coordinate PLRB review with the triggering of USPTO post-issuance review and might simplify the funding arrangements for the PLRB, particularly to the extent PLRB activities are to be funded by patent application or maintenance fees. More generally, location of the PLRB within the USPTO would avoid the need to construct a new administrative home for the proposed process of litigation review.

On the other hand, there are reasons to resist the upfront convenience of folding the PLRB into the PTAB or of establishing the PLRB as a new division within the USPTO. First, there is the concern that the USPTO already is strained in performance of its current missions, and the generally

increasing inflow of new patent applications<sup>223</sup> and petitions for adversarial forms of post-issuance review<sup>224</sup> suggests that this strain is unlikely to let up soon. Second, the PLRB's job would in a substantial sense be to preview likely outcomes in litigation, rather than before the USPTO. These sets of likely outcomes can diverge because the USPTO might have taken a stance on an issue—for example, the patentability of genetic sequences—that a court would view as more open. A PLRB located within the USPTO might have more difficulty acting as a faithful previewer of likely court outcomes as opposed to a follower of established USPTO positions. Relatedly and thirdly, the USPTO has traditionally (and explicitly) viewed patent applicants and owners as its “customers.” Despite recent increases in the use of USPTO post-issuance proceedings to bring inter partes patent challenges,<sup>225</sup> this fact, along with the USPTO's reliance on application and maintenance fees for its funding<sup>226</sup> and more general concerns about USPTO “capture,”<sup>227</sup> might justify worry about a USPTO-based body's capacity to make determinations with the impartiality and appearance of impartiality thought desirable even with respect to only advisory determinations that formally serve as no more than inputs to Article III court proceedings. Finally, although the USPTO has shown an ability to recruit highly qualified attorneys for the PTAB, PTAB judges already number in the hundreds, and there might be some value in having a separate, relatively small body to focus on issues relating to patent litigation and to facilitate oversight of PLRB performance.

If the PLRB were to be a separate administrative body, it might be modeled on adjudicative agencies such as the ITC. Alternatively, it could be established as a private, non-profit corporation with government responsibilities in the manner of the Public Company Accounting Oversight

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<sup>223</sup> See U.S. Patent & Trademark Office, U.S. Patent Statistics Chart: Calendar Years 1963-2014 (showing that the number of U.S. utility patent applications grew from 61,841 in 1984 to 107,233 in 1994 to 189,536 in 2004 and to 285,096 in 2014), *available at* [http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us\\_stat.htm](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm); *cf.* Golden, *supra* note 61, at 463 (noting that, “at least for the more than century-old categories of utility and design patents, the general long-term trend has been for the number of patents issued each year to increase at an accelerating pace”).

<sup>224</sup> See *supra* text accompanying notes \_\_\_\_.

<sup>225</sup> See *supra* text accompanying notes \_\_\_\_.

<sup>226</sup> See Michael D. Frakes & Melissa F. Wasserman, *Does Agency Funding Affect Decisionmaking?: An Empirical Assessment of the PTO's Granting Patterns*, 66 VAND. L. REV. 67, 69 (2013) (“Since 1991, the PTO's budget has largely been derived from patent examination and post-allowance fees.”).

<sup>227</sup> See John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 TEX. L. REV. 1041, 1098 (2011) (discussing concerns of USPTO “capture or bias”).

Board (PCAOB).<sup>228</sup> The latter model would permit the PLRB to avoid standard federal pay scales, thereby likely enhancing its ability to recruit experienced professionals best qualified to make preliminary determinations in patent suits.<sup>229</sup> In either case, members of the PLRB could be appointed by the President for a statutorily set term of years, subject to removal by the President only for good cause.<sup>230</sup>

#### 4. PLRB Adjustment and the “Flood of Claims” Concern

A major concern with the addition of any pre-litigation screening process such as PLRB review is that it will add complication and expense that outweighs any of its benefits.

A potential concern with PLRB review is that, despite intentions to the contrary, such review’s predominant effect might be more to add complication and expense to processes of resolving patent disputes, rather than to bring about their more efficient resolution or deterrence. First, there is the basic concern that PLRB review necessarily adds a new preliminary stage to patent litigation. Up front, the addition of this stage necessarily adds some costs. The preceding subsection has provided some reason to believe that, with respect to sufficiently meritorious suits, these costs will be outweighed by the increases to the values of those suits that PLRB review generates. Further, to the extent that any filing fees associated with PLRB review create entry barriers to patent holders with limited access to capital—for example, independent inventors or startups—these concerns can be mitigated by reducing or even waiving fees for such litigants, or even by

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<sup>228</sup> See *Free Enterprise Fund v. Pub. Co. Accounting Oversight Bd.*, 561 U.S. 477, 484 (2010) (describing the PCAOB as “modeled on private self-regulatory organizations in the securities industry—such as the New York Stock Exchange”); Mick Bordonaro, *The Public Accounting Oversight Board After Dodd-Frank*, 30 REV. BANKING & FIN. L. 474, 475 (2011) (“As outlined by statute, the PCAOB is a non-profit corporation under the supervision and control of the SEC.”).

<sup>229</sup> See *Free Enter.*, 561 U.S. at 484-85 (noting that the PCAOB’s technically private status enables it “to recruit its members and employees from the private sector by paying salaries far above the standard Government pay scale”); Bordonaro, *supra* note 228, at 476 (noting that “the PCAOB does not follow the standard federal pay scale in remunerating its board members”).

<sup>230</sup> The U.S. Supreme Court struck down a statutory provision making members of the PCAOB removable only for cause by the members of the Securities Exchange Commission (SEC) because the Court understood the members of the SEC themselves to be removable by the President only for cause. *Free Enter.*, 561 U.S. at 487 (accepting the “understanding” “that the Commissioners cannot themselves be removed by the President except under the *Humphrey’s Executor* standard”). The Court believed that the resulting two layers of “tenure protection” between PCAOB members and the President unconstitutionally undermined Presidential authority. *Id.* at 495-98.



abandoning filing fees and absorbing costs into existing fees for patent applications, patent issuance, or patent maintenance.

A second concern is that, from a social standpoint, parties might spend excessively on argument before the PLRB and thus dissipate any social value that the PLRB promises to generate and perhaps even cause PLRB proceedings to generate more social cost than value. A sub-concern here is that the PLRB might encourage more filings of weak claims, rather than fewer, as patent holders with weak claims come to view the PLRB as a useful forum to test the prospects for their claim relatively cheaply in comparison to district court litigation. Use of the PLRB as a “trial balloon” forum for claims that might not otherwise be asserted in district courts could undermine at least part of the PLRB’s promise as a means to encourage swifter and cheaper resolution, or in some cases simple non-assertion, of claims of patent infringement. In particular, if the cost of pursuing claims before the PLRB is set sufficiently low relative to the benefit to the claimant of Type II error (i.e., a false positive) for a weak claim, then a party may find a strategy of “flooding” the PLRB with weak claims to have a positive net present value. Functionally, if even one of a number of weak claims receives a positive PLRB assessment and the value of such a positive assessment is high enough, this one success could more than make up for the cost of bringing an entire batch of weak claims.

This subsection grapples with this second concern about potential PLRB-induced costs by presenting an additional model, one that models individual parties’ incentives to make assertions of essentially any form before the PLRB. The model suggests that, in a broad range of circumstances, the private costs of making such assertions will cause rational parties to exercise sufficient self-restraint to preserve the PLRB’s promise as a mechanism for improving overall social welfare. On the other hand, under a limited set of circumstances, private parties’ use of PLRB proceedings could, if left unregulated, drive the social costs of those proceedings above their social benefits. Although the model suggests only a limited possibility that rational profit-maximizing parties will drive PLRB toward inefficiency, this possibility, as well as the further possibility of inefficiency-promoting behavior or factors not falling within the model, provides reason to ensure that the PLRB has powers to regulate its proceedings in interests of streamlining and efficiency that are at least comparable to those of district courts or the PTO in its post-issuance proceedings. For example, by imposing page limits on filings, demanding that parties make certain assertions with particularity, and even potentially limiting the number of the issues a party can present for PLRB review, the PLRB can do much to counter any tendencies toward socially excessive argument before the PLRB that parties turn out to exhibit.

In the model, we consider the incentives for a party to a patent lawsuit to raise an issue for review by the PLRB. In light of the clear-and-convincing-plus standard for PLRB review, we model two basic ways that the PLRB can be expected to rule on that issue if raised: (1) the PLRB can agree that the petitioner should prevail based on the information at hand (an agreement hereinafter described as an “affirmative” ruling), or (2) the PLRB can rule that existing evidence is inconclusive. Let us assume that the probability of the PLRB agreeing that the petitioner should prevail is given by the nonnegative value  $p$ , and let us assume for simplicity that an inconclusive ruling by the PLRB does not generate any information that adds or destroys value for society or the individual parties.<sup>231</sup> On the other hand, if the petitioner obtains a favorable ruling, the petitioner will effectively win an amount equal to  $V_{\text{petr}}$  as a result of an increase in the expected value of the petitioner’s side of the patent litigation in light of the petitioner’s victory before the PLRB. There are at least two potential channels for contributions to the win value  $V_{\text{petr}}$ : (1) an increase in the petitioner’s likelihood of at least partially prevailing in any subsequent district court litigation and (2) an increase in the likelihood of settlement on terms relatively favorable to the petitioner after the favorable PLRB ruling. Of course, there is a price for the possibility of winning in the PLRB proceeding: the cost  $C_{\text{petr}}$  of raising the issue and then litigating it before the PLRB. Consequently, we can expect a rational profit-maximizing party to raise the issue for PLRB review only when the probability of winning times the value of winning exceeds or equals the cost of making and pursuing the relevant petition—i.e., only when  $pV_{\text{petr}} \geq C_{\text{petr}}$  or, alternatively stated, only when  $p \geq C_{\text{petr}}/V_{\text{petr}}$ .

Likewise, we assume that society will gain from the early clarification that an affirmative PLRB ruling brings, with the value of that gain being given by  $V_{\text{soc}}$  and the probability of that gain being  $p$ , the previously indicated probability of an affirmative ruling. This gain will come at a cost  $C_{\text{soc}}$ , however: including the cost to the petitioner  $C_{\text{petr}}$  of engagement in PLRB proceedings, the cost  $C_{\text{resp}}$  to the other party or parties to the case of responding to the petition, and the cost  $C_{\text{pub}}$  to the public of conducting those proceedings. Under the model, the net welfare change for society as a result of the petitioner’s pursuit of an issue before the PLRB is therefore given by  $\Delta = pV_{\text{soc}} - C_{\text{soc}}$ . Thus, society only loses from PLRB proceedings if for an

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<sup>231</sup> One might expect that an inconclusive ruling by the PLRB will have a negative effect on the expected value of the litigation for the petitioner as the case will now be one in which the petitioner has failed to prevail before the PLRB, rather than one in which the petitioner only had a probability of failing to prevail before the PLRB. But because the standard for prevailing before the PLRB is intended to be very demanding, we assume that any such negative effect of an inconclusive, rather than affirmative, PLRB ruling is negligible to first approximation.

appropriately representative petition,  $pV_{\text{soc}} < C_{\text{soc}}$  or, alternatively stated,  $p < C_{\text{soc}}/V_{\text{soc}}$ .

Hence, under the model, for the raising of an issue before the PLRB to be rationally in a party's interest but contrary to society's interest, the value of  $p$ , the probability of the petitioning party's prevailing before the PLRB, must lie within a doubly restricted range:  $C_{\text{petr}}/V_{\text{petr}} \leq p < C_{\text{soc}}/V_{\text{soc}}$ . Under some circumstances, there will be no values of  $p$  that satisfy the twin conditions because  $C_{\text{soc}}/V_{\text{soc}}$  is in fact less than  $C_{\text{petr}}/V_{\text{petr}}$ , and thus there are no values that are less than  $C_{\text{soc}}/V_{\text{soc}}$  and greater than or equal to  $C_{\text{petr}}/V_{\text{petr}}$ . This situation can arise when there are strong positive externalities to the PLRB's providing a preliminary judgment on a particular point—for example, the invalidity or limited scope of a patent claim whose validity and breadth have significant implications for competitors of the petitioner as well as the petitioner itself.<sup>232</sup>

On the other hand, one can also anticipate that, when a party chooses to pursue litigation of an issue before the PLRB, that party will often be litigating an issue that, if the party prevails, will produce disproportionate benefit, relative to the rest of society, for that individual party, perhaps by mainly effecting a wealth transfer between the two parties, rather than doing much to benefit society at large. Thus, given that the cost to society of PLRB proceedings  $C_{\text{soc}}$  includes and therefore necessarily exceeds  $C_{\text{petr}}$ , one can certainly imagine situations where  $V_{\text{petr}}$  is so sizable relative to  $V_{\text{soc}}$  that  $C_{\text{soc}}/V_{\text{soc}} > C_{\text{petr}}/V_{\text{petr}}$ , and there is a range of available  $p$  values that can lead to net negative social welfare effects from PLRB review.

But it is important to recall that, under the model,  $p$  values that can lead to net negative social welfare effects are always capped by the value  $C_{\text{soc}}/V_{\text{soc}}$ , the ratio of the cost to society of PLRB proceedings divided by the societal value added by those proceedings, including savings in litigation costs. If we assume that a PLRB ruling declaring a party's position to be weak or strong will often lead to the associated issue dropping out of further litigation, and if we assume that the ratio between the costs of PLRB proceedings and the costs of litigation before the district courts will roughly track the ratio of costs associated with current PTO *inter partes* review proceedings and the costs of litigation before the district courts, we have reason to believe that the ratio  $C_{\text{soc}}/V_{\text{soc}}$  will be in the nature of a fraction such as 0.1 or lower. In other words, because district court patent litigation seems, generally speaking, to result in litigation costs that are roughly ten times or

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<sup>232</sup> Golden, *supra* note 177, at 616 (“[A] patent challenger can generate significant positive externalities that are not positively reflected in a challenger's incentives.”).

more higher than those characteristic of PTO administrative proceedings,<sup>233</sup> litigation cost savings alone could cause the ratio  $C_{\text{soc}}/V_{\text{soc}}$  to take a value that is no more than about 0.1 or 10%. In short, there is reason to believe that PLRB proceedings will produce net positive value for society as long as parties restrain themselves—or are restrained through appropriate rules governing proceedings—such that the overall success rate of their filings is at least about 10%.

Such discretion in raising issues when a claimant faces a demanding standard is more than plausible. In the face of an arguably more demanding standard for success than the PLRB’s proposed clear-and-convincing-plus standard, patentees already restrain their filing of motions for preliminary injunctions so that such motions have a success rate of nearly 20%.<sup>234</sup> Hence, the suggestion from the model is that, as long as the PLRB policies and record make clear that a litigant has only a very limited chance of obtaining a favorable as opposed to substantially inconclusive judgment with respect to an issue that the litigant places before the PLRB, parties are likely to restrict their use of PLRB proceedings accordingly. Of course, the PLRB can use further procedural tools, such as a page or word limits, to effectively force further restraint as necessary.

### C. COMPLEMENT OR SUBSTITUTE FOR OTHER ADJUSTMENTS

Beyond the concern with a potential flood of claims before the PLRB, one potential objection to this article’s proposal for prelitigation administrative review is that the reform is unnecessary because there have already been a number of recent adjustments to how the patent system operates and more reforms might already be in the works.<sup>235</sup> In short, one can anticipate an argument that, in light of other reforms, patent litigation administrative review is unnecessary. To respond to such an argument, this

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<sup>233</sup> See AIPLA 2015 SURVEY, *supra* note 18, at 37-38 (showing typical patent litigation costs of from \$600,000 to \$5 million depending on the stakes and typical costs for filing an inter partes review petition of \$80,000 and for full litigation of inter partes review through appeal of \$350,000).

<sup>234</sup> Kirti Gupta & Jay P. Kesan, *Studying the Impact of eBay on Injunctive Relief in Patent Cases* 7 tab.2 (2015) (reporting that over 19% (125 of 655) of preliminary injunction motions in patent cases have been granted since the Supreme Court’s 2006 decision in *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006)), available at <http://ssrn.com/abstract=2629399>.

<sup>235</sup> Cf. F. Scott Kieff & Henry E. Smith, *How Not to Invent a Patent Crisis*, in *REACTING TO THE SPENDING SPREE: POLICY CHANGES WE CAN AFFORD* 55 (Terry L. Anderson & Richard Sousa eds., 2009) (“[I]n light of the rapid, and we would argue excessive, changes that have already occurred in the courts, what patent law needs is a tweaking of existing safety valves and processes—not opening the floodgates to more discretion and uncertainty.”).

section discusses recently implemented or proposed reforms and the work that they leave for the proposed administrative review.

In 2011, Congress made substantial adjustments to the patent system's mechanisms for dispute resolution. In early 2011, Congress enacted a statute launching the Patent Pilot Program under which, in certain districts, judicial expertise in handling patent cases can be cultivated by preferentially assigning such cases to a select subset of district judges.<sup>236</sup> Later that same year, Congress passed the America Invents Act (AIA). The AIA limited joinder in patent suits, apparently in response to the litigation practices of PAEs that, by alleging infringement against several unrelated defendants in a single case, could reduce their enforcement costs while potentially complicating litigation for accused infringers and making the PAE's choice of forum less vulnerable to challenge.<sup>237</sup> As noted above, the AIA also expanded opportunities for post-issuance review of patent validity issues at the USPTO.<sup>238</sup>

The courts have also been active in making adjustments, whether to their understanding of substantive patent law or to their procedures. The Supreme Court and Federal Circuit have issued decisions that, *inter alia*, have (1) tightened—or re-emphasized the demands of—the patentability requirements of subject-matter eligibility,<sup>239</sup> nonobviousness,<sup>240</sup> claim

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<sup>236</sup> See Pilot Program in Certain District Courts, Pub. L. 111-349, 124 Stat. 3674, 3674 (2011) (describing the act as aiming “to encourage enhancement of expertise in patent cases among district judges”); Anderson, *supra* note 147, at 691 (describing the Patent Pilot Program); La Belle, *supra* note 252, at 117 (observing that “fourteen district courts were chosen to participate in the program”).

<sup>237</sup> See Taylor, *supra* note 29, at 672-78 (discussing how joining multiple defendants can reduce a patentee's enforcement costs, increase those of accused infringers, and decrease the probability of transfer); see Klerman & Reilly, *supra* note 20, at 16 (discussing how “[t]he Eastern District of Texas's case management of multi-defendant and consolidated cases ... benefits patentees” by, for example, “imposing the same page and time limits for the multiple defendants in the aggregate as for the single plaintiff”).

<sup>238</sup> See *supra* text accompanying notes \_\_\_\_.

<sup>239</sup> See John M. Golden, Flook Says One Thing, Diehr Says Another: A Need for Housecleaning in the Law of Patentable Subject Matter, 82 GEO. WASH. L. REV. 1765, 1768-74 (2014) (discussing recent Supreme Court decisions on subject-matter eligibility).

<sup>240</sup> See Jason Rantanen, *The Federal Circuit's New Obviousness Jurisprudence: An Empirical Study*, 16 STAN. TECH. L. REV. 709, 764 (2013) (concluding that appellate case law on nonobviousness has effectively tightened the nonobviousness requirement in the wake of a 2007 Supreme Court decision).

definiteness,<sup>241</sup> and adequate disclosure;<sup>242</sup> (2) emphasized district courts' discretion to deny injunctive relief;<sup>243</sup> (3) tightened or re-emphasized requirements for proving (a) patent-infringement damages,<sup>244</sup> (b) willful infringement in justification of an award of enhanced damages,<sup>245</sup> and, on the other side of a patent-infringement suit, (c) inequitable conduct before the USPTO;<sup>246</sup> (4) increased opportunities for attorney fee shifting;<sup>247</sup> (5) broadened application of a statutory rule of construction to effectively require narrower interpretations of many existing patent claims;<sup>248</sup>

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<sup>241</sup> *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2130 (2014) (stating that, contrary to the implication of some language in Federal Circuit case law, “[t]o tolerate imprecision just short of that rendering a claim ‘insolubly ambiguous’ would diminish the definiteness requirement’s public-notice function and foster the innovation-discouraging ‘zone of uncertainty’ ... against which this Court has warned”).

<sup>242</sup> *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1340 (2010) (en banc) (“We now reaffirm that § 112, first paragraph, contains a written description requirement separate from enablement ....”).

<sup>243</sup> *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 394 (“We hold only that the decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity ....”).

<sup>244</sup> *See, e.g., LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 78 (Fed. Cir. 2012) (holding that “the district court abused its discretion by admitting [a] settlement agreement into evidence” and “erred in allowing the jury to hear [an expert’s] testimony concerning a 6% royalty rate”); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1315 (Fed. Cir. 2011) (“Evidence relying on [a] 25 percent rule of thumb [estimating a reasonable royalty to equal 25% of the infringer’s expected profits] is ... inadmissible ... because it fails to tie a reasonable royalty base to the facts of the case at issue.”); Douglas G. Smith, *The Increasing Use of Challenges to Expert Evidence Under Daubert and Rule 702 in Patent Litigation*, 22 J. INTELL. PROP. L. 345, 350-73 (2015) (discussing developments in the case law on admissibility of expert testimony in patent cases).

<sup>245</sup> *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc) (stating that a prior standard for willfulness was “more akin to [one of] negligence” and that “proof of willful infringement permitting enhanced damages requires at least a showing of objective recklessness”).

<sup>246</sup> John M. Golden, *Patent Law’s Falstaff: Inequitable Conduct, the Federal Circuit, and Therasense*, 7 WASH. J.L. TECH. & ARTS 353, 371-72 (2012) (discussing how *Therasense* “g[a]ve the law a significant, non-fact-specific shove toward a leaner doctrine of inequitable conduct”).

<sup>247</sup> *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1755 (2014) (holding that a Federal Circuit framework for when attorney fees may be awarded was “unduly rigid” and “impermissibly encumber[ed] the statutory grant of discretion to district courts”).

<sup>248</sup> *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, (Fed. Cir. 2015) (en banc in relevant part) (overruling precedent “characterizing as ‘strong’ the presumption that a [patent claim] limitation lacking the word ‘means’ is not subject to § 112, para. 6” and asserting a “strict

(6) overruled precedent erecting hurdles to bringing or triumphing in declaratory judgment actions challenging the scope or validity of patent rights;<sup>249</sup> and (7) repeatedly used writs of mandamus to order transfer of patent cases to new districts, particularly in cases in which the original district was the Eastern District of Texas.<sup>250</sup> Trial courts have taken additional measures. Starting with the Northern District of California in 2000,<sup>251</sup> various district courts and judges have adopted local rules or standing orders specifically directed toward managing patent litigation,<sup>252</sup> commonly with an eye toward achieving greater efficiency.<sup>253</sup>

Despite exclusive federal jurisdiction over patent-infringement lawsuits, states have also taken measures to regulate processes of patent assertion. Spurred by the actions of patent assertion entities that have carpet-bombed industry sectors with demand letters asserting patent infringement, a majority of states have now passed laws specifically targeting patent demand letters, commonly criminalizing patent-infringement allegations made in bad faith and requiring alleged violators to post a bond for potential penalties.<sup>254</sup> Even in states without such laws, alleged infringers have begun looking to

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requirement” for application of that paragraph that there be “a showing that the limitation essentially is devoid of anything that can be construed as structure”).

<sup>249</sup> *Medtronic, Inc. v. Mirowski Family Ventures, LLC*, 134 S. Ct. 843, 846 (2014) (reversing a Federal Circuit holding that a licensee bears the burden of proving non-infringement in a declaratory judgment action); *MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, (2007) (holding that a patent licensee “was not required, insofar as Article III [of the U.S. Constitution] is concerned, to break or terminate its 1997 license agreement” before challenging the patent in a declaratory judgment action).

<sup>250</sup> Paul R. Gugliuzza, *The New Federal Circuit Mandamus*, 45 IND. L. REV. 343, 346 (2012) (noting that, despite never before having “granted a mandamus petition to overturn a [district court] transfer decision,” “the Federal Circuit ha[d], on ten occasions since December 2008, granted mandamus to order the U.S. District Court for the Eastern District of Texas to transfer a patent case”).

<sup>251</sup> Pelletier, *supra* note 108, at 478 (“[T]he Northern District of California is the acknowledged model and pioneer of local patent rules, having adopted its first version in 2000.”).

<sup>252</sup> Megan M. La Belle, *The Local Rules of Patent Procedure*, 47 ARIZ. ST. L.J. 63, 63 (2015) (“Today, thirty district courts in twenty different states have comprehensive local patent rules, and many more individual judges have adopted ‘local-local’ rules or standing orders that apply to patent cases in their courts.”).

<sup>253</sup> MENELL ET AL., *supra* note 101, at 2-8 (“In an effort to provide fair and efficient management of patent cases, some districts have adopted Patent Local Rules . . .”).

<sup>254</sup> Ryan Davis, *Patent Troll Targets Getting Boost from State Laws*, LAW360, Nov. 24, 2015 (observing that “[d]ozens of states have recently passed laws making it a crime under state law to allege patent infringement in bad faith” and that 15 states “include a bond provision in their abusive patent litigation laws”).

state consumer protection laws as a potential basis for counterclaims against patentees.<sup>255</sup>

But these adjustments have proven inadequate to stem either the flood of patent-infringement suits into the district courts or continuing perceptions that patent assertion has become a drag on innovation. Part of this failure reflects counterbalancing adjustments by patent holding plaintiffs. For example, patent holders have proven adept at partly circumventing the force of the new joinder limitations by “increasing the number of filings against individual defendants who would have previously been named in a single complaint,” by “employing multidistrict litigation (MDL) procedures to bind cases for pre-trial activities,” and by incorporating in Delaware to pursue defendants in a forum where consolidation of cases is likely because of the forum’s “relatively small” size.<sup>256</sup>

Nonetheless, in early 2015, there was some hope that a combination of the USPTO’s new post-issuance proceedings and adjustments to approaches to subject-matter eligibility and fee shifting had stanching the torrent of new patent suits. From a record number of 6,114 new suits filed in 2013, the number of new suits dropped to 5,070 in 2014.<sup>257</sup> But in 2015, the number of new suits bounced back to 5,829,<sup>258</sup> and this number of new suits in district courts was supplemented by an increasingly prominent, rising tide of new filings in USPTO post-issuance proceedings.<sup>259</sup> As a result, despite all the reforms from 2006 through 2014, there is cause for concern that the burdens of patent litigation have only worsened.

More recent changes to the Federal Rules of Civil Procedure offer further hope for relief but little assurance. In 2015, the Supreme Court approved new Federal Rules of Civil Procedure that seek to “contro[l] the expense and time demands of litigation” and to promote “prompt and efficient resolutions of disputes.”<sup>260</sup> Steps to these ends notably include (1) shortening the default deadline for a trial judge’s mandatory scheduling

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<sup>255</sup> *Id.* (noting use of “state consumer protection statutes” by “[s]ome accused infringers”).

<sup>256</sup> Smith & Transier, *supra* note 14, at 231-32.

<sup>257</sup> Lex Machina, Cases Filed by Year, <https://law.lexmachina.com> (last visited Jan. 3, 2016) (listing annual numbers of patent cases filed in district courts from 2009 through 2015).

<sup>258</sup> *Id.* (same).

<sup>259</sup> See U.S. Patent & Trademark Office, Patent Trial and Appeal Board Statistics 3 (Nov. 30, 2015) (reporting that, from fiscal year 2014 to fiscal year 2015, the number of petitions for inter partes review, post-grant review, and covered business method review increased from 1,489 to 1,897), available at <http://www.uspto.gov/sites/default/files/documents/2015-11-30%20PTAB.pdf>.

<sup>260</sup> See Chief Justice of the Supreme Court of the United States, 2015 Year-End Report on the Federal Judiciary 6 (discussing the significance of amendments to the Federal Rules of Civil Procedure).



order from “the earlier of 120 days after any defendant has been served with the complaint or 90 days after any defendant has appeared” to the earlier of 90 days after first service or 60 days after first appearance;<sup>261</sup> (2) limiting authorized discovery to “nonprivileged matter” not only “relevant to any party’s claim or defense” but also “proportional to the needs of the case”;<sup>262</sup> and (3) tightening patent-suit pleading requirements by eliminating the ability of patentees to rely on Form 18, a model complaint for patent-infringement suits.<sup>263</sup>

But these changes to the Federal Rules seem insufficiently powerful or systematic in likely effect to drain the patent litigation morass. The change in the default deadline for mandatory scheduling orders does not seem very significant for the bulk of patent suits because of the proliferation of local rules and standing orders that already set default schedules.<sup>264</sup> Given prior limitations on discovery, the significance of the new proportionality requirement for discovery will only become clear with time<sup>265</sup> and may leave much up to individual trial judges’ discretion.<sup>266</sup> The abrogation of patentees’ ability to rely on Form 18 does have at least one clearly identifiable effect: unshielded from any further ability to rely on Form 18, patent-infringement plaintiffs have become more effectively subject to a general “plausibility” pleading requirement articulated in recent Supreme Court opinions.<sup>267</sup> But application of this pleading requirement might be left substantially up to the

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<sup>261</sup> Administrative Office of the U.S. Courts, Redline of Civil Rules Amendments (eff. Dec. 1, 2015) 5-6 [hereinafter “Rules Amendments Redline”], *available at* <http://www.uscourts.gov/rules-policies/current-rules-practice-procedure/federal-rules-civil-procedure>.

<sup>262</sup> *Id.* at 10.

<sup>263</sup> *Id.* at 49 (showing abrogation of Rule 84); *see also* Matthew Bultman, *Stricter Patent Pleading Requirements Take Effect Dec. 1*, LAW360 (Nov. 30, 2015) (“The changes, a rewrite of the Federal Rules of Civil Procedure, ... eliminate a rule that allowed filers of patent suits to rely on a bare-bones model complaint.”).

<sup>264</sup> *See supra* text accompanying note 253.

<sup>265</sup> *Cf.* Moore, *supra* note 30, at 1114-16 (contesting the position of the Advisory Committee on Rules of Civil Procedure that addition of the proportionality requirement has little significance).

<sup>266</sup> *Cf.* *Alexsam, Inc. v. IDT Corp.*, 715 F.3d 1336, 1342 (Fed. Cir. 2013) (“A district court’s decision to sanction a litigation [for a discovery violation] is reviewed for abuse of discretion.”); *Abbott Point of Care Inc. v. Epocal, Inc.*, 666 F.3d 1299, 1302 (Fed. Cir. 2012) (“[T]his court reviews the district court’s denial of discovery, an issue not unique to patent law, for abuse of discretion, applying the law of the regional circuit ....” (internal quotation marks omitted)).

<sup>267</sup> Gugliuzza, *supra* note 188, at 283-84 (noting that “[p]atent litigation ha[d] been partially immunized from the pleading revolution wrought by the Supreme Court’s decisions” because of complainants ability to rely on Form 18).

discretion of individual district judges,<sup>268</sup> and, although such a plausibility requirement might help screen the very weakest of patent-infringement allegations, this threshold does not seem to address concerns about patent-infringement suits that, though facially plausible on the basis of facts alleged in a complaint, are unlikely to survive serious contestation.<sup>269</sup>

Additional adjustments might be forthcoming from Congress. Over the past few years, members of Congress have introduced several bills focused on patent litigation reform<sup>270</sup> and proposing changes to aspects of litigation such as pleading requirements, rules for attorney-fee shifting and case venue, and the scope of allowable discovery.<sup>271</sup> Some bills have sought to have address the pre-litigation demand letters<sup>272</sup> that have attracted the attention of state legislators.<sup>273</sup> In 2015, the main congressional bills focused on litigation reform, a House bill and a Senate bill, were each voted on favorably by their chambers' respective judiciary committee.<sup>274</sup> But efforts to enact the bills ultimately stalled.<sup>275</sup>

Regardless of whether these bills move forward in this or a later session of Congress, they do not obviate the desirability of this article's

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<sup>268</sup> See Kaplow, *supra* note 89, at 1285-86 (suggesting that the plausibility pleading standard might effectively leave much up to the idiosyncratic views of individual district judges).

<sup>269</sup> Cf. Robert G. Bone, Twombly, *Pleading Rules, and the Regulation of Court Access*, 94 IOWA L. REV. 873, 878 (2009) (contending that "the Court's plausibility standard marks only a modest departure from notice pleading").

<sup>270</sup> See Gugliuzza, *supra* note 188, at 283 ("Of the fourteen patent reform bills introduced in the 113th Congress, five focused specifically on patent litigation."); Patent Progress, Patent Progress's Guide to Federal Patent Reform Legislation, [http://www.patentprogress.org/patent-progress-legislation-guides/patent-progresss-guide-patent-reform-legislation/#strong\\_act](http://www.patentprogress.org/patent-progress-legislation-guides/patent-progresss-guide-patent-reform-legislation/#strong_act) [hereinafter "Patent Progress Guide"] (last visited Jan. 2, 2016) (describing bills entitled the "Protecting American Talent and Entrepreneurship Act (PATENT Act)" and the "Innovation Act").

<sup>271</sup> See, e.g., Innovation Act, H.R. 9, 114th Cong. (2015); Protecting American Talent and Entrepreneurship Act ("PATENT Act"), S. 1137, 114th Cong. (2015); see also Gugliuzza, *supra* note 188, at 283 (noting that bills before the 113th Congress "addressed four main topics relevant to patent litigation: pleading requirements, discovery, recovery of attorneys' fees, and stays of lawsuits against end users").

<sup>272</sup> See *id.* (describing House bills entitled the "Targeting Rogue and Opaque Letters Act of 2015" and the "Demand Letter Transparency Act of 2015"); Gugliuzza, *supra* note 188, at 283 ("[S]everal other bills [in the 113th Congress] proposed to fight patent trolls who send demand letters to thousands of end users by making it illegal to send 'in bad faith' a letter threat[en]ing patent infringement litigation.").

<sup>273</sup> See *supra* text accompanying notes \_\_.

<sup>274</sup> See *supra* note 4 and accompanying text.

<sup>275</sup> Tony Dutra, *Sources Say Patent Bills Not Right-Sized But Goodlatte, Pro-Bill Lobbyists Keep Fighting*, 90 BNA'S PATENT, TRADEMARK & COPYRIGHT J. 3624, 3624 (Oct. 30, 2015) ("Legislation that would change how courts handle patent infringement cases is unlikely to move forward in its current form, sources familiar with the effort told Bloomberg BNA.").

proposed system of administrative review. They do not provide for automatic early-stage review of the substance of patent litigation and thus cannot offer the informational advantages especially characteristic of such review—informational advantages both for individual parties and also for society in its attempts to understand the patent litigation landscape *ex ante*. Thus, to the extent current congressionally proposed reforms are embraced, this article’s framework for patent litigation administrative review would still have a place as a significant complement. Moreover, to the extent reforms proposed in Congress are viewed as overly draconian or otherwise unwise, this article’s proposal of administrative review might act as a welcome alternative.

## CONCLUSION

Preliminary administrative review of patent suits can improve the patent system’s short-term economic performance and, by enabling the development of a better understanding of the current patent litigation landscape, can provide information that fosters the design of a better patent system for the future. Patent litigation in the United States currently bears many hallmarks of a process ripe for, and indeed marked by, opportunistic behavior. High litigation costs, long delays in obtaining judgments in even pretrial stages of district court litigation, and evidence of forum shopping are among the most dramatic of such signals. Standard economic theory and common sense suggest that a process of preliminary administrative review, particularly one designed to facilitate early judgment on what at least one party believes should be a relatively easy issue, can help mitigate problems behind the current patent litigation morass. Part III’s economic models, which include detailed analysis of plausibly representative litigation scenarios, provide further reason to believe that preliminary administrative review will improve patent system performance.

On the other hand, procedural mechanisms such as preliminary administrative review can sometimes generate unexpected effects or be unforeseeably susceptible to variants of the opportunistic gaming that the procedural mechanisms seek to contain. Consequently, the proposed framework for preliminary administrative review should probably be adopted on a trial basis only. A sunset provision would effectively require policymakers to reevaluate the framework and any potential successors within a few years. The commitment to policy innovation, information gathering, and recurrent evaluation that such a pilot would represent might be crucial to ensuring that legal systems like the U.S. patent system serve their intended social purposes faithfully and competently over time.