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Inter Partes Review as a Shield for Technology Purchasers: A Response to Gaia Bernstein's *The Rise of the End-User in Patent Litigation*

Brian J. Love
Santa Clara University School of Law, blove@scu.edu

INTER PARTES REVIEW AS A SHIELD FOR TECHNOLOGY PURCHASERS: A RESPONSE TO GAIA BERNSTEIN'S *THE RISE OF THE END-USER IN PATENT LITIGATION*

BRIAN J. LOVE*

Abstract: In her Article, *The Rise of the End User in Patent Litigation*, Professor Bernstein makes the case for legislative and judicial action designed to protect technology users from abusive patent enforcement that exploits their relative lack of resources and technical knowledge. This Essay presents the findings of an empirical study designed to determine the extent to which this problem has been mitigated in recent months by inter partes review ("IPR")—a reform signed into law more than three years ago but only now emerging as a powerful shield for those accused of patent infringement. My findings suggest that IPR has thus far proven to be a substantial benefit to downstream technology purchasers and other relatively small entities faced with infringement claims. I find that tech purchasers and small businesses have both been nearly as successful as large manufacturers at instituting reviews, halting co-pending litigation, and ultimately winning on the merits of their petitions. In addition, I observe that some manufacturers have filed IPR petitions to challenge patents asserted in court against their customers. However, despite the potential benefits of pursuing IPR, I find that technology purchasers appear to be substantially underrepresented among IPR petitioners, likely due to the high cost involved. Accordingly, additional reform measures may still be advisable to assist those particularly vulnerable to abusive litigation tactics.

INTRODUCTION

Perhaps no entity is more responsible for renewed interest in patent reform legislation than Innovatio IP Ventures.[1] Its campaign to collect patent

* Assistant Professor and Co-Director of the High Tech Law Institute, Santa Clara University School of Law. Thanks to Shawn Ambwani, Gaia Bernstein, Dan Burk, Colleen Chien, Shawn Miller, Tyler Ochoa, David Schwartz, and Jim Yoon for helpful comments on earlier drafts. Thanks also to participants at the Stanford Law School Conference on the PTO and Courts, and the Santa Clara University School of Law Faculty Workshop.

[1] On February 5, 2015, Congressman Bob Goodlatte reintroduced the Innovation Act, a bill that passed in the U.S. House of Representatives in December 2013 but later died in the Senate in May 2014. Innovation Act, H.R. 9, 114th Cong. (2015); Kate Tummarello, *Patent Reform Bill Dealt Fatal Blow in Senate*, HILL (May 21, 2014), http://thehill.com/policy/technology/206793-leahy-takes-patent-reform-off-committee-agenda, *archived at* http://perma.cc/BK4W-8MT7. If passed, the Inno-

licensing fees from thousands of Wi-Fi-equipped coffee shops, hotels, restaurants, and other small technology users[2] invited scrutiny from patent scholars[3] and, more importantly, angered politically-powerful constituents nationwide.[4] For the first time in memory, patent litigation became an issue outside major tech hubs and outside the tech industry itself, as businesses with no engineers on the payroll suddenly and quite unexpectedly found themselves knee-deep in patent law.[5]

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vation Act would, among other reforms, raise pleading requirements for patent infringement claims, establish a presumption that attorneys' fees be awarded in patent suits, and limit discovery in patent suits prior to claim construction. H.R. 9. In 2013 and 2014, many other bills were introduced, including a number at the state level. *See* Joe Mullin, *Ten States Pass Anti-Patent-Troll Laws, with More to Come*, ARS TECHNICA (May 15, 2014), http://arstechnica.com/tech-policy/2014/05/fight-against-patent-trolls-flags-in-the-senate-but-states-push-ahead/, *archived at* http://perma.cc/9V2A-KCX2 (collecting citations to state-level legislative action); *Patent Progress's Guide to Federal Patent Reform Legislation*, PATENT PROGRESS, http://www.patentprogress.org/patent-progress-legislation-guides/patent-progresss-guide-patent-reform-legislation/, *archived at* http://perma.cc/JL4C-WLR4 (last visited Apr. 8, 2015) (collecting citations to federal patent reform bills). As a counterpoint to the Innovation Act and other bills that target abusive patent assertion, Senator Christopher Coons introduced the STRONG Patents Act—a bill largely comprised of patentee-friendly reforms—on March 3, 2015. Support Technology and Research for Our Nation's Growth Patents Act, S. 632, 114th Cong. (2015); Gene Quinn, *Pro-Patentee Patent Reform, the STRONG Patents Act Introduced in Senate*, IPWATCHDOG (Mar. 3, 2015), http://www.ipwatchdog.com/2015/03/03/strong-patents-act-introduced-in-senate/id=55384, *archived at* http://perma.cc/YE6Y-DASE (referring to the STRONG Act as "clearly and overwhelmingly favorable to innovators and patent owners" and "stand[ing] in stark contrast with the Innovation Act").

[2] *See* Amended Complaint at 19, Cisco Sys., Inc. v. Innovatio IP Ventures, LLC, No. 1:11-cv-09308 (N.D. Ill. Oct. 1, 2012) ("Innovatio has sent more than 8,000 threatening letters to licensing targets [end users of Wi-Fi technology] in all 50 states.").

[3] *See, e.g.*, COLLEEN CHIEN, PATENT ASSERTION AND STARTUP INNOVATION 12–15 (2013), *available at* http://newamerica.net/sites/newamerica.net/files/policydocs/Patent%20Assertion%20and%20Startup%20Innovation_updated.pdf, *archived at* http://perma.cc/GBQ5-TEM8; Gaia Bernstein, *The Rise of the End User in Patent Litigation*, 55 B.C. L. REV. 1443, 1492–93 (2014); Colleen V. Chien & Edward Reines, *Why Technology Customers Are Being Sued en Masse for Patent Infringement & What Can Be Done*, 49 WAKE FOREST L. REV. 235, 235–38 (2014); Brian J. Love & James C. Yoon, *Expanding Patent Law's Customer Suit Exception*, 93 B.U. L. REV. 1605, 1606–08 (2013).

[4] *See* Brian Fung, *Patent Reform Advocates Are Launching a 'Super-Coalition' to Whack Patent Trolls*, WASH. POST (Jan. 15, 2015), http://www.washingtonpost.com/blogs/the-switch/wp/2015/01/15/patent-reform-advocates-are-launching-a-super-coalition-to-whack-patent-trolls/, *archived at* http://perma.cc/MCG7-REW8 ("'When patent reform was being fought several years ago, it was tech versus pharma . . . . [But] this is no longer a tech-industry issue. It's become much, much broader.'" (quoting John Potter, President, Application Developers' Alliance)).

[5] *See* Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Seller and User Liability in Intellectual Property Law*, 68 U. CIN. L. REV. 1, 3 (1999) (concluding that patents are "almost never enforced" against private, noncommercial users of inventions). There have, however, been noteworthy exceptions. *See* Colleen V. Chien, *Reforming Software Patents*, 50 HOUS. L. REV. 325, 325 (2012) ("[I]n the late 1800s, farmers were sued by 'patent sharks' en masse over their use of basic farming tools that were covered by scores of patents."); Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation*, 44 B.C. L. REV. 509, 517 (2003) (noting that E-Data, a company that "owns a patent which arguably covers financial

In the years that followed Innovatio's formation, other patent holders borrowed from the same playbook, demanding licensing fees from thousands of small business for using off-the-shelf technology designed and manufactured by large tech companies that, presumably, these patentees preferred not to face in court. MPHJ Technology Investments—the "scanner troll"—inundated the likes of doctors' offices, architecture firms, and even non-profits with vague licensing demands based on allegedly infringing use of ordinary copy machines, eventually drawing the wrath of the Federal Trade Commission and multiple state attorneys general.[6] In addition, patentees like Lodsys, GeoTag, Soverain Software, and Clear with Computers targeted users of ubiquitous e-commerce technology,[7] and yet another pair, ArrivalStar and PJC Logistics, sued local governments and trucking companies en masse for using GPS technology to track buses, trucks, and trains.[8]

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transactions on the Internet," reportedly sent demand letters to 75,000 alleged infringers before suing forty-one companies for patent infringement).

[6] *See, e.g.*, Complaint at 4, *In re* MPHJ Tech. Inv. LLC, F.T.C. Matter No. 142-3003 (F.T.C. Nov. 6, 2014) (alleging that MPHJ "sent [demand letters] to approximately 16,465 small businesses located in all fifty states and the District of Columbia"), *available at* http://www.ftc.gov/system/files/documents/cases/141106mphjcmpt.pdf, *archived at* http://perma.cc/8GN2-UHST; Ashby Jones, *New York State Cracks Down on Patent Trolls*, WALL ST. J., Jan. 13, 2014, at B3, *available at* http://www.wsj.com/articles/SB10001424052702303819704579319071070777820, *archived at* https://perma.cc/8CM2-CX6C?type=pdf ("[In addition to New York,] MPHJ has fought with other state attorneys general. Both Vermont and Nebraska have sued the firm, and last year, the company reached a settlement with Minnesota in which the company agreed to stop its licensing efforts in the state.").

[7] Lodsys has sued more than one hundred alleged infringers in actions that generally settle for less than the cost of mounting a defense. *See* Colleen V. Chien, *Patent Trolls by the Numbers*, PATENTLYO (Mar. 14, 2013), http://www.patentlyo.com/patent/2013/03/chien-patent-trolls.html, *archived at* http://perma.cc/4WGN-38JK; David Ruddock, *Patent Trolls: What Is Lodsys Actually Asking App Developers to Pay? You Might Be Surprised*, ANDROID POLICE (Nov. 2, 2011), http://www.androidpolice.com/2011/11/02/patent-trolls-what-is-lodsys-actually-asking-app-developers-to-pay-you-might-be-surprised, *archived at* http://perma.cc/6ZP3-QZ8J (reporting that Lodsys demands a royalty of only 0.575% of U.S. revenue even though royalty rates typically fall between one and four percent). GeoTag, Soverain, Clear with Computers, and others have sued hundreds of additional online retailers. *See* J.J. Barrow, *GeoTag Searches for More Local Search Engines to Sue*, PAT. EXAMINER (Feb. 29, 2012), http://patentexaminer.org/2012/02/geotag-searches-for-more-local-search-engines-to-sue/, *archived at* http://perma.cc/7T88-WTVF (noting that GeoTag, Inc. has sued approximately 400 companies that use a "website with a business or 'store locator' search function," including Giorgio Armani, Christian Dior, Oscar De La Renta, Gucci, Rolex, Nordstrom, Best Buy, Target, Yellow Book, Intelius and Yelp); Joe Mullin, *How Newegg Crushed the "Shopping Cart" Patent and Saved Online Retail*, ARS TECHNICA (Jan. 27, 2013), http://arstechnica.com/tech-policy/2013/01/how-newegg-crushed-the-shopping-cart-patent-and-saved-online-retail/, *archived at* http://perma.cc/RV78-UKX6 (discussing Soverain's suits filed against Newegg, Nordstrom, Macy's, Home Depot, Radio Shack, Kohl's, Amazon, The Gap, Avon, Victoria's Secret, Walgreen's, and others for the basic use of the "shopping cart" feature on their websites); John S. Pratt & Bonnie M. Grant, *Beware the Trolls: Explorers or Buccaneers?*, 207 PAT. WORLD, Nov. 2008, at 18 (reporting that, likewise, Clear with Computers once sued forty-seven defendants in a single suit for using ubiquitous e-commerce technology).

[8] *See, e.g.*, Emily Badger, *Why Is a Patent Troll in Luxembourg Suing U.S. Public Transit Agencies?*, ATLANTIC CITYLAB (Apr. 23, 2012), http://www.theatlanticcities.com/technology/2012/

In her Article, *The Rise of the End User in Patent Litigation*, Professor Bernstein discusses licensing campaigns like these and convincingly makes the case for legislative and judicial action—more frequent use of fee shifting is her top choice—to protect technology users from sharp patent litigation practices.[9] This Essay doesn't aim to change the reader's mind on that front. In fact, I have written on similar topics myself.[10] Instead, this Essay investigates the possibility that in recent months this problem has already (though quietly) been substantially mitigated by another mechanism—one signed into law more than three years ago, but only now emerging as a powerful shield for those accused of patent infringement.

In 2011, Congress passed the America Invents Act ("AIA"), the most significant piece of patent legislation since 1952, spurred at least in part by concern that patent rights were regularly being enforced in abusive ways.[11] Though many reforms included in the AIA were greeted by the patent community with a collective yawn,[12] one reform has recently emerged as an un-

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04/why-patent-troll-luxemburg-suing-us-public-transit-agencies/1819/, *archived at* http://perma.cc/64N3-CSTZ (reporting that ArrivalStar has "sued the Massachusetts Bay Transportation Authority, the New York Metropolitan Transport Authority, Chicago's Metra, the Port Authority of New York and New Jersey, and Seattle's King County Metro Transit" as well as other "transit systems in Cleveland, Monterey, California, and Portland, Oregon"); Avery Vise, *More Than 200 Carriers Sued for Patent Infringement*, COM. CARRIER J. (Mar. 28, 2011), http://www.ccjdigital.com/more-than-200-carriers-sued-for-patent-infringement/, *archived at* http://perma.cc/TT48-73NZ (reporting that PJC Logistics "has sued 211 trucking companies, private fleets and logistics providers," many of whom were "Qualcomm customers"); *see also* Chien, *supra* note 7 (providing a more recent litigation tally and showing that PJC Logistics and ArrivalStar have collectively sued over six hundred parties in over 250 cases).

[9] Bernstein, *supra* note 3, *at* 1452–58, 1488–93.

[10] *See generally* Love & Yoon, *supra* note 3 (arguing that the "customer suit exception" should be expanded to make it easier for manufacturers to defend patent suits filed against their customers); Christian Helmers et al., *Is There a Patent Troll Problem in the U.K.?*, 24 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 509 (2014) (concluding that fee shifting may be a key reason for the relative lack of patent assertion by non-practicing entities in the U.K.).

[11] *See* Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (codified as amended in scattered sections of 35 U.S.C. (2012)); *see also* Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792 (codified as amended in scattered sections of 35 U.S.C.) (enacting "title 35 of the United States Code entitled Patents"). For more on the motivations behind passage of the AIA, particularly modifications to post-grant administrative review, see, for example, *Protecting Small Businesses and Promoting Innovation by Limiting Patent Troll Abuse: Hearing Before the S. Judiciary Comm.*, 113th Cong. 3–6, 8 (2013) (statement of Q. Todd Dickinson, Exec. Dir., Am. Intellectual Property Law Ass'n), *available at* http://ipwatchdog.com/blog/dickinson-senate-testimony-12-17-2013.pdf, *archived at* http://perma.cc/95RL-RHDX (recounting the debate leading up to the AIA and referring to "the assertion of allegedly invalid or overbroad patents" as "the very abuse for which AIA post-grant procedures were created").

[12] *See* GARY R. MAZE & K. KALAN, THE AMERICA INVENTS ACT: MUCH ADO ABOUT VERY LITTLE 2, 8 (2011), *available at* http://www.bw-legal.com/news/nbin/20111006_whitepaper.pdf, *archived at* http://perma.cc/6A4S-QHQH.

expected exception: procedural modifications to post-grant patent challenges.[13]

Specifically, the America Invents Act replaced the Patent Office's procedures for so-called "inter partes reexamination" of issued patents with a modified and renamed regime of "inter partes review" ("IPR").[14] In doing so, Congress raised the bar for granting petitions to review issued patents, but at the same time, advantaged petitions that do pass muster by expediting the process and allowing the reviews to take place before the Patent Trial and Appeal Board in the first instance, rather than on appeal.[15] Following these modifications, interest in administrative patent challenges grew, slowly at first, before eventually erupting in a full-blown explosion of filings in 2014.[16]

To date, in-depth commentary on this "new normal" in patent defense has been scarce and what exists has largely focused on overall statistics spanning all types of patents and parties. This Essay breaks down statistics on IPRs to examine the extent to which they have been a boon for *all* accused infringers, regardless of size and position on the supply chain. As the data reported below demonstrates, technology purchasers and small businesses (as well as those with reason to step in and protect them) are beginning to seek refuge at the patent office—much as Congress intended—and have done so with a fair amount of success. As Professor Bernstein aptly explains in her Article, there was good reason to be skeptical that this result would come to

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[13] *See* Rob Sterne & Gene Quinn, *PTAB Death Squads: Are All Commercially Viable Patents Invalid?*, IPWATCHDOG (Mar. 24, 2014), http://www.ipwatchdog.com/2014/03/24/ptab-death-squads-are-all-commercially-viable-patents-invalid, *archived at* http://perma.cc/23H5-YETX ("[N]o one could have predicted . . . how broadly and rapidly the new challenges to the patentability of issued U.S. patents would become the standard defense tactic in U.S. patent litigation in all areas of technology.").

[14] Leahy-Smith America Invents Act, § 6, 125 Stat. at 299–305 (setting forth procedures for IPR). The AIA also established two new forms of administrative post-issue review—"post grant review" and "covered business method patent review"—but both procedures have more restrictive availability and, as a result, have not to date generated enough petitions to warrant empirical analysis. *See* DOCKET NAVIGATOR, http://home.docketnavigator.com/, *archived at* http://perma.cc/K8J6-Y4JX (last visited Apr. 8, 2015) (reporting that as of February 1, 2015, there have been a total of seventy-seven petitions for CBM review and a total of four petitions for post grant review).

[15] *See* Justin A. Hendrix & Robert F. Shaffer, *Post Grant Proceedings of the AIA Provide New Opportunities and Require Reconsideration of Old Patent Litigation Strategies* FINNEGAN, HENDERSON, FARABOW, GARRETT, & DUNNER LLP (June 15, 2012), http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=598696f7-7eba-4fcb-83b8-2369caa91dd3, *archived at* http://perma.cc/Q9QJ-EAE8 (last visited Apr. 8, 2015) (describing the similarities and differences between IPR and inter partes reexamination).

[16] Brian J. Love & Shawn Ambwani, Inter Partes *Review: An Early Look at the Numbers*, 81 U. CHI. L. REV. DIALOGUE 93, 93–95 (2014), https://lawreview.uchicago.edu/page/inter-partes-review-early-look-numbers, *archived at* http://perma.cc/3HYZ-8KDF.

fruition[17]—and, to be clear, the data reported below suggests that there is still room for improvement. Nonetheless, early returns on the impact of IPRs are now in, and what they show is encouraging.

The Essay proceeds in three Parts. Part I describes the data I gathered and my classification methodology.[18] Part II summaries my findings,[19] and Part III briefly assesses what conclusions policymakers might draw from those findings.[20]

I. STUDY DESIGN

To study the extent to which IPR has thus far benefited technology purchasers and other relatively small entities, I assembled a database of IPR petitions and collected a variety of information about the parties and outcomes associated with each. In this Part, I explain what petitions I studied and what data I collected.

For this study, I started with a previously-compiled database that includes data on outcomes and co-pending litigation, current as of September 30, 2014, for all petitions for IPR filed on or before March 31, 2014.[21] As described in greater detail in a prior Essay examining these petitions, this study window includes 979 total petitions,[22] proceeding in parallel with a total of 249 unique patent suits involving the same parties,[23] and resulting in a total of 823 decisions whether to grant—or "institute"—a petition[24] and 160 final decisions affirming, invalidating, or cancelling claims challenged in an instituted petition.[25]

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[17] Bernstein, *supra* note 3, *at* 1473 (arguing that "end users are less likely to benefit from [the AIA's post grant administrative review] procedures because they lack the technological know-how, and are unlikely to be implicated in the patent conflict at the time periods when the patent can be most effectively challenged").

[18] *See infra* notes 21–29 and accompanying text.

[19] *See infra* notes 30–48 and accompanying text.

[20] *See infra* notes 49–61 and accompanying text.

[21] *See* Love & Ambwani, *supra* note 16, at 99, tbl.3. Because institution decisions are generally issued close to six months after petitions are filed, this study window includes the lion's share of IPRs that received at least a preliminary ruling on their merits by the end of September 2014.

[22] *Id.* at 96. To identify IPRs and access the docket for each, we used Docket Navigator. DOCKET NAVIGATOR, *supra* note 14.

[23] Love & Ambwani, *supra* note 16, at 104, tbl.8. We determined whether co-pending litigation existed by searching Lex Machina for each challenged patent's number. LEX MACHINA, https://lexmachina.com, *archived at* http://perma.cc/NK64-A969 (last visited Apr. 8, 2015). We collected data on motions to stay by reviewing the docket sheet available on Lex Machina for each co-pending suit.

[24] Love & Ambwani, *supra* note 16, at 100, tbl.4; *see* Leahy-Smith America Invents Act § 6, 35 U.S.C. § 314 (2012) (setting "a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition" as the standard for the institution of IPR).

[25] Love & Ambwani, *supra* note 16, at 102, tbl.6.

Building on this database, I first classified each IPR's petitioner as either a manufacturer or purchaser of the allegedly infringing technology.[26] As shown below in Table 1, I include in this latter category all down-stream purchasers of the accused technology, including component buyers who incorporate the infringing technology into larger products, distributors and retailers who disseminate those products to customers, and off-the-shelf purchasers who buy and use those products.

Table 1: Technology Purchasers

Type of Purchaser	No. of Petitions
Component Vendee	34
Retailer / Distributor	8
End-User	21

Next, I classified petitioners as either "small and medium-sized enterprises" ("SMEs") or large enterprises.[27] Though there is no one established definition for what constitutes an SME, I applied this term (as others studying patent litigation have) to all entities earning less than $100 million in annual revenue.[28] Finally, for all petitions challenging a litigated patent, I examined court records to determine whether or not the petitioner had been sued.[29] In addition, I checked to see whether any of the petitioner's customers were among those accused of infringement in court.

[26] I made this determination by reviewing both the challenged patent and publicly-available information about the petitioner, including the petitioner's website. When available, I also reviewed documents filed in litigation asserting the challenged patent, including the patentee's pleadings. I excluded from both categories a small number of third-party entities that neither purchase nor manufacture the accused technology.

[27] I made this determination by reviewing publicly-available information about the petitioner, including financial disclosures and other materials prepared for investors, marketing materials and other information available on the petitioner's website, and (when necessary) information collected by third-party providers like Bloomberg Business Week, Manta, and Hoovers.

[28] *Cf.* James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 398 (2014) (reporting separate findings for "[f]irms making less than $100 million in revenue"); Colleen V. Chien, *Startups and Patent Trolls*, 17 STAN. TECH. L. REV. 461, 464–66 (2014) (reporting survey evidence linking the impact of patent litigation to firm size, as measured by revenue); *March 2014 Litigation Report*, UNIFIED PAT., INC., http://unifiedpatents.com/march-2014-report/?utm_source=Unified+Patents+Newsletter&utm_campaign=8298fafa3a-Spring_Newsletter4_22_2014&utm_medium=email&utm_term=0_5140119467-8298fafa3a-81845149, *archived at* http://perma.cc/RA6D-88GP (last visited Apr. 8, 2015) (defining "SME" as "about $100 million or less in revenue per year worldwide"). I excluded from the category of SMEs third-party entities that neither use nor manufacture the accused technology, even if those entities appeared to earn less than $100 million annually.

[29] As in my prior study, I collected data on co-pending litigation by searching Lex Machina for each challenged patent's number. LEX MACHINA, *supra* note 23. All litigation data reported *infra*, including stay rates, has been updated and is current as of January 1, 2015.

II. FINDINGS

In this Part, I report the findings of my study.[30] On the whole, what I find is encouraging. Though technology purchasers and SMEs constitute a relatively small percentage of those taking advantage of administrative review proceedings, these parties are relatively successful in their efforts when they do file petitions. In addition, the data reveals that some manufacturers are also taking advantage of IPR to shield their customers from lawsuits and, to date, have been more successful doing so with IPRs than through the litigation process.

A. Technology Purchasers as IPR Petitioners

Looking first at those IPR petitions filed by technology purchasers, I find that resellers and users of allegedly infringing technology are responsible for a surprisingly small number of IPRs, but nonetheless have performed well in the IPRs that they have initiated.

As shown below in Table 2, purchasers are responsible for less than seven percent of the petitions in my database.[31] Though comprehensive statistics on the share of patent suits filed against technology purchasers do not exist at present, purchasers appear to be substantially underrepresented among IPR petitioners relative to the share of patent assertions they defend in court. For comparison, I collected data for a random sample of 250 patent suits filed contemporaneously with the IPRs in my database. In that sample, a purchaser of the allegedly infringing technology was named as a defendant in over one-third of suits—a share almost six times larger than the percentage of IPRs initiated by purchasers.[32]

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[30] *See infra* notes 31–48 and accompanying text.

[31] Technology purchasers were responsible for a near-identical percentage of the total number of unique patents challenged during the period covered by my database (6.2%, 47/764), as well as a very similar percentage of the total number of petitioners and co-petitioners across all IPRs in my database (6.9%, 70/1011). My tally of petitioners counts a parent company and its subsidiaries as one party. In addition, to test whether the percentage of IPRs filed by purchasers has changed in the last year, I categorized the petitioners in a random sample of 100 petitions filed between April 1, 2014, and April 21, 2015. The percentages are virtually identical. In that sample, purchasers filed 6% (6/100) of petitions, comprised 7.2% (11/152) of all petitioners and co-petitioners, and challenged 6.2% (6/96) of unique patents.

[32] I collected this data by searching Lex Machina for all patent suits filed between September 16, 2012, and March 31, 2014 and coding the defendants in a random sample of suits. In this sample, purchasers were sued in 35.6% (89/250) of all suits, accounted for 34.5% (100/290) of all defendants, and were accused of infringing 31.6% (156/493) of all unique asserted patents. Consider also that fifteen patentees specializing in suing purchasers alone filed almost six percent of all patent suits initiated in the U.S. between 2010 and mid-2013. *Compare* Chien & Reines, *supra* note 3, at 236 tbl.1, 256 app. A (reporting that between January 1, 2010, and June 2013, the 15 most litigious non-practicing entities sued roughly 2214 customer defendants in 813 lawsuits), *with Cases Filed by Year*, LEX MACHINA, https://law.lexmachina.com/ (located behind paywall)

Whatever the reasons might be for some purchasers' reluctance to pursue IPR, my findings suggest that fear of failure shouldn't be high on the list. Among those petitions in my database, purchasers have performed reasonably well, even relative to parties that actually design and produce the accused technologies. Petitions filed by purchasers have been instituted at rates virtually indistinguishable from institution rates achieved by technology manufacturers[33]—rates which have generally been regarded as extremely favorable to accused infringers.[34] Moreover, technology purchasers have achieved a one hundred percent grant rate thus far in motions to stay patent suits co-pending instituted IPRs—a trend that hinders patentees' ability to induce alleged infringers to settle simply to avoid the high cost of discovery.[35]

(last visited Apr. 27, 2015) (reporting that there were roughly 14,764 total patent suits filed during this same time period). Moreover, in recent years almost half of all parties sued by non-practicing entities were "non-tech" companies operating in industries like retail, transportation, financial services, and hospitality. *Exposure by Industry*, PAT. FREEDOM https://www.patentfreedom.com/about-npes/industry/, *archived at* http://perma.cc/Y69D-BU2S (last updated July 14, 2014) (reporting that between 2005 and mid-2014 over 45% of all parties sued by non-practicing entities were companies operating outside the "high tech" sector in industries like retail, transportation, financial services, and hospitality); *see* CHIEN, *supra* note 3, at 12–13 (reporting that surveyed venture capitalists indicated that about forty percent of patent suits filed by NPEs against startups targeted technology the startup purchased, rather than developed).

[33] Two limitations of the results reported in this Essay bear mention. First, they do not control for the quality of patents asserted against purchasers and SMEs compared to the quality of patents asserted against manufacturers and large companies. Thus, it is possible, for example, that patentees targeting purchasers and SMEs assert marginally weaker patents (i.e., patents more likely to be found invalid) because they anticipate facing a litigation opponent that is unlikely to mount a vigorous defense. If true, this would tend to inflate the success rates of purchasers and SMEs that do petition for IPR relative to other petitioners. Second, they do not control for the relative quality of the legal teams representing various subsets of petitioners and patentees. Thus, it is also possible, for example, that purchasers and SMEs hire lawyers, expert witnesses, and other legal services providers who are marginally less skilled compared to those hired by larger entities with deeper pockets. If true, this would tend to deflate the relative success rates of purchasers and SMEs. Unfortunately, neither of these two potentially confounding effects is readily or reliably quantifiable.

[34] *See*, Meaghan H. Kent et al., *10 Reasons Every Defendant in Patent Litigation Should Consider* Inter Partes *Review*, MONDAQ, http://www.mondaq.com/unitedstates/x/309504/Patent/10+Reasons+Every+Defendant+in+Patent+Litigation+Should+Consider+Inter+Partes+Review, *archived at* http://perma.cc/7BT4-4DPU (last updated Apr. 16, 2015) (referring to the Patent Trial and Appeal Board as "pro-petitioner"); Scott A. McKeown, *Speed of PTAB Fuels Criticism of Initial Trial Results*, PAT. POST-GRANT (Apr. 22, 2014), http://www.patentspostgrant.com/recalibrating-ptab-amendment-practice, *archived at* http://perma.cc/Z8EL-E5XL ("Critics of the Patent Trial & Appeal Board (PTAB) are out in force decrying the work of the PTAB as anti-patent. . . . Some consider the heavy number of claim cancellation decisions as evidence of a bias against patentees.").

[35] Patent owners, especially those that do not sell products of their own and, thus, cannot be countersued for infringement, can impose asymmetrical litigation costs on their opponents. *See Patent Assertion Entities: Informational Hearing Before the Cal. Assemb. Select Comm. on High Tech*., 2013 Leg., Reg. Sess. 3 (Cal. 2013) (statement of Brian J. Love, Assistant Professor of Law, Santa Clara University), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2347138, *archived at* https://perma.cc/2ANZ-EZMZ?type=pdf. As a result of this cost differential, patentees

That said, purchasers have less to cheer at the final decision stage. Though the small sample size makes it hard to draw strong conclusions, purchasers do not appear to succeed as often as their manufacturing peers. Even so, almost sixty percent of purchasers that pushed an IPR all the way through to a final decision succeeded in eliminating all of the patentees' instituted claims—a success rate well above that seen in previous incarnations of administrative patent review.[36]

are often able to collect settlements that reflect the cost of defense in addition to the value of the patented invention and strength of the patentee's claims. *Id*.

[36] Inter Partes *Reexamination Filing Data*, U.S. PAT. & TRADEMARK OFF. 1 (Sept. 30, 2013), http://www.uspto.gov/patents/stats/inter_parte_historical_stats_roll_up_EOY2013.pdf, *archived at* http://perma.cc/D5K5-22LU (reporting that only thirty-one percent of inter partes reexaminations ended in the cancellation of all claims).

Table 2: Purchasers vs. Manufacturers

	Purchasers	Mfrs.[†]	All Petitioners
All petitions	63 (6.4%)	891 (91.0%)	979 (100%)
No. with institution decision on the merits[±]	48	761	823
% instituted for at least 1 challenged claim	81.2% (39/48)	84.1% (640/761)	84.0% (691/823)
Instituted IPRs			
% instituted for all challenged claims	69.2% (27/39)	74.4% (476/640)	74.0% (511/691)
% of all challenged claims instituted	88.1% (636/722)	88.3% (8979/10,164)	88.3% (9769/11,059)
Final Decisions			
% invalidating all instituted claims	58.3% (7/12)	77.5%[‡] (107/138)	77.5% (124/160)
% of all instituted claims invalidated	44.9% (144/321)	84.9%* (1598/1882)	79.6% (1801/2262)
Co-pending Litigation			
Stay rates in suits co-pending instituted IPRs (number of suits with ruled-upon motion)	100% (9)	81.2% (154)	82.2% (163)
		* $p < 0.01$[♦]	

[†] This group excludes twenty-five petitions filed by third-party entities—like RPX, Unified Patents, and Iron Dome—that neither use nor manufacture the accused technology.

[±] This number excludes petitions that were not instituted because the petition was deemed untimely or duplicative, without reaching the merits of the petition. A party seeking IPR of a patent asserted against it in court must, by statute, file a petition within one year of being sued. 35 USC § 315(b) (2012). If a party fails to seek IPR within that one-year window, its petition will be denied as untimely. The PTAB also may deny a petition without reaching its merits on the grounds that it is substantially duplicative of an earlier-filed petition. *Id.* § 325(d).

[‡] Due to the small sample size, this result is significant with just 83% confidence (p=0.1605) despite the large gap between the two sets.

[♦] Tables 2, 3, and 4 indicate when the differences in institution, invalidation, and stay rates between the compared subsets of petitioners are statistically significant with at least 90% confidence. With the exception of tests of per-claim institution rates, all p-values reported were calculated using a two-tailed Fisher's exact test, which is the preferred test when sample sizes are small and data is unequally distributed among contingencies. For per-claim institution rates, the number of observations is sufficiently large to use a chi-square test. Both the Fisher's exact and chi-square tests calculate statistical significance under the assumption that all observations are independent. For a number of reasons, including that some IPRs challenge the same patent and that some patent claims are quite similar, this assumption is not completely accurate. Other near-significant results are noted in individual footnotes.

B. SMEs as IPR Petitioners

Next, because many commentators argue that patent law should provide special protection to technology purchasers due to their relative lack of resources and sophistication,[37] I also collected data on IPRs filed by small businesses of all types to see what, if any, impact size might have on access to, and performance in, IPRs.

Contrary to conventional wisdom, my data suggests that smaller companies, as a group, have embraced IPR and, thus far, have held their own on the merits of their challenges. As shown below in Table 3, SMEs are responsible for about twenty-one percent of the petitions in my database,[38] a share that appears to be below the percentage of patent suits filed against them during the same period, but not dramatically so. In the comparative sample of 250 patent suits discussed *supra*, patentees accused SMEs of infringement in about thirty percent of cases.[39]

Moreover, SMEs have performed about as well as their larger counterparts overall. Though SMEs have fared slightly worse at the institution stage, they have performed slightly better in final decisions—effects that roughly offset one another.[40]

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[37] *See* Bernstein, *supra* note 3, at 1489 ("[T]here is an imbalance of power between the parties. Many end users, such as patients or small businesses, are entities of limited resources."); Chien & Reines, *supra* note 3, at 237 ("The burden for these suits falls disproportionately on small companies and too often results in nuisance settlements based on the high cost of defending a patent case, not the merits of the claim.").

[38] SMEs were responsible for a similar percentage of the total number of unique patents challenged during the period covered by my database (25.9%, 198/764), as well as a similar percentage of the total number of petitioners and co-petitioners across all IPRs in my database (21.8%, 220/1011). In addition, to test whether the percentage of IPRs filed by SMEs has changed in the last year, I categorized the petitioners in a random sample of 100 petitions filed between April 1, 2014, and April 21, 2015. If anything, the percentage appears to have fallen over time. In that sample, SMEs filed 17% (17/100) of petitions, comprised 11.2% (17/152) of all petitioners and co-petitioners, and challenged 17.7% of unique patents (17/96).

[39] *See supra* note 32. In this sample, SMEs were sued in 29.6% (74/250) of all suits, accounted for 28.6% (83/290) of all defendants, and were accused of infringing 26.0% (128/493) of all unique asserted patents. Consider also that a recent study of all 2014 patent suits found that twenty-four percent were filed against SMEs. *2014 Litigation Report*, UNIFIED PAT., http://unifiedpatents.com/2014patentlitigationreport/, *archived at* http://perma.cc/DN4R-HCBY (last visited Apr. 8, 2015).

[40] For example, SMEs and larger business are both about equally likely to win across the board in an IPR—i.e., invalidate all claims challenged in the petition. *See infra* Table 3.

Table 3: SMEs vs. Large Enterprises

	SMEs[†]	Large Enterprises	All Petitioners
All petitions	207 (21.1%)	761 (77.7%)	979 (100%)
No. with institution decision on the merits	185	632	823
% instituted for at least 1 challenged claim	78.4% (145/185)	85.6%** (541/632)	84.0% (691/823)
Instituted IPRs			
% instituted for all challenged claims	64.8% (94/145)	76.5%* (414/541)	74.0% (511/691)
% of all challenged claims instituted	85.4% (2304/2698)	89.4%* (7384/8261)	88.3% (9769/11,059)
Final Decisions			
% invalidating all instituted claims	88.2% (30/34)	74.6%[±] (94/126)	77.5% (124/160)
% of all instituted claims invalidated	97.8% (536/548)	73.8%* (1265/1714)	79.6% (1801/2262)
Co-pending Litigation			
Stay rates in suits co-pending instituted IPRs (number of suits with ruled-upon motion)	75.0% (52)	85.6% (111)	82.2% (163)

* $p < 0.01$
** $0.1 > p > 0.01$

[†] This group excludes eleven petitions filed by small third-party entities that neither use nor manufacture the accused technology.

[±] This result is significant with almost ninety percent confidence (p=0.1083).

C. Manufacturers Protecting Customers via IPR

Finally, because anyone—including parties that have not yet been sued—can file an IPR,[41] entities that manufacture accused technology can use IPR as a mechanism for defending (and potentially preempting altogether) suits filed against their customers. To determine the extent to which this is taking place, I collected data on petitions filed by manufacturers whose customers had previously been sued.

[41] *See* 35 U.S.C. § 311 (2012) (stating that an IPR may be filed by any "person who is not the owner of [the challenged] patent").

As shown below in Table 4, more than fourteen percent of petitions in my database[42] were filed by manufacturers with at least one customer facing a full-blown lawsuit asserting the challenged patent. Just one-quarter of these petitions, however, were filed by manufacturers who had not also been sued themselves—a fact that calls into question manufacturers' willingness and ability to look after their customers' interests, rather than simply their own, in the majority of these challenges.[43]

[42] Manufacturer-petitioners with at least one sued customer were responsible for a similar percentage of the total number of unique patents challenged during the period covered by my database (15.1%, 115/764), as well as a similar percentage of the total number of petitioners and co-petitioners across all IPRs in my database (14.6%, 148/1011). In addition, to test whether the percentage of IPRs filed by this subset of petitioners has changed over time, I categorized the petitioners in a random sample of 100 petitions filed between April 1, 2014, and April 21, 2015. In that sample, manufacturer-petitioners with at least one sued customer filed 15% (15/100) of petitions, comprised 15.1% (23/152) of all petitioners and co-petitioners, and challenged 14.6% (15/96) of unique patents.

[43] Of 140 total petitions that fall in this category, thirty-five co-pend litigation that exclusively targets technology purchasers, without the manufacturer joined as a co-defendant. The remaining 105 petitions all co-pend litigation in which the manufacturer was sued along with at least one customer. In my sample of more recently filed IPRs, six percent co-pend litigation that exclusively targets purchasers.

Table 4: Manufacturers Protecting Purchasers

	Mfrs. Defending Purchaser-Only Lit.	Mfrs. Defending Purchasers in Any Lit.[†]	Other Petitioners	All Petitioners
All petitions	35 (3.6%)	140 (14.3%)	839 (85.7%)	979 (100%)
No. with institution decision on the merits	26	115	708	823
% instituted at least 1 challenged claim	80.8% (21/26)	86.9% (100/115)	83.5% (591/708)	84.0% (691/823)
Instituted IPRs				
% instituted for all challenged claims	57% (12/21)	68% (68/100)	74.9% (443/591)	74.0% (511/691)
% of all challenged claims instituted	83.1% (306/368)	84.2% (1216/1444)	88.9%* (8553/9615)	88.3% (9769/11,059)
Final Decisions				
% invalidating all instituted claims	75% (3/4)	58.8% (10/17)	79.7%** (114/143)	77.5% (124/160)
% of all instituted claims invalidated	95.5% (64/67)	76.7% (161/210)	79.9% (1640/2052)	79.6% (1801/2262)
Co-pending Litigation				
Stay rates in suits co-pending instituted IPRs (number of suits with ruled-upon motion)	94.1% (51)	82.6% (69[±])	85.6% (146)	82.2% (163)
			* $p < 0.01$	
			** $0.1 > p > 0.01$	

[†] This group excludes four petitions that, though they challenge patents previously asserted against technology purchasers, were filed by non-manufacturing third-party entities, including the Electronic Frontier Foundation, RPX, and Unified Patents. *See infra* note 59 and accompanying text (discussing these petitions and citing legislation that would prohibit them from being filed).

[±] This tally includes eighteen suits in which a manufacturer-petitioner was sued along with one or more customers and fifty-one suits in which the only named defendants were customers of the manufacturer-petitioner. These fifty-one suits collectively relate to a total of just twelve petitions for IPR filed by a manufacturer of the accused technology.

Potential conflicts of interest aside, I find that manufacturers were largely as successful in these petitions as they were in others, achieving only marginally lower per-claim rates of institution and invalidation. Perhaps more importantly, manufacturers were also relatively successful in leveraging the IPR process to halt litigation filed against their customers. More than four-fifths of the time their customers moved for a stay pending review, that motion was granted. As a result, some manufacturers were able to completely

preempt litigation filed against their customers and, thus, effectively take the reins of defense, albeit in a limited administrative forum.

Notably, in doing so, manufacturers not joined to suits targeting their customers were able to accomplish something with IPR that they have historically been unable to accomplish through litigation. Though manufacturers often file declaratory judgment actions when their customers are sued, in recent decades manufacturers have generally not been able to convince courts to stay earlier-filed suits targeting customers so that the manufacturer can litigate in their stead.[44]

With IPR, manufacturers have thus far had much more luck stepping into their customers' shoes. For example, SAP America's IPR challenging patent rights held by non-practicing entity Pi-Net International led to stays in several suits Pi-Net filed against car rental agencies using allegedly infringing software.[45] Similarly, Oracle was able to leverage an IPR petition to help its customers—including Macys, Carnival Cruise Lines, and multiple car insurance companies—halt a suit filed by patentee Click-to-Call Technologies.[46] In fact, an IPR filed jointly by Lexmark, Ricoh, and Xerox led to the preemption of several suits filed by the infamous MPHJ.[47] Many others, including

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[44] Love & Yoon, *supra* note 3, at 1614.

> Under the customer suit exception, courts can stay litigation filed against a customer until after the resolution of a later-filed declaratory judgment action initiated by the accused product's manufacturer . . . . [Unfortunately,] the customer suit exception has long existed in a state of relative disuse. Since the 1960s, the doctrine has been raised in fewer than seventy cases, and has been applied in just nineteen. The Federal Circuit has discussed the doctrine just five times in the last thirty years, and has affirmed its application only once.

Id. If enacted, the Innovation Act would codify a much more customer-friendly version of this doctrine. Innovation Act, H.R. 9, 114th Cong. § 5 (2015).

[45] *See* Minute Order Re: Stay Pending Inter partes Review at 3, Pi-Net Int'l, Inc. v. Enter. Holdings, Inc., No. 12-CV-3970-PSG (C.D. Cal. July 2, 2013) (staying an additional four suits, filed against Enterprise, U-Haul, Ace Rent A Car, and Payless); Order Granting Motion to Stay at 1, Pi-Net Int'l, Inc. v. Hertz Corp., No. 12-CV-10012-PSG (C.D. Cal. June 5, 2013) (staying three suits filed against Hertz, Dollar Thrifty, and Avis Budget).

[46] *See* Order at 4–5, Click-to-Call Technologies, LLC v. Oracle Corp., No. 12-CV-468-SS (W.D. Tex. Nov. 26, 2013) (staying the case as to all parties, including several customers); Order Granting Motion to Stay Case at 4, Click-to-Call Technologies, LLC v. Ingenio, Inc., No. 12-CV-465-SS (W.D. Tex. Aug. 16, 2013).

[47] Stipulated Order for an Interim Stay at 3, MPHJ Tech. Invs. LLC v. Unum Grp., No. 1:14-CV-00006-SLR (D. Del. Apr. 4, 2014) (stipulating a stay for cases against Coca-Cola, Dillards, Huhtamaki, and Unum); Order at 1, MPHJ Tech. Invs. LLC v. Unum Grp., No. 1:14-CV-00006-SLR (D. Del. Sept. 23, 2014) (staying the case against Unum); Order at 1, MPHJ Tech. Invs. LLC v. The Coca-Cola Co., No. 1:14-CV-00003-SLR (D. Del. Sept. 23, 2014) (staying the case against Coca-Cola).

Cisco, IBM, and Nintendo, have also successfully used this strategy to shield their customers from suit.[48]

III. ANALYSIS

Overall, the data presented above suggests that the plight of small technology purchasers is not as dire today as it was just two years ago. Despite the obvious disadvantages purchasers have relative to parties that actually manufacture accused technology, users and resellers appear to be performing unexpectedly well in IPR. Moreover, this seems to be true even among the smallest fifth of petitioners, who, despite having fewer resources available for litigation, do appear to have the funds and sophistication necessary to fight infringement allegations in an administrative proceeding.

Though this seems like a surprising finding, perhaps it shouldn't be. Because IPRs focus exclusively on the validity of the challenged patent, purchasers' relative lack of knowledge about the accused technology—which is primarily relevant to the separate question of infringement—is less of a liability. For the same reason, purchasers can also rely heavily on relatively cheap third-party prior art searchers, rather than relatively expensive expert witnesses, to provide the firepower behind their defense.[49]

Moreover, regardless of resources and sophistication, some purchasers that find themselves embroiled in a lawsuit will soon thereafter be (at least temporarily) shielded from litigation costs by stays granted pending IPRs lodged by their suppliers. Whether due to indemnification agreements, good business judgment, or something else entirely, some manufacturers are using IPR to protect their customers and, those that are, have done so with a good deal of success.[50]

Again, although this finding may surprise some, it probably shouldn't. Manufacturers have long attempted to accomplish these same goals through litigation and, moreover, have shown at least some willingness in the past to

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[48] *See, e.g.*, Order at 7, AIP Acquisition LLC v. Comcast Corp., No. 1:12-cv-01690-GMS (D. Del. Jan. 9, 2014) (staying six cases); Opinion & Order at 8, Intellect. Ventures II LLC v. SunTrust Banks, Inc., 1:13-cv-02454-WSD (N.D. Ga. Oct. 7, 2014) (staying the case); Order at 1, Motion Games, LLC v. Nintendo Co., No. 6:12-cv-00878-JDL (E.D. Tex. Sept. 23, 2014) (staying the case for customers Rent-A-Center and GameStop).

[49] *See* Love & Yoon, *supra* note 3, at 1629–30 (explaining why technology purchasers must rely heavily on professional expert witnesses in traditional patent litigation).

[50] *Id.* at 1613 ("Widespread use of indemnification agreements means that manufacturers often remain on the hook for their customers' settlements. Manufacturers also legitimately fear losing goodwill with existing customers as well as business in the future if they fail to stand up for customers accused of infringement.").

use far less petitioner-friendly administrative procedures, like *ex parte* re-examination.[51]

Despite the successes purchasers and small businesses have had to date, however, these statistics also leave good reason to believe that IPR is far from a silver bullet for abusive suits and, thus, far from a perfect substitute for other forms of legislative reform presently under consideration in Congress.[52] Of the first 979 IPR petitions, purchasers filed less than seven percent—a percentage that appears to be well below the percentage of patent litigation in which purchasers are named defendants and much further below the share of *all* patent enforcement efforts, including demand letters, that target purchasers.[53] In addition, though the degree of underrepresentation is much smaller for SMEs—and for both groups is mitigated to some degree by petitions that manufacturers filed in response to suits targeting their customers[54]—the ratio of total IPRs filed by purchasers and SMEs to total patent suits filed against them is also well below one-to-one.[55] Put simply, large numbers of purchasers and SMEs confronted with patent demands choose not to take advantage of IPR—a system specifically designed to provide the sort of inexpensive and

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[51] Indeed, many of the patentees most notorious for suing end-users faced ex parte or inter partes reexaminations. *See EFF Challenges Tracking-Services Patent Used to Threaten Cities Across the U.S.*, ELEC. FRONTIER FOUND. (Sept. 14, 2012), https://www.eff.org/press/releases/eff-challenges-tracking-services-patent-used-threaten-cities-across-us, *archived at* http://perma.cc/5W4A-KLYK (discussing EFF's petition for reexamination of an ArrivalStar patent used in demands against California, Cleveland, and the Illinois Commuter Rail for the use of transit-tracking systems); Mike Isaac, *Google Steps Up to Defend Android Developers from Patent Lawsuit*, WIRED (Aug. 13, 2011), http://www.wired.com/2011/08/google-android-lodsys-patent/, *archived at* http://perma.cc/24K4-DWYD (discussing Google's petition for reexamination of two Lodsys patents, which was accompanied by Google's statement that "'[d]evelopers play a critical part in the Android ecosystem and Google will continue to support them'" (quoting Kent Walker, Vice President, Google, Inc.)).

[52] *See supra* note 1 and accompanying text (discussing the Innovation Act and other legislation).

[53] *See supra*, notes 2, 5–8 and accompanying text (describing demand letter campaigns that collectively generated tens of thousands of letters directed to small businesses).

[54] As the data shown *supra* in Table 4 suggest, the degree of mitigation may well be small. Just thirty-five petitions were filed by manufacturers to challenge patents that were asserted against groups of their customers, but not against the manufacturers themselves. *See supra* note 43. All other petitions discussed *supra* in Part II.C were filed in response to suits that name a petitioning manufacturer as a defendant. *See supra* notes 41–50 and accompanying text. Overwhelmingly, these suits additionally name just one or two strategically-selected customer co-defendants and, thus, appear to be primarily aimed at the manufacturer, rather than its customers. Even if this were not the case, it appears that purchasers would still be substantially underrepresented among IPR petitioners relative to the frequency with which they are accused of infringement in court. *See supra* notes 31–32 and accompanying text.

[55] In 2013 and 2014, there was roughly one IPR petition for every five patent lawsuits filed. *See* DOCKET NAVIGATOR, *supra* note 14 (reporting that there were 2204 petitions for IPR filed in 2013 and 2014); LEX MACHINA, *supra* note 23 (reporting that there were 11,080 total patent suits filed in 2013 and 2014).

expedited adjudication that these parties desire—and instead opt for traditional litigation or, more likely, quick settlement.

While the reasons for this deficit are likely myriad, cost remains a likely culprit. Estimates of the costs of litigating an IPR to final decision generally exceed $250,000 and often reach half a million dollars—not far below the median cost to litigate a patent suit to a pre-trial settlement and an amount that clearly leaves ample room for unscrupulous patentees to force nuisance-value settlements.[56] In short, despite the benefits of IPR reflected in the findings discussed above, for many SMEs and purchasers the cost to fight infringement allegations remains prohibitively high.

Accordingly, as Professor Bernstein argues, there does appear to be a place for additional litigation-focused patent reforms even in a post-IPR world. Moreover, short of adopting new reforms to further deter abusive suits, policymakers and courts could also consider minor tweaks to reduce and control the cost of administrative review. For one, the PTO could reduce the filing fees for IPR, which presently top $23,000 for a single instituted petition with no discount for small and micro entities.[57] The PTAB can also help keep costs low by continuing to grant motions to amend sparingly,[58] by taking a permissive view of challenges by third-party industry and public interest

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[56] *Compare* Kent et al., *supra* note 34 ("[T]he [legal] fees to take a PTAB proceeding through completion generally range from $200,000–750,000"), *with* AM. INTELLECTUAL PROP. LAW ASS'N, REPORT OF THE ECONOMIC SURVEY 2013, at 34–35 (2013) (reporting that the median cost to litigate a patent case to the end of discovery is $350,000 for cases with less than $1 million in potential damages, and $1 million for cases with between $1 million and $10 million in potential damages). Many patentees have been known to settle patent cases filed en masse for relatively small sums. *See* Gregory Thomas, *Innovatio's Infringement Suit Rampage Expands to Corporate Hotels*, PAT. EXAMINER (Sept. 30, 2011), http://patentexaminer.org/2011/09/innovatios-infringement-suit-rampage-expands-to-corporate-hotels, *archived at* http://perma.cc/B7WV-EKKF (reporting that Innovatio demanded just a "few thousand dollars" to settle with small businesses to ensure that a legal defense strategy would not make sense); Joe Mullin, *Patent Trolls Want $1,000—for Using Scanners*, ARS TECHNICA (Jan. 2, 2013), http://arstechnica.com/tech-policy/2013/01/patent-trolls-want-1000-for-using-scanners, *archived at* http://perma.cc/JF9Z-RSXW (reporting that MPHJ requested $1000 per employee from small businesses across the country for the use of 'distributed computer architecture' patents used in off-the-shelf scanners).

[57] *Fee Schedule*, U.S. PAT. AND TRADEMARK OFF., http://www.uspto.gov/web/offices/ac/qs/ope/fee010114.htm, *archived at* http://perma.cc/M5R7-DQ4P (last updated Apr. 1, 2015) (listing a $9000 filing fee and a $14,000 "post-institution fee," as well as $200 and $400 per claim "excess" claim fees at each respective stage).

[58] To date, the PTAB has granted just two motions to amend. Andrew Williams, *PTAB Update—The Board Grants Its Second Motion to Amend (At Least in Part)*, PAT. DOCS (Jan. 8, 2015), http://www.patentdocs.org/2015/01/ptab-update-the-board-grants-its-second-motion-to-amend-at-least-in-part.html, *archived at* http://perma.cc/HNM6-U445 ("For only the second time, the Patent Trial and Appeals Board . . . granted a motion to amend claims."). The recently introduced STRONG Act would change this status quo by instructing the PTAB to generally allow claim amendments during the course of IPR. Support Technology and Research for Our Nation's Growth Patents Act, S.632, 114th Cong. § 102 (2015) (providing that claim amendments should be allowed as long as they are "reasonable").

groups that can efficiently pool the resources necessary to mount a challenge,[59] and perhaps also by further simplifying its procedures[60] or relying less than it currently does on expert declarations.[61] Finally, district courts can assist as well, by continuing to stay suits proceeding in parallel with instituted IPRs with high frequency so that purchasers and SMEs can petition with confidence that they won't have to fund a meritorious IPR *and* a lawsuit at the same time.

CONCLUSION

Although my data suggests that there is room for improvement, IPR does appear to be a substantial benefit to technology purchasers and other small businesses that find themselves staring down the barrel of a patent suit. So far, smaller players have been relatively successful at instituting reviews, halting co-pending litigation, and ultimately winning on the merits of their petitions. Moreover, manufacturers have been getting in on the act as well, using IPR to shield customers that choose not to defend themselves. One serious chink in IPR's armor, however, is that many non-traditional defendants appear reluctant to use it, likely because they largely remain unable to afford

[59] A small but growing number of IPRs have been filed by industry groups (like the Printing Industries of America), public interest organizations (like the Electronic Frontier Foundation), and membership-based patent risk management firms (like RPX and Unified Patents). *See supra* Tables 2, 4. By pooling resources ex ante, these groups also help mitigate the collective action problem that arises when multiple purchasers, rather than one manufacturer, is faced with infringement allegations. *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, 958 (2004) ("[A] challenger bears the cost of litigation but its rivals . . . will capture almost all the benefits of successful challenge . . . ."). The Electronic Frontier Foundation, for example, was able to crowd-fund an IPR that successfully challenged patent rights asserted against numerous podcasters. *See* Joe Mullin, *Infamous "Podcasting Patent" Knocked Out*, ARS TECHNICA (Apr. 10, 2015), http://arstechnica.com/tech-policy/2015/04/10/infamous-podcasting-patent-knocked-out-in-patent-office-challenge/, *archived at* http://perma.cc/725K-L4S3. If enacted, the STRONG Act would prohibit groups like these from filing petitions. S.632 (restricting IPR to only those parties that would otherwise have standing to sue in court).

[60] For example, one commenter has suggested that the PTO could adopt "an analogue to judgment on the pleadings" in PTAB challenges and, moreover, could increase competition in the legal market by dropping the requirement that challenges be filed only by attorneys who are registered patent prosecutors. Rochelle Cooper Dreyfuss, *Giving the Federal Circuit a Run for its Money: Challenging Patents in the PTAB*, 90 N.D. L. REV. (forthcoming 2015) (manuscript at 43–44), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2572647, *archived at* https://perma.cc/WC42-PVNK?type=pdf. The STRONG Act would, to the contrary, make PTAB challenges less efficient by requiring each challenge to be heard by two different three-judge panels, one at the institution stage and another at the trial stage. S.632 ("A member of the Patent Trial and Appeal Board who participates in the decision to institute a post-grant review or an *inter partes* review of a patent shall be ineligible to hear the review.").

[61] PTAB decisions not to institute a petition commonly criticize the petitioner's expert declaration. *See* Matt Cutler, *Conclusory Declaration Testimony Again Leads to Unsuccessful IPR Petition*, HARNESSING PAT. OFF. LITIG. (Aug. 28, 2014), http://ipr-pgr.com/conclusory-declaration-testimony-again-leads-to-unsuccessful-ipr-petition/, *archived at* http://perma.cc/Z29C-MC7Q.

it. Accordingly, additional patent reform may still be necessary to assist vulnerable parties. And, if IPR costs can be further reduced, the potential benefits to purchasers and SMEs may well grow in kind.