

Inter Partes Review: An Early Look at the Numbers

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In the roughly two years since *inter partes* review (IPR) replaced *inter partes* reexamination,¹ petitioners have filed almost two thousand requests for the Patent Trial and Appeal Board (PTAB) to review the validity of issued US patents.² As partial data on IPR has trickled out via the blogosphere,³ interest from patent practitioners and judges has grown to a fever (and sometimes fevered) pitch.⁴ To date, however, no commentator has collected a

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¹ The Patent Trial and Appeal Board began accepting petitions for IPR on September 16, 2012. See Leahy-Smith America Invents Act § 319(c)(2)(A) (“AIA”), Pub L No 112-29, 125 Stat 284, 304 (2011), codified in various sections of Title 35 (stating that the sections pertaining to IPR “shall take effect upon the expiration of the 1-year period beginning on the date of the enactment”).

² See generally *Patent Trial and Appeal Board AIA Progress Statistics (as of 9/25/14)* (US Patent and Trademark Office), online at http://www.uspto.gov/ip/boards/bpai/stats/aia_statistics_09_25_2014.pdf (visited Nov 17, 2014).

³ See, for example, Scott A. McKeown, *PTAB Institution Rate Dips into 60% Range*, Patents Post-Grant Blog (Oblon, Spivak, McClelland, Maier & Neustadt, LLP July 21, 2014), online at <http://www.patentspostgrant.com/ptab-institution-rate-dips-into-60-range> (visited Nov 13, 2014); Michelle Carniaux and Michael E. Sander, *Instituted Patent Claims Survive in About One Third of All IPR Trials*, IPR Blog (Kenyon & Kenyon LLP Aug 13, 2014), online at <http://interpartesreviewblog.com/instituted-patent-claims-survive-one-third-ipr-trials> (visited Nov 17, 2014); Merchant & Gould, *Inter Partes Review Procedure Statistics* (Sept 25, 2014), online at http://www.merchantgould.com/OurPractice_PostGrant_IPR_Statistics.aspx (visited Nov 17, 2014).

⁴ See, for example, Tony Dutra, *Rader Regrets CLS Bank Impasse, Comments on Latest Patent Reform Bill*, Bloomberg BNA Legal and Business News (Oct 29, 2013), online at <http://www.bna.com/rader-regrets-cls-n17179879684> (visited Nov 17, 2014) (quoting Randall Rader, then Chief Judge of the US Court of Appeals for the Federal Circuit, stating that “the PTAB . . . [is] 300 administrative patent judges ‘acting as death squads, killing property rights’”); Robert Greene Sterne and Gene Quinn, *PTAB Death Squads: Are All Commercially Viable Patents Invalid?*, IPWatchdog Blog (Mar 24, 2014), online at <http://www.ipwatchdog.com/2014/03/24/ptab-death-squads-are-all-commercially>

comprehensive set of statistics on IPR. Moreover, what little data currently exists focuses on overall institution and invalidation rates—data that, alone, gives us little idea whether IPR is thus far accomplishing its original goal of serving as an efficient alternative to defending patent suits filed in federal court, particularly those initiated by nonpracticing entities (NPEs).⁵

This Essay aims to fill both gaps by reporting the findings of an empirical study tracking the outcome of IPRs and their impact on co-pending litigation. As described in greater detail below, we find that:

- The PTAB grants—or “institutes”—IPR petitions for at least one challenged claim 84 percent of the time;
- Among instituted IPRs, *all* challenged claims are instituted 74 percent of the time;
- Among IPRs that reach a final decision on the merits, *all* instituted claims are invalidated or disclaimed more than 77 percent of the time;
- IPRs challenging NPE-owned patents are more likely to be instituted and, on average, are instituted for a larger share of challenged claims, but these claims are invalidated at a lower rate;
- Litigation proceeding in parallel with an instituted IPR is stayed about 82 percent of the time.

Though it is too early to draw sweeping conclusions from these statistics, they suggest that IPR promises to be considerably more

-viable-patents-invalid (visited Nov 17, 2014) (“Ultimately, if the PTAB continues on this path, the raison d’être of the Patent Office and the entire patent system will be called into question.”).

⁵ America Invents Act, HR Rep No 112-98, 112th Cong, 1st Sess, 48 (2011), reprinted in 2011 USCCAN 67, 78 (referring to the postgrant review proceedings created by the AIA as “quick and cost effective alternatives to litigation”). See also Alston & Bird, LLP, *Inter Partes Review—One Year Later* *1 (Sept 17, 2013), online at <http://www.alston.com/files/publication/ba36e481-8956-4318-a846-b1547e87b773/presentation/publicationattachment/651fa1eb-2994-427d-863e-b9275e537113/13-691-inter-partes-review-one-year-laterpdf.pdf> (visited Nov 17, 2014), quoting Patent Reform Act of 2011, S 23, 112th Cong, 1st Sess, in 157 Cong Rec S 1326 (daily ed Mar 7, 2011) (“IPR was designed to be a cost-effective alternative to litigation. In fact, its legislative history states that the IPR process ‘will allow invalid patents that were mistakenly issued by the USPTO to be fixed early in their life, before they disrupt an entire industry or result in expensive litigation.’”); *Review of Recent Judicial Decisions on Patent Law, Hearing before the Subcommittee on Intellectual Property, Competition, and the Internet of the Committee of the Judiciary, House of Representatives*, 112th Cong, 1st Sess 10 (2011) (statement of Dan L. Burk, Chancellor’s Professor of Law, University of California, Irvine) (“As you are aware, Mr. Chairman, much of the push toward patent reform legislation has been driven by the activity of ‘non-practicing entities’ or NPEs, whom some have dubbed ‘patent trolls.’”).

potent than *inter partes* reexamination and, moreover, to have a substantial impact on co-pending patent litigation, particularly suits filed by NPEs.

I. BACKGROUND

Prior to the America Invents Act⁶ (AIA), parties could administratively challenge issued patents at the US Patent and Trademark Office (USPTO) via one of two forms of reexamination: (1) *ex parte* reexamination, which proceeded essentially as an extension of the patent's original *ex parte* examination; or (2) *inter partes* reexamination, which allowed the challenger to take an adversarial role in the process in exchange for a waiver of its ability to re-argue validity later in court.⁷

Though originally developed to serve as a cost-effective alternative to full-blown litigation,⁸ reexaminations rarely realized that goal. Rather, reexamination developed a well-deserved reputation for lengthy delays, a lack of decisive results, and a permissiveness for claim amendments that led some in the patent bar to view reexamination more as a vehicle for patentees to strengthen their patent rights post hoc than as a tool for possible infringers to quickly and cheaply eliminate invalid claims without resorting to litigation.⁹

⁶ Leahy-Smith America Invents Act, Pub L No 112-29, 125 Stat 284 (2011), codified in various sections of Title 35.

⁷ See, for example, RatnerPrestia, *Guide to Re-examination and Post Grant Review of U.S. Patents: Ex Parte versus Inter Partes Review* (2013), online at <http://www.rppostgrant.com/ComparisonCharts/index.html> (visited Nov 17, 2014) (highlighting the similarities and differences between *ex parte* and *inter partes* reexamination).

⁸ See HR 1907, 106th Cong, 1st Sess, in 145 Cong Rec 19278 (Aug 3, 1999) (statement of Representative Dana Rohrabacher) ("This title was an attempt . . . to further encourage potential litigants to use the PTO as a [sic] avenue to resolve patentability issues without expanding the process into one resembling courtroom proceedings.").

⁹ *Inter partes* reexamination took 3 years on average, after which challenged patents survived 69 percent of the time, generally with new claims added. Commissioner for Patents, *Inter Parte Reexamination Filing Data* *1 (US Patent and Trademark Office Nov 22, 2013), online at http://www.uspto.gov/patents/stats/inter_parte_historical_stats_roll_up_EOY2013.pdf (visited Nov 17, 2014) ("PTO IPX Data"). As a result, many patent lawyers viewed reexamination as more likely to strengthen a patent than to weaken it. See, for example, Kyle J. Trout and Thomas C. Stuart, *Managing Risk in the Age of the Patent Troll (Part 2)*, 20 Westlaw J Intell Prop 1, 3 (Feb 19, 2014) ("[R]e-examination proves to be a double-edged sword that [often] necessitates taking a license on less favorable terms against . . . strengthened reissued claims."). As evidence, consider that many litigation-minded patentees voluntarily subject their patents to *ex parte* reexamination. See, for example, Changes to Implement the Supplemental Examination Provisions of the Leahy-Smith America Invents Act and to Revise Reexamination Fees; Final Rule, 77 Fed Reg 48828, 48847 (2012), amending 37 CFR Part 1 ("[T]he Office estimates

Spurred by (at least a perception of) widespread litigation abuse, Congress passed the AIA in 2011.¹⁰ Among other changes, the AIA replaced the existing regime of *inter partes* reexamination with a modified and renamed *inter partes* review.¹¹ The new legislation raised the bar for granting requests to review a patent but advantaged accepted petitions by both mandating a shorter time to completion and allowing the reviews to take place before the PTAB in the first instance, rather than on appeal.¹² These modifications, legislators hoped, would transform *inter partes* administrative patent challenges into the cheap, efficient litigation alternative that *inter partes* reexamination never proved to be.¹³

II. STUDY DESIGN

To test the extent to which Congress has thus far achieved its goals with IPR, we collected a variety of data for every petition for IPR filed between September 16, 2012—the effective date of the statutory provision creating IPR—and March 31, 2014.¹⁴ During this period, challengers filed a total of 979 petitions.¹⁵ As shown in Table 1, this tally is roughly half the total

that it receives approximately 110 . . . requests for *ex parte* reexamination filed by patent owners annually.”).

¹⁰ AIA, 125 Stat at 284. For more on the motivations behind passage of the AIA, particularly the modification to administrative review, see, for example, *Protecting Small Businesses and Promoting Innovation by Limiting Patent Troll Abuse, Hearing on S 23 before the US Senate Judiciary Committee*, 113th Cong, 1st Sess *3–6, 8 (2013) (“2013 Patent Troll Abuse Hearing”) (testimony of Q. Todd Dickinson, Executive Director of the American Intellectual Property Law Association), online at <http://ipwatchdog.com/blog/dickinson-senate-testimony-12-17-2013.pdf> (visited Oct 25, 2014) (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”).

¹¹ AIA § 6, 125 Stat at 299–305 (setting forth procedures for IPR).

¹² See, for example, Justin A. Hendrix and Robert F. Shaffer, *Post Grant Proceedings of the AIA Provide New Opportunities and Require Reconsideration of Old Patent Litigation Strategies* *2–3 (Medical Device June 15, 2012), online at <http://www.finnegan.com/resources/articles/articlesdetail.aspx?news=598696f7-7eba-4fcb-83b8-2369caa91dd3> (visited Nov 17, 2014) (describing the similarities and differences between IPR and *inter partes* reexamination).

¹³ See generally *2013 Patent Troll Abuse Hearing* (cited in note 10).

¹⁴ Because institution decisions are generally issued close to six months after petitions are filed, as seen in Table 3, this study window includes the vast majority of IPRs that received at least a preliminary ruling on their merits by the end of September 2014. Moreover, all data presented in this Essay is current as of September 30, 2014.

¹⁵ To identify IPRs and access the docket for each, we used Docket Navigator, <http://www.docketnavigator.com>. In all, 987 petitions for IPR were filed during our study window, but we excluded eight petitions that challenged design (rather than utility) patents. For an explanation of the difference between design patents and utility patents,

number of requests for *inter partes* reexamination filed over the course of the thirteen years prior.¹⁶ As of September 30, 2014, the PTAB had received a total of 1,841 petitions for IPR, making the rate of IPR six times that of *inter partes* reexamination.¹⁷

TABLE 1. QUANTITY OF FILINGS AS OF SEPTEMBER 30, 2014

	<i>Inter Partes</i> Reexaminations	<i>Inter Partes</i> Review
Total	1,919	1,841
Average per month	12.5	75.1

For each IPR examined in the study, we collected several pieces of information about the petition, the patent, and the parties involved. First, we determined whether the PTAB decided to grant, or “institute,” the IPR petition.¹⁸ We also determined whether the IPR was still pending or had terminated.¹⁹ If the IPR had terminated, we noted how and when it terminated. As shown in Table 2, of the 979 petitions that fall within our study window, over 40 percent are still pending before the PTAB. However, less than 1 percent of these petitions are still awaiting an institution decision, which confirms that our study window contains the lion’s share of petitions that have, to date, received substantial attention from the PTAB.

see US Patent and Trademark Office, *Design Patent Application Guide*, online at <http://www.uspto.gov/patents/resources/types/designapp.jsp#differ> (visited Oct 29, 2014) (“[A] utility patent protects the way an article is used and works, while a design patent protects the way an article looks.”) (quotation marks and citation omitted).

¹⁶ *PTO IPX Data* at *2 (cited in note 9) (showing that 1,919 petitions for *inter partes* reexamination were filed between November 29, 1999, and September 11, 2012).

¹⁷ See Docket Navigator (cited in note 15).

¹⁸ AIA § 6, 125 Stat at 300 (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).

¹⁹ An IPR can terminate in one of four ways: settlement, a decision not to institute the petition, a final written decision from the PTAB, or a request for adverse judgment from the patentee.

TABLE 2. IPRS BY OUTCOME TYPE

Pending	413 (42.2%)
No institution decision yet	4
Instituted	409
Terminated	566 (57.8%)
Not Instituted	191
On the merits	132
Untimely or duplicative ²⁰	59
Settled	215
After institution	128
Before institution	87
Final written decision or request for adverse judgment	160

Next, we determined whether the respondent in the IPR was an NPE.²¹ Finally, we classified each challenged patent by technology²² and determined whether it had ever been asserted in court.²³ When we found co-pending litigation between the IPR petitioner and respondent, we checked to see whether a motion

²⁰ 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). 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. 35 USC § 325(d).

²¹ NPEs—patent owners that do not commercialize the patent technology and thus do not “practice” their patent rights—can take many forms, including for-profit firms engaged in patent monetization, individuals, and universities. See, for example, John R. Allison, Mark A. Lemley, and Joshua Walker, *Extreme Value or Trolls on Top? The Characteristics of the Most-Litigated Patents*, 158 U Pa L Rev 1, 10–11 (2009) (introducing a taxonomy of NPEs that includes—in addition to “patent assertion entities”—universities, preproduct startups, and IP-holding subsidiaries of product-producing parent companies). To classify patentees, we combined information obtained from public records (namely, court and SEC filings), the patentees’ own websites, and business directories available from third parties like Hoover’s and Bloomberg.

²² We categorized patents as falling into one of the following categories: high-tech, bio-pharma, other chemical, medical device, other mechanical, and other miscellaneous. See Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls without Harming Innovators?*, 161 U Pa L Rev 1309, 1329 (2013) (describing broad definitions for “software,” “high-tech,” “medical device,” “pharmaceutical,” and “biotechnology” patents). To make the most of limited data, we have consolidated these six classifications into four: high-tech; bio-pharma and chemical; medical device and mechanical; and other.

²³ We determined whether co-pending litigation existed by searching Lex Machina, <https://lexmachina.com>, for each challenged patent’s number.

to stay had been filed in the suit and, if so, when it was filed and whether it was successful.²⁴

III. FINDINGS

In this Part, we provide statistics on various aspects of IPR, including the duration of review, institution rates, claim-validity decisions, and its impact on co-pending litigation. On the whole, what we find suggests that IPR is considerably more powerful than *inter partes* reexamination and, accordingly, more likely to serve its intended purpose as an alternative to full-blown litigation.²⁵

First, we find that IPRs have thus far concluded within a relatively short period of time. As shown in Table 3, among all terminated IPRs, the average time to termination was roughly nine months. Among just those IPRs that reached a final determination, the average pendency was roughly fifteen months—a duration still considerably shorter than the thirty-six-month average pendency of *inter partes* reexamination.²⁶ IPR settlements, on average, occurred after seven months, and decisions not to institute came, on average, a little under six months after the petition was filed.

TABLE 3. IPR DURATION IN DAYS

All Terminated IPRs²⁷	270
Not instituted	169
Settled	221
Final written decision or request for adverse judgment	456

Next, among IPRs with an institution decision, we find that petitioners have thus far been quite successful in convincing the PTAB that challenged patents deserve scrutiny. As shown in Table 4, among IPRs for which an institution decision was made on the petition's merits, the PTAB exercised its discretion to institute review of at least one petitioned claim 84 percent of the time. Though this is lower than the historical rate of acceptance for *inter partes* reexamination—93 percent—it is nonetheless

²⁴ We collected data on motions to stay by reviewing the docket sheet available on Lex Machina for each co-pending suit.

²⁵ A direct comparison of statistics for IPR and *inter partes* reexamination is included in Appendix B.

²⁶ See *PTO IPX Data* at *1 (cited in note 9).

²⁷ Excluding IPRs not instituted as untimely or duplicative.

unexpectedly close.²⁸ In fact, 22 of the 132 IPRs that were not instituted following a decision on the merits were petitions to review patents for which another IPR *was* instituted. Taking this fact into account, less than 14 percent of petitions both sought to challenge a unique patent and were not instituted.

In addition, when PTAB panels have decided to institute IPR, they have generally concluded that review is warranted for all claims challenged in the petition. Among instituted IPRs, the PTAB instituted review of all challenged claims 74 percent of the time and, overall, instituted review of more than 88 percent of all challenged claims.

Moreover, as shown in Table 5, despite the fact that almost two-thirds of IPRs have challenged a patent covering a computer- or telecommunications-related invention, institution rates have been quite consistent across technologies. Appendix A includes more data broken down by technology classification.

TABLE 4. INSTITUTION RATES

Petitions with an Institution Decision	823 ²⁹
Percent of IPRs with at least 1 claim instituted	84.0%
Percent of IPRs with at least 1 claim of a <i>unique</i> patent instituted	86.3%
Instituted IPRs	691
Percent of IPRs with <i>all</i> challenged claims instituted	74.0%
Percent of challenged claims instituted	88.3%

²⁸ See *PTO IPX Data* at *1 (cited in note 9) (reporting that 93 percent of requests for *inter partes* reexamination were granted by the PTO's central reexamination unit); Sterne and Quinn, *PTAB Death Squads* (cited in note 4):

[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.

...

Approximately 80% of the claims challenged in petitions are instituted for trial on at least one proposed ground of unpatentability.

²⁹ In six IPRs, the patentee requested an adverse judgment that was granted prior to an institution decision.

TABLE 5. INSTITUTION RATES BY TECHNOLOGY CLASSIFICATION

	High-Tech	Bio/Pharma/ Chem	Med Device/ Mech
All Petitions ³⁰	657 (67.1%)	111 (11.3%)	178 (18.2%)
Petitions with an institution decision	551	95	149
IPRs with at least 1 claim instituted	83.8%	83.2%	82.6%
Instituted IPRs	462	79	123
Percent of IPRs with <i>all</i> challenged claims instituted	73.4%	74.7%	75.6%
Percent of challenged claims instituted	86.5%	90.2%	92.9%

Narrowing our focus further to IPRs with a decision on claim validity, we find that petitioners have also been quite successful before the PTAB on the merits of their challenges. As shown in Table 6, among instituted IPRs with a final decision on the merits, the PTAB eliminated all *instituted* claims almost 78 percent of the time. Among the same group, the PTAB eliminated all claims *challenged* in the petition 65 percent of the time, giving petitioners a complete victory almost two-thirds of the time that they pursued their IPRs to a final decision.

Unlike acceptance rates, which are similar for both IPR and *inter partes* reexamination, the rate at which petitioners have succeeded on the merits of their petitions is markedly different: *inter partes* reexaminations ended in complete victory for the petitioner just 31 percent of the time, less than half as often as for IPR. In addition, over 60 percent of *inter partes* reexaminations ended with patentees securing new, amended claims.³¹ To date,

³⁰ But see *PTO IPX Data* at *1 (cited in note 9) (reporting that *inter partes* reexaminations challenged a patent directed to an “electrical” invention 45 percent of the time, a “chemical” invention 15 percent of the time, and a “mechanical” invention 25 percent of the time). Some high-tech patents can be challenged in an IPR *or* in the “Transitional Program for Covered Business Method Patents” (CBM review). See Scott A. McKeown, *Where Are All the Business Method Patent Challenges?*, Patents Post-Grant Blog (Oblon, Spivak, McClelland, Maier & Neustadt, LLP Apr 24, 2013), online at <http://www.patentspostgrant.com/where-are-all-the-business-method-patent-challenges> (visited Oct 27, 2014) (discussing the tradeoffs between IPR and CBM review). Like IPR, CBM review was created by the AIA and went into effect in 2012. AIA § 18, 125 Stat at 329. Thus, were it not for the existence of CBM review, the share of patents challenged in IPRs that cover high-tech inventions might be larger still.

³¹ See *PTO IPX Data* at *1 (cited in note 9) (reporting that in 61 percent of completed *inter partes* reexaminations the challenged patent survived with claim amendments).

the PTAB has granted just a single motion to amend—one that was both unopposed and filed by the United States itself.³²

TABLE 6. CLAIM-INVALIDATION RATES

IPRs with Decision on Merits	160
All <i>instituted</i> claims invalid or disclaimed	77.5%
All <i>challenged</i> claims invalid or disclaimed	65.0%
Motion to amend granted	0.62%

Moreover, as rough as IPR has been for patentees to date, we find that it has been even tougher on NPEs. Table 7 compares petitions challenging patents owned by NPEs and product-producing companies. Overall, NPEs are respondents in about 48 percent of IPRs, a percentage that roughly matches the share of patent litigation filed by NPEs.³³ By comparison to challenged patents owned by product-producing companies, patents owned by NPEs are more likely to be challenged in an IPR that is instituted for at least one claim and, on average, have a higher percentage of challenged claims instituted. That said, in final decisions, NPE claims are less likely to be invalidated or disclaimed, a finding that roughly cancels out NPEs' greater per-claim institution rate. Ultimately it would seem that, in the PTAB's estimation to date, NPE-owned patents are more likely than product-company-owned patents to have suspect claims—but suspect

³² See generally *International Flavors & Fragrances, Inc v Secretary of Agriculture*, Case IPR2013-00124, slip op (PTAB May 20, 2014). See also Scott A. McKeown, *PTAB Grants First Motion to Amend in IPR*, Patents Post-Grant Blog (Oblon, Spivak, McClelland, Maier & Neustadt, LLP May 22, 2014), online at <http://www.patentspostgrant.com/ptab-grants-first-motion-to-amend-in-ipr> (visited Oct 27, 2014) (“[T]he motion was unopposed, and was essentially a settlement by amendment (challenger was satisfied that new claims were no longer a threat and simply walked away).”).

³³ See Sara Jeruss, Robin Feldman, and Joshua Walker, *The America Invents Act 500: Effects of Patent Monetization Entities on US Litigation*, 11 Duke L & Tech Rev 357, 375–78 (2012) (finding, in a study of 100 patent suits filed each year from 2007 to 2011, that the percentage attributable to NPEs was roughly 22 percent in 2007, 27 percent in 2008, 33 percent in 2009, 30 percent in 2010, and 40 percent in 2011); Robin Feldman, Tom Ewing, and Sara Jeruss, *The AIA 500 Expanded: The Effects of Patent Monetization Entities*, 17 UCLA J L & Tech 1, 7 (2013) (expanding a prior study to find that NPEs filed roughly 59 percent of patent suits in 2012). See also Christopher A. Cotropia, Jay P. Kesan, and David L. Schwartz, *Unpacking Patent Assertion Entities (PAE's)*, 99 Minn L Rev *25 (forthcoming), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2346381 (visited Oct 27, 2014) (finding that NPEs filed roughly 50 percent of patent-infringement claims in 2010 and 2012).

claims in both types of patents are roughly equally likely to be deemed invalid.

TABLE 7. NPES VERSUS PRODUCT-PRODUCING COMPANIES

	NPEs	Product-Producing Companies
Share of all IPRs	48.3%	51.7%
Institution rate	88.7%	80%*
Among instituted IPRs, share instituting all challenged claims	77.0%	71.1%
Among instituted IPRs, share of claims instituted	90.8%	86.3%*
Among IPRs with decision on the merits, share invalidating all instituted claims	76.2%	78.9%

* $p < 0.01$

Finally, turning to petitions pending alongside litigation in federal court, we find that IPR has thus far proven to be a successful means for accused infringers to halt patent suits filed against them. Table 8 shows data for IPRs with parallel litigation. Overall, in 80 percent of IPRs, the challenged patent was also asserted in litigation between the petitioner and respondent.³⁴ Of patent suits proceeding in parallel with an instituted IPR between the same parties, a motion to stay was filed in over 76 percent. Overall, these cases were stayed (at least in part) 82 percent of the time, though rates varied considerably across districts. When a motion to stay was filed before claim-construction briefing, cases were stayed even more often: close to 84 percent of the time. Compared to *inter partes* reexamination—for which district courts stayed co-pending litigation about half the time³⁵—petitioning for IPR is much more likely to result in a

³⁴ By comparison, almost 76 percent of *inter partes* reexaminations challenged a litigated patent. See *PTO IPX Data* at *1 (cited in note 9).

³⁵ See Eric J. Rogers, *Ten Years of Inter Partes Patent Reexamination Appeals: An Empirical View*, 29 Santa Clara Comp & High Tech L J 305, 320–21 (2012) (collecting sources and concluding that, overall, “[m]otions to stay patent litigation until the conclusion of a reexam are granted about half of the time,” and also that rates varied by district with the Northern District of California and the Eastern District of Texas granting motions more and less than average, respectively).

stay of litigation and, thereby, to save litigation costs and reduce an NPE's hold-up power.³⁶

TABLE 8. CO-PENDING LITIGATION STAYS

	Overall	D Del	ND Cal	ED Tex	CD Cal
Suits co-pending an <i>instituted</i> IPR	249	48	31	32	11
With a motion to stay ³⁷	190	36	26	19	9
With a decided motion to stay ³⁸	171	32	25	16	9
Percent granted ³⁹	81.9%	81.2%	80.0%	56.2%	77.8%
Suits with a decided motion filed before claim-construction briefing	140	24	18	13	8
Percent granted	83.6%	83.3%	77.8%	69.2%	87.5%

In fact, the relative filing dates of IPR petitions and co-pending patent suits suggest that administratively challenging a patent may also tend to reduce the number of times that the patent will be asserted in the future. Among co-pending suits enforcing a patent challenged in a terminated IPR, roughly 85

³⁶ Because NPEs do not sell products of their own, they cannot be countersued for infringement and, thus, can impose asymmetrical litigation costs on their opponents. See *Informational Hearing on Patent Assertion Entities before the California Assembly Select Committee on High Technology* (Oct 30, 2013) (statement of Brian J. Love, Assistant Professor of Law, Santa Clara University), online at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2347138 (visited Oct 28, 2014). As a result of this cost differential, NPEs can collect settlements that reflect the cost of defense in addition to the value of the patented invention and strength of the patentee's claims. If the cost of defense is large enough, patent litigation may still be lucrative even when the patent in suit is weak and covers technology of little importance. See *id.*

³⁷ In some suits, parties filed multiple motions to stay. This row reports the number of suits with at least one motion.

³⁸ In most instances, the motion was not ruled on because the case settled or was stayed for a reason unrelated to IPR before the court ruled on the motion. In a small number of ongoing cases, motions to stay remained pending at the time of publication.

³⁹ This row reports the percentage of suits in which at least one motion to stay was granted at least in part. For another description of the variation in grants by district, see Wolf Greenfield, *IP Strategy: Stays* *9 (presentation to the AIPLA Post Grant Committee, June 12, 2014) (on file with authors) (finding, in a sample that includes motions to stay filed prior to institution, a grant rate of 60 percent in the District of Delaware, 83 percent in the Northern District of California, and 58 percent in the Eastern District of Texas).

percent were filed prior to the IPR petition.⁴⁰ In addition, over 10 percent of patents challenged in terminated IPRs have, to date, never been asserted in court. In short, IPR does not seem to encourage additional patent litigation and, for a substantial number of patents, it appears to act as a complete substitute for litigation.

That said, it is still too early to draw a firm conclusion about IPR's impact on the final outcome of co-pending patent suits between the petitioner and respondent. The vast majority of suits running in parallel with an IPR decided on the merits have themselves not yet terminated. Suits pending with IPRs invalidating claims of the asserted patent largely remain stayed pending appeal of the PTAB's decision to the US Court of Appeals for the Federal Circuit, and suits pending with IPRs that were not instituted are largely open and ongoing.⁴¹ Thus, the true extent to which IPR simplifies patent litigation remains to be seen.

CONCLUSION

Though it would be premature to make sweeping claims about IPR at this time, so far IPR appears to be a powerful shield for those accused of patent infringement (and those who anticipate that they may soon be). Compared to requests for *inter partes* reexamination, petitions for IPR are currently granted at a similar rate, but once instituted, they result in the elimination of every challenged claim about twice as often, reach a final decision almost twice as quickly, and make accused infringers almost twice as likely to win motions to stay co-pending litigation. In its attempt to create a formidable avenue for administratively challenging issued patents, Congress appears to have hit the mark—but only time will tell for sure.

⁴⁰ In suits between the petitioner and respondent, 94 percent of co-pending suits were filed prior to the IPR petition. Among suits between the respondent and third parties, about 80 percent of suits were filed before the IPR petition.

⁴¹ Though many final decisions remain pending on appeal, history suggests that the affirmance rate is likely to be high. See Rogers, 29 Santa Clara Comp & High Tech L J at 342–43 (cited in note 35) (noting that in nineteen appeals of *inter partes* reexamination to the Federal Circuit, the court dismissed fourteen and affirmed five).

APPENDIX A. IPR DATA BY NPE STATUS AND TECHNOLOGY
CLASSIFICATION

	Overall	NPEs	Product- Producing Companies	High-Tech	Bio/Pharma/ Chem	Med Device/ Mech	Other
All IPRs	100% (979)	48.3% (473)	51.7% (506)	67.1% (657)	11.3% (111)	18.2% (178)	3.4% (33)
Institution rate	84.0% (691/823)	88.7% (331/373)	80.0% (360/450)*	83.8% (462/551)	83.2% (79/95)	82.6% (123/149)	96.4% (27/28)
Among instituted IPRs, those instituting all challenged claims	74.0% (511/691)	77.0% (255/331)	71.1% (256/360)	73.4% (339/462)	74.7% (59/79)	75.6% (93/123)	74.1% (20/27)
Among instituted IPRs, claims instituted	88.3% (9,769/11,059)	90.8% (4,559/5,020)	86.3% (5,210/6,039)*	86.5% (6,339/7,325)	90.2% (1,185/1,313)	92.9% (1,742/1,875)	92.1% (503/546)
Among IPRs with decision on the merits, those invalidating all instituted claims	77.5% (124/160)	76.2% (64/84)	78.9% (60/76)	72.0% (72/100)	87.0% (20/23)	93.1% (27/29)	62.5% (5/8)
Stay rates in suits co-pending instituted IPRs (number of suits with motion)	81.9% (171)	85.5% (90)	77.8% (81)	82.9% (105)	58.3% (12)	85.7% (42)	83.3% (12)

* $p < 0.01$

APPENDIX B. IPX VERSUS IPR

	<i>Inter Partes</i> Reexamination	<i>Inter Partes</i> Review
Total petitions (as of Sept 30, 2014)	1,919	1,841
Average petitions per month	12.5	75.1
Average duration to final decision (months)	36.0	14.9
By technology:		
Electrical	45.1%	67.1%
Chemical	14.9%	11.3%
Mechanical	25.5%	18.2%
Institution rate	93.4%	84.0%
All (instituted) claims invalidated	31.5%	78.8%
Amended claims added	60.9%	0.62%
Percent with co-pending litigation	75.5%	78.8%
Grant rate for motions to stay	~50.0%	81.9%