

**Comments of Dell Inc., Hewlett-Packard Company, and Adobe Systems, Inc.
to the U.S. Department of Justice and Federal Trade Commission
Regarding Patent Assertion Entity Activities**

April 5, 2013

Summary

The dramatic rise of Patent Assertion Entities (PAEs) – firms whose business model primarily focuses on purchasing and asserting patents – is threatening competition and innovation. As FTC Chairman Leibowitz stated at the December 10, 2012, DOJ/FTC workshop, “it is clear that the time has come to address PAE activity.” We appreciate the leadership of the two agencies to date. The purpose of this submission is fourfold.

First, we debunk claims that PAEs play a useful role in the innovation economy. PAEs and their defenders have argued that PAEs could, in theory, provide an incentive for innovative effort by rewarding patentees and promote wider adoption of their inventions. In fact, publicly available data show that PAEs are grossly inefficient at rewarding patentees. No more than 15% (and perhaps as little as 5% to 10%) of the costs imposed on licensing targets reaches patentees. The bulk of the costs inflicted on licensing targets is paid to lawyers and investors in PAE litigation and licensing. And PAEs do not disseminate technology; to the contrary, PAEs target existing products and independently developed technologies.

Second, we provide additional support for the conclusion that PAE activity has inflicted enormous harm on competition and consumers. Most obvious, PAEs inflict heavy costs on start-ups and established companies by exploiting weaknesses in legal institutions and rules to extract payments far in excess of patent value. For example, PAEs are increasingly filing cases at the ITC, where the threat of an exclusion order provides hold-up leverage. PAEs also are asserting patents against end-users who cannot effectively defend against nuisance claims. The tactics used by PAEs suggest they are seeking and receiving payoffs not related to the contributions of the underlying patents: both ITC exclusion orders and harassing end users are ways to increase leverage in a manner largely disconnected from the underlying invention (if any). The costs that PAEs impose and the rents they extract are passed on to consumers in the form of higher prices and reduced innovation.

Third, we identify actions that the enforcement agencies can take today to improve the administration of the patent laws and related statutes through (1) amicus participation in private litigation before the ITC and in the courts; (2) DOJ’s engaging in competition advocacy and working with the Administration (including with the PTO) on policy initiatives; and (3) the FTC’s using its ability to obtain information as part of an industry study. The ITC is becoming a forum of choice for PAEs only because that agency’s mandate has been misinterpreted both as to the domestic industry requirement and the “public interest” inquiry under § 337. A sound interpretation of that statute – which DOJ and FTC should encourage – would help to defuse the threat of unjustified exclusion orders.

Fourth, we encourage the enforcement agencies to investigate activities by PAEs – and especially by PAE **patent aggregators** – that likely violate current law. Patent aggregators –

which amass large portfolios of mostly low-value patents for the purpose of extracting licenses – operate in secret: their litigation threat depends not on disclosure of valuable patents but on concealment of low-value ones. That secrecy gives rise to at least three distinct varieties of unlawful conduct.

- Patent aggregators demand that targets license their patents mostly sight-unseen using a few select patents as proxies. But because the patentee's right to exclude is conditioned on disclosure of the invention, such tactics constitute patent misuse. To the extent any PAE has engaged in such conduct, the enforcement agencies should seek orders that their patents are unenforceable.
- PAEs and their investors are in a position to manipulate standard-setting processes to create hold-up and to evade FRAND obligations. Because PAE interests in patents are often disguised and PAE investors are often anonymous, those entities can collude to embed proprietary technology in technological standards without proper disclosure.
- PAEs can purchase and assert patents that foreclose competition between rival technologies, or patents that their investors could not acquire directly without violating the antitrust laws.

Acquiring thousands of patents at garage sale prices and then using the massed exclusionary rights to get pricing power for lottery level returns on the investment cannot be defended as efficient in rewarding patentees or spreading technology any more than smaller scale PAEs.

Because of the grave risks to competition and innovation and because so much about PAE activity remains opaque, there is good cause for the agencies to use the full range of their investigative tools to learn the rest of the facts and, if violations are uncovered, to seek remedies.

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I. Statement of Interest of Dell, HP, and Adobe

The companies joining in this submission are themselves substantial innovators. Dell is a leading global information technology company that offers its customers a broad range of products and services. Dell's business includes four major segments: The End-User Computing Group provides notebooks, desktop PCs, thin client products, tablets, third-party software, and client-related peripherals. The Enterprise Solutions Group provides servers, networking, storage, converged infrastructure offerings, and ESG-related peripherals. Dell Services provides a broad range of IT and business services, including support and deployment services, infrastructure, cloud, and security services, and applications and business process services. The Dell Software Group provides systems management, security, and information management. Dell employs 40,000 people in the United States and invests more than one billion dollars in research, development and engineering of computer system products annually.

HP is a leading global provider of products, technologies, software, solutions and services to individual consumers, small- and medium-sized businesses and large enterprises, including customers in the government, health and education sectors. HP's offerings include: personal computing and other access devices; multi-vendor customer services, including infrastructure technology and business process outsourcing, technology support and maintenance, application development and support services and consulting and integration services; imaging and printing-related products and services; and enterprise information technology infrastructure, including enterprise server and storage technology, networking products and solutions, information technology management software, information management solutions and security intelligence/risk management solutions. HP employs approximately 331,000 employees worldwide and invests more than three billion dollars in research and development annually.

Adobe Systems is one of the largest and most diverse software companies in the world, offering software and services to a wide range of clients. It offers a broad range of Creative Suite desktop products and Digital Publishing Suite tools, including its flagship Adobe Creative Cloud, that allow its customers to create, publish and promote their content using Adobe Photoshop, Adobe Premiere, and Adobe Acrobat, among other products. It also provides digital marketing solutions, as part of its Adobe Marketing Cloud which facilitates digital advertising and marketing campaigns. It employs 11,000 people in the United States and invests approximately \$700 million annually in research and development of innovative software products.

Collectively we hold tens of thousands of U.S. patents. We have a strong interest in a patent system that rewards innovation.

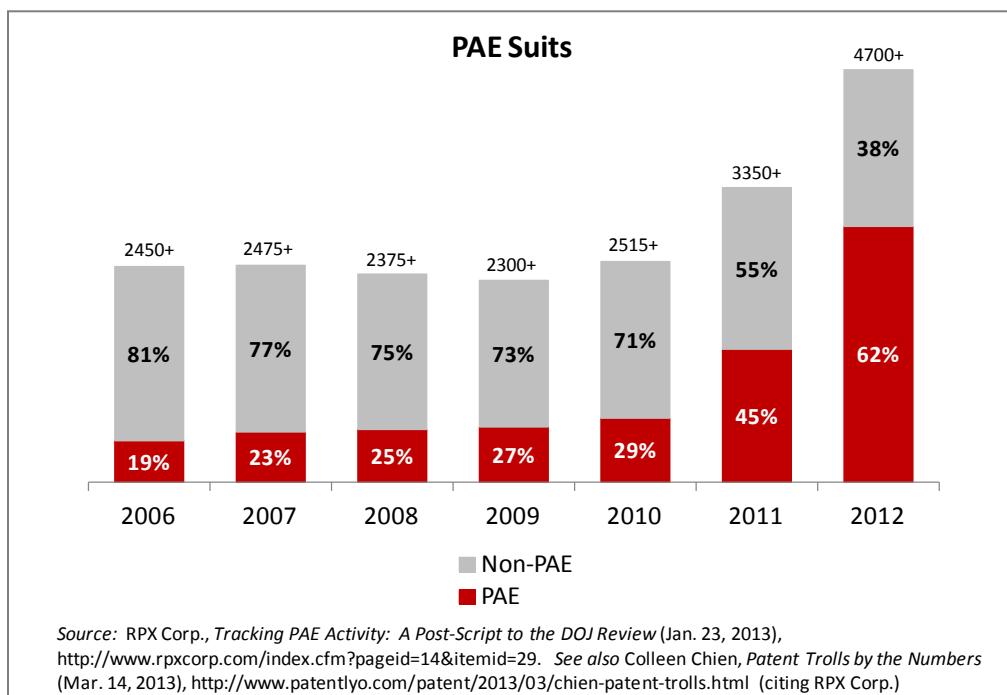
We also are being targeted in numerous PAE suits. According to Patent Freedom, Dell and HP were among the top five companies most often sued by PAEs during the period 2008 to

2012.¹ According to RPX data, Dell has 54 active cases and 164 inactive cases. HP has 50 active cases and 215 inactive cases.

Our customers are often targeted by PAE suits as well. Adobe has received over 100 indemnification requests from its customers in the last five years.

II. The Benefits of PAE Activity Are Small and the Costs Are High.

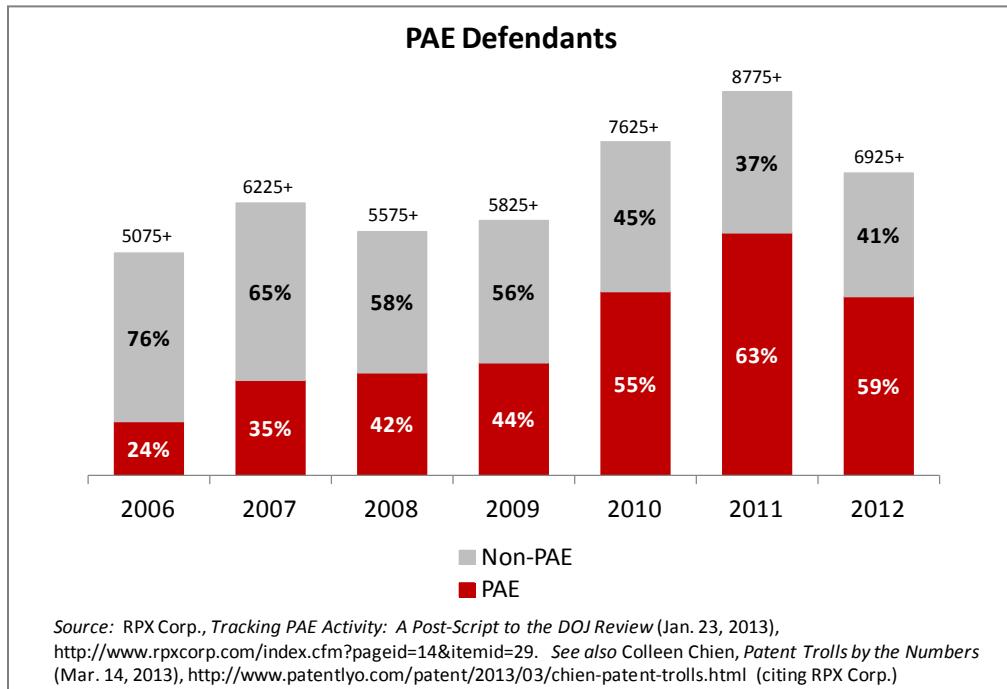
It is important to understand the impact of PAE activity because this activity is growing so dramatically. In 2012, PAEs filed 2,921 of the 4,701 new patent cases in federal court, a record 62% of all patent cases.²



¹ Patent Freedom, Most Pursued Companies (Jan. 2013), <https://www.patentfreedom.com/about-npes/pursued/>.

² Colleen V. Chien, *Patent Trolls by the Numbers*, Patent Law Blog (Patently-O) (Mar. 14, 2013) (reporting data from RPX Corp.), <http://www.patentlyo.com/patent/2013/03/chien-patent-trolls.html>.

For each of the past three years, well over half the defendants in federal court patent cases were sued by PAEs.³



During the DOJ/FTC workshop, Carl Shapiro described two competing “narratives” of the effects of PAE activities.⁴ In the first, PAEs are viewed as promoting innovation by rewarding patentees and increasing technology transfer. In the second, PAE activity is viewed as a tax on innovation, in which payments to PAEs are excessive compared to the value of the patents and much of the activity relates to after-the-fact (i.e., ex post or revenue-driven) licensing or litigation against companies that have already deployed independently-developed technology. As described below, the experience of the companies joining in this submission and the other publicly-available information supports this latter view that PAEs are a tax on innovation.

A. PAE Licensing Rewards Lawyers and Speculators Much More Than Patentees; Any Reward to Patentees Is Small Compared to the Tax on Licensees.

PAEs like to claim that, by facilitating payments of licensing fees to patentees, they promote innovation.⁵ But, the main reward from PAE activity – accounting for 80% to 95% of

³ *Id.* (reporting data from RPX Corp.).

⁴ Carl Shapiro, *Patent Assertion Entities: Effective Monitors, Tax on Innovation, or Both?* (Dec. 10, 2012), available at <http://www.justice.gov/atr/public/workshops/pae/presentations/290074.pdf>.

⁵ See, e.g., Ron Epstein, *Debunking the “Patent Troll” Myth*, Bloomberg Businessweek, Feb. 1, 2010, available at <http://www.businessweek.com/stories/2010-02-01/debunking-the-patent-troll-mythbusinessweek-business-news-stock-market-and-financial-advice>; Erin Fuchs, *In Defense of the Dreaded “Patent Troll,”* Business Insider, Nov. 27, 2012 (quoting Acacia CEO Paul Ryan as stating “[u]ntil we came along, most small entities were really frozen out of the market,” and explaining that Acacia helps small-time investors get paid for their creations), available at

the costs inflicted on targets – goes to lawyers and investors. The “innovation” being rewarded is the lawyerly creativity that transforms a patent purchased for a small amount into settlements and judgments worth millions of dollars.⁶ Investors are attracted to this business model because returns from patent assertion are uncorrelated with the stock and bond markets.⁷ Estimates of the amounts invested in PAE activity range well into the billions of dollars.⁸

As a mechanism for providing rewards to patentees, PAE activity is hugely inefficient, with no more than about 15% of the costs to licensing targets (perhaps as little as 5% to 10% of the costs) being paid to patentees.

The fraction of the amount spent by targets of PAE activity that is returned to inventors may be estimated several ways. First, there are four publicly-traded PAEs that for several years have reported both their licensing revenues and expenses to obtain patents. Using these data (and making an estimate of the legal costs inflicted by PAEs on licensees and the broker fees that

<http://www.businessinsider.com/in-defense-of-the-dreaded-patent-troll-2012-11>; Nathan Myrhvold, *The Big Idea: Funding Eureka!*, Harv. Bus. Rev., Mar. 2010 at 40, 48 (claiming that Intellectual Ventures offers “inventors new or better options for profiting from their work”).

⁶ “Patent lawyers are in such demand that their specialty may account for more than 15 percent of law firm job openings while representing just 3 percent of lawyers in the United States.” Bloomberg News, *New Law Creates a Demand for Patent Specialists*, New York Times (Oct. 9, 2011), http://www.nytimes.com/2011/10/10/business/new-law-creates-demand-for-patent-specialists.html?_r=2&. “Patent lawyers can charge clients more than colleagues in other practice areas.” Paul Freeman, *Patently Obvious: Intellectual Property Business Is Booming*, Seattle Business (Apr. 2012), <http://www.seattlebusinessmag.com/article/patently-obvious-intellectual-property-business-booming>. “The lawsuits are a boon for patent lawyers, who bill companies as much as \$1,200 an hour each for their ability to help jurors and judges understand technology and arcane rules of law.” Susan Decker, *Apple Patent Battles Create Lawyer Boon at \$1,200 an Hour*, Bloomberg (Aug. 23, 2012), <http://www.bloomberg.com/news/2012-08-23/apple-patent-battles-create-lawyer-boon-at-1-200-an-hour.html>.

⁷ The former head of acquisitions for IV explained that “financial investors invest in IP because it is uncorrelated and long term.” Nigel Page, *IV Shifts Gear*, Intell. Asset Mag. 3, 5 (July/Aug. 2009) (quoting Vincent Pluvinage), available at <http://www.iam-magazine.com/issues/article.ashx?g=2c2a2269-4563-4558-98cc-9b631ce95854>.

⁸ *Patents As Financial Assets: Trolls Demanding Tolls*, The Economist (Sept. 10, 2009), available at http://www.economist.com/node/14416641?story_id=14416641; John Letzing, *Silicon Valley Woes Create Buyers’ Market for Ideas*, Dow Jones News Service (Apr. 10, 2009); Victoria Slind-Flor, *Topware, McAfee, Payless: Intellectual Property (Update1)*, Bloomberg (July 17, 2008), available at <http://www.bloomberg.com/apps/news?pid=conewsstory&refer=conews&tkr=PSS:US&sid=aO7.p8iQ1uww>; Daniel P. McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, Sci. Progress 78, 82 (Fall & Winter 2008/2009), available at <http://scienceprogress.org/wp-content/uploads/2009/01/issue2/mccurdy.pdf>; Bruce D. Sunstein, *Funding Patent Assertion Litigation* at 2 (ABA Annual Mtg., Aug. 25, 2005), available at http://www.sunsteinlaw.com/media/funding_patent_assertion_BDS.pdf.

reduce the proceeds from most sales of patents), from 2009 to 2012 at most only 13% of the cost to licensing targets was remitted to patentees:

Table 1. Data for Publicly Traded PAEs Show Minimal Proceeds Paid to Patentees (2009 – 2012)		
PAE	Costs Inflicted on Practicing Entities	Proceeds Paid to Patentees
	PAE Licensing Revenues + Defendant Legal Costs	PAE Expenses for Patents – Brokerage Fees
Acacia	\$1.4 billion	\$243.3 million
InterDigital	\$1.2 billion	\$112.4 million
Tessera	\$915.2 million	\$83.4 million
WiLAN	\$344.9 million	\$69.9 million
TOTAL	\$3.9 billion	\$508.9 million
	Patentee Share	13%

Sources: PAE licensing revenues and PAE expenses for patents are reported in PAE SEC filings and include patent acquisition costs reported during this period; brokerage fees are estimated by Hagiu & Yoffie in *The New Patent Intermediaries* (2013) and are consistent with fees charged by individual brokerages; defendant legal costs are the product of the number of defendants in federal district court cases and data from RPX Corporation for mean per-defendant legal defense costs. Data for WiLAN include November-December 2008 due to a change in its fiscal year.

In addition to the above, another estimate can be derived from the numbers reported by Intellectual Ventures (“IV”) in its court filings. IV stated that it received \$2 billion in revenue based on \$400 million paid to patentees.⁹ Assuming again that brokerage fees are 25% and even without using any assumption of the legal costs IV has inflicted on its targets, the return to patentees is no more than 15%.

IV also stated that it purchased 40,000 patents and patent applications at a cost of \$400 million, or \$10,000 per patent asset. After subtracting brokerage fees, the patentees on average are recouping only approximately the legal cost of prosecuting the patents through the PTO and on average nothing at all for the innovations covered by the patents.¹⁰

⁹ Compl. at 12, *Intellectual Ventures II LLC v. AT&T Inc.*, No. 1:13-cv-116 (W.D. Tex. Feb. 8, 2013).

¹⁰ Other estimates of the return to patentees range from 7% to 21%. See James Bessen & Michael Meurer, *Patent Trolls in Public*, Patent Law Blog (Patently-O) (Mar. 19, 2013), <http://www.patentlyo.com/patent/2013/03/patent-trolls-in-public.html> (for ten publicly listed PAEs during the period 2005 to 2010, “[o]f the total licensing revenues earned, only 7% flowed to third party inventors”); James Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes* at 22, B.U. Law Working Paper No. 12-34 (June 28, 2012), available at http://www.bu.edu/law/faculty/scholarship/workingpapers/documents/BessenJ_MeurerM062512rev062812.pdf (maximum percentage of costs from NPE suits flowing to small investors no more than 21%); Andrei Hagiu & David B. Yoffie, *The New Patent Intermediaries: Platforms, Defensive Aggregators, and Super-Aggregators*, 27 J. Econ. Persp. 45, 52 (2013) (“back-of-the-envelope calculation” showing patent settlements are expected to exceed ten times the cost to the PAE of the patents); Federal Trade Comm’n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 70 (Mar. 2011) (hereinafter “2011 FTC Report”) (“amount PAEs paid to inventors was too small to provide a significant incentive to invent or funding for future work”) (citing McCurdy, *Patent Trolls Erode the Foundation of the U.S. Patent System*, *supra* note 8, at 82).

All of these estimates may be improved with access to the actual source data from the PAEs.¹¹

B. The Potential Benefit of Technology Transfer Is Absent.

Another theoretical benefit of PAE activity would be promoting adoption of technology through licensing.¹² By definition, however, licensing that promotes technology adoption occurs *ex ante*, while a company is still in the process of developing a new product or service that may incorporate the licensed technology. At the development stage, licensing may provide valuable know-how and enable the licensee to avoid the costs and time of independent development, speeding entry and allowing the licensee to offer a lower-priced product to consumers. For example, many large pharmaceutical and biotech companies rely on licenses from universities, start-ups, and others to help develop new products.¹³

We are unaware of *any* PAEs buying patents and offering operating companies pre-deployment (*ex ante*) licenses in order to promote new use of the patented technologies. An affiliate of Intellectual Ventures has done modest but highly-publicized original research on projects such as zapping mosquitoes with a laser, but these technologies have not been reported to be part of the patent portfolio offered to licensing targets.¹⁴ Another affiliate of Intellectual Ventures seeks to promote inventions created by university and research labs, but public reports show no success commercializing these inventions.¹⁵

¹¹ The numbers from the publicly-traded PAEs may not fully reveal how little they return to patentees. For example, PAEs may use an accelerated measure of depreciation in their reported patent costs, which may inflate apparent payments for patents and create a timing disparity where costs recognized in early periods generate higher revenues in future periods. And all of the PAEs may have an incentive to try to portray their data as favorably as possible to show benefits to patentees.

¹² One defender of PAEs explains that “[b]y acting as a market intermediary for patents, collecting information regarding patents and their associated industries, and forming relationships with corporations, a patent dealer becomes a focal point for those who create and seek technology[,]” thereby increasing access to inventive technology. James F. McDonough III, *The Myth of the Patent Troll: An Alternative View of the Function of Patent Dealers in an Idea Economy*, 56 Emory L.J. 189, 223 (2006).

¹³ 2011 FTC Report, *supra* note 10, at 35.

¹⁴ See Jim Kerstetter & Josh Lowensohn, *Inside Intellectual Ventures, the Most Hated Company in Tech*, CNET News (Aug. 21, 2012) (describing visit to IV’s labs to see laser-guided bug killers, a Tyrannosaurus Rex model, and a 2,438-page cook book); Alex Blumberg & Laura Sidell, *When Patents Attack*, This American Life, NPR (July 22, 2011) (describing IV’s lab: “But the lab is a tiny fraction of what IV does. * * * In fact, nothing that’s come out of this lab — not the mosquito zapper, not the nuclear technology — has made it into commercial use.”); Jennifer B. Lee, *Using Lasers to Zap Mosquitoes*, N.Y. Times (Feb. 12, 2010) (describing IV’s mosquito zapping machine and indicating IV is uncertain who will bring it to market and of the timeline for commercial availability).

¹⁵ Invention Development Fund I, which IV claims works with university labs “to identify areas of innovation that are commercially … important,” *see* IV Funds, <http://www.intellectualventures.com/index.php/about/funds>, had realized no return according to one of its investor-partners, the University of Texas Investment Management Company. Erick Schonfeld, *Patent Trolling Doesn’t Pay: Intellectual Ventures Shows a Negative 73 Percent Return*, Techcrunch, July 28, 2010 (reporting that as of May 31, 2010, UTIMC had invested \$12,961,977 in IDF I on which it had realized a return of \$0.00, and the General Partner had estimated that the value of the investment had dropped 73.27 percent); Nathan Vardi, *Nathan Myhrvold’s Patent Investing Returns Are Still Lousy*, Forbes, June 19, 2012 (IDF “is a complete disaster”).

Rather, in our experience, PAE licensing assertions and litigation involve targets that independently have developed the allegedly infringing technology and already are selling products. Indeed, PAEs' business models are based on acquiring patents and identifying potentially infringing products that are already developed. For example, a reverse-engineer for Rockstar Consortium examines successful products that are already being sold and tries to find proof that the products infringe some patent, any patent, in a portfolio of over 4,000 patents; if he finds evidence of infringement, Rockstar documents it, contacts the manufacturer, and demands licensing fees for the patents in question.¹⁶ Similarly, in deciding which patents to invest in, Altitude Capital Partners looks at opportunities to win damages and royalty awards.¹⁷ Another PAE, Pendrell Corporation, stated in its SEC filing that, through its acquisition of ContentGuard, it "will be more affirmative than it has been historically in protecting its IP when infringing parties are unwilling to enter into fair and reasonable licenses."¹⁸ Pendrell acquired over 1,300 patents that it claims cover 3G and 4G wireless technologies that it claimed "are being used today"¹⁹ Thus, PAEs tax existing technology rather than spread adoption of new technology.

Because revenue-driven licensing occurs "after a firm has invested in creating, developing or commercializing the patented technology,"²⁰ the threat of an injunction, ITC exclusion order, or large royalty award may allow a PAE to capture *hold-up costs* – what the accused infringer would be willing to pay to continue using the patented technology after having sunk costs into it, embedded it in products with numerous other components designed to work with it, and made investments in complementary plant, equipment, systems, training, and other resources. That amount will often be substantially greater than the proper value of the patented technology itself – which is its value over available alternatives before any infringement (or even design activity) began, when *ex ante* comparisons could be freely made.²¹

As the FTC identified, the implications of hold-up are grave: it "can overcompensate patentees, raise prices to consumers who lose the benefits of competition among technologies and deter innovation by manufacturers facing the risk of hold-up."²² Similarly, the recent head economist of the Antitrust Division described how markets can be "distorted by the threat of injunctions and exclusions ... and the problem of *ex post* licensing, both of which may lead to holdup":

¹⁶ Robert McMillan, *How Apple and Microsoft Armed 4,000 Patent Warheads*, Wired Enterprise, May 21, 2012, <http://www.wired.com/wiredenterprise/2012/05/rockstar/all/>.

¹⁷ Altitude Capital Partners, *Investment Criteria*, <http://www.altitudecp.com/criteria.html> (last accessed Mar. 18, 2013).

¹⁸ Pendrell Corp., 10-K Annual Report (2011) (filed Mar. 9, 2012), available at <http://www.sec.gov/Archives/edgar/data/1359555/000119312512107242/d278566d10k.htm>.

¹⁹ Press Release, Pendrell Corp., *Pendrell Acquires More Than 1,300 Patents Covering 3G and 4G Wireless Technologies, E-Commerce, Mobile Applications, Video Delivery and Security* (Apr. 2, 2012), available at <http://investor.pendrell.com/releasedetail.cfm?releaseid=661104>.

²⁰ See 2011 FTC Report, *supra* note 10, at 50 (emphasis in original).

²¹ See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991, 2009-2010 (2007) (the ability to overcharge is independent from the patent holder's actual innovative contribution, and thus hold-up is an inefficient means of rewarding innovation); Thomas F. Cotter, *Patent Holdup, Patent Remedies, and Antitrust Responses*, 34 J. Corp. L. 101, 103-04 (2009).

²² 2011 FTC Report, *supra* note 10, at 5.

It is widely recognized that these problems lead to inefficiencies in licensing, exacerbated by the very poor quality of many patents. The prices achieved by negotiation between a buyer and an IP supplier in this environment will therefore tend *not* to reflect the value of the patent before it was incorporated into the product or standard, and will *not* be at levels that most stimulate innovation. For example, in a standard model, the high transaction cost of determining the value of a patent leads to royalty rates that do not reflect the value of the technology described by the patent, but rather the higher value of avoiding litigation. This outcome – when holdup is threatened [– causes] royalty rates [to] rise [above] the contribution of the technology²³

C. The Costs of PAE Activity Are High.

1. PAE Activity Adversely Affects Small and Large Businesses, Wasting Innovation Resources.

The costs imposed by PAE activities are significant. One study found that PAE activity cost defendants and licensees \$29 billion in 2011, equivalent to a 10.7% tax on private sector U.S. R&D.²⁴ These costs affect both start-ups and large companies and are passed on to consumers in the form of higher prices and reduced innovation.

PAE activity is frequently directed at start-ups and small companies. Although start-ups and small companies do not have deep pockets, PAEs pursue these small companies to establish a high royalty percentage prior to suing larger companies.²⁵ At least 66% of all defendants named in PAE suits are small companies and start-ups that make less than \$100 million; 55% of these defendants make \$10 million or less per year.²⁶ PAE assertions have significant operational impacts on these companies, such as delaying hiring, delaying achievement of financial milestones, causing changes in products or business strategy, forcing a shut-down of a

²³ Deputy Asst. Attorney General Fiona Scott Morton, Patent Portfolio Acquisitions: An Economic Analysis at 2-3 (Sept. 21, 2012). *See* Lemley & Shapiro, *supra* note 21, at 2009-2010 (“These companies are paying holdup money to avoid the threat of litigation. This is not a legitimate part of the value of a patent; it is a windfall to the patent owner that comes at the expense . . . of legitimate companies doing their own R&D. *** [Hold-up] can discourage innovation by firms that design and manufacture complex products; it can even lead to circumstances in which no one can profitably produce a product with social value.”).

²⁴ Bessen & Meurer, *The Direct Costs from NPE Disputes* *supra* note 10, at 18-19. U.S. private sector R&D spending in 2011 was approximately \$269.46 billion. *See* Martin Grueber, *2012 Global R & D Funding Forecast: R & D Spending Growth Continues While Globalization Accelerates*, R&D Mag., Dec. 16, 2011, <http://www.rdmag.com/articles/2011/12/2012-global-r-d-funding-forecast-r-d-spending-growth-continues-while-globalization-accelerates>.

²⁵ Steven M. Cherry, *Patent Profiteers*, IEEE Spectrum, June 2004, <http://spectrum.ieee.org/semiconductors/design/patent-profiteers> (explaining how Acacia tested its ability to attack larger companies by first suing several small companies).

²⁶ Bessen & Meurer, *The Direct Costs from NPE Disputes*, *supra* note 10, at 12, n.10; Colleen V. Chien, *Startups and Patent Trolls*, Santa Clara U. L. Sch. Legal Studies Research Paper No. 09-12 at 2 & n.6 (Sept. 2012), available at <http://ssrn.com/abstract=2146251>. By comparison, operating companies sued companies with less than \$10M in annual revenue 16% of the time. Chien, *Startups and Patent Trolls*, at 2.

business line or an entire business, and decreasing the company’s value.²⁷ PAE assertion also causes financial hardship; many of these companies do not have the resources to pay the defense costs necessary to litigate against a PAE and the looming presence of a suit stifles a start-up’s ability to gain funding and momentum by impairing its reputation in the eyes of customers and investors.²⁸ In the market for attracting capital, PAEs are diverting investment funds from start-ups because PAEs are believed to provide a safer and larger return on investments.²⁹

When PAEs pursue larger companies, those companies are also significantly harmed. PAE assertion imposes high litigation and settlement costs, with large companies often spending millions of dollars in legal costs per defense.

PAE assertions also result in directly wasted innovation resources. In the face of assertions against existing products, accused companies may create and implement work-arounds. To do so, companies divert their limited pool of skilled engineers from developing new products. For example, then-Cisco executive Mallun Yen explained “every assertion we receive distracts our engineers from innovation and productive efforts” that could “otherwise be spent on developing new products.”³⁰ Companies that independently developed a product and then must implement a work-around are effectively duplicating their innovative effort – they innovate once to create the product in the first place and then again to work-around the asserted patent. Defenders of PAE activity assert that work-arounds “increase research and development” which benefits consumers,³¹ but in the experience of the submitting companies such efforts have not led to product improvements or other consumer benefits. In the high-tech and software fields, the extra costs of a work-around typically return the operating company to the status quo of being able to provide a feature or function as before. The diverted engineering resources prevent or delay other innovations that might have benefited consumers and the higher cost of doing the work twice is ultimately borne by consumers.

²⁷ Chien, *Startups and Patent Trolls*, *supra* note 26, at 2. The smaller the company, the greater these impacts. *Id.* at 14 & Table 2.

²⁸ See Chien, *Startups and Patent Trolls*, *supra* note 26, at 12 (collecting comments from start-up survey participants); Fabio Marino & Teri Nguyen, *Are Patent Trolls Now Zeroed in on Start-Ups?*, Forbes, Jan. 17, 2013, <http://www.forbes.com/sites/ciocentral/2013/01/17/are-patent-trolls-now-zeroed-in-on-start-ups/>. Average defense costs for small companies have been estimated at \$420,000 per case, although the costs in particular cases can be much higher. Bessen & Meurer, *The Direct Costs from NPE Disputes* *supra* note 10, at 12.

²⁹ See Comments by Nicholas White, Tangible IP, in response to Joff Wold, *Now that IP is Mainstream, Let’s Not Mess This Once in a Lifetime Opportunity Up*, Intel. Asset Mag. Blog (09 Jul 2012, 14:14), available at <http://www.iam-magazine.com/blog/detail.aspx?g=b0610bab-d371-4401-bd6f-6b12368b8eb0> (“In the past six months I have been approached by two investors with interest in large patent portfolios investment. They used to invest in start-ups. Why the change? Less risk [and] bigger potential gains.”).

³⁰ 2011 FTC Report, *supra* note 10, at 53.

³¹ McDonough, *supra* note 12, at 223 (“[P]atent dealers encourage people to invent around patents. With knowledge that patents will be enforced by patent dealers, potential infringers are forced to either license technology, or increase research and development to invent around these patents. Regardless of the choice, the end result for the public is broader access to works.”).

2. PAE Tactics Exploit Institutional Weaknesses.

By design, PAEs exploit current legal rules and institutions to maximize the monetary value of the patents they own. An important example is the explosion in PAE activity at the ITC. Prior to 2006, no ITC investigation had been brought by any PAE or (more broadly) any non-practicing entity (NPE). Since 2006, NPEs have filed an increasing number of investigations naming large numbers of respondents, as illustrated in Figure 1. As of 2012, NPEs brought 39% of investigations and named 53% of total respondents. A recent study revealed that PAEs, as a subset of NPEs, were responsible for 30% of the investigations and 48% of the total respondents in 2012.³² These trends coincide with the changes to the availability of injunctive relief in federal court following the *eBay* decision, significant Federal Circuit decisions that limit damage awards in federal court, and the new joinder limits under the America Invents Act of 2011, indicating that PAEs are using the ITC to avoid these changes.

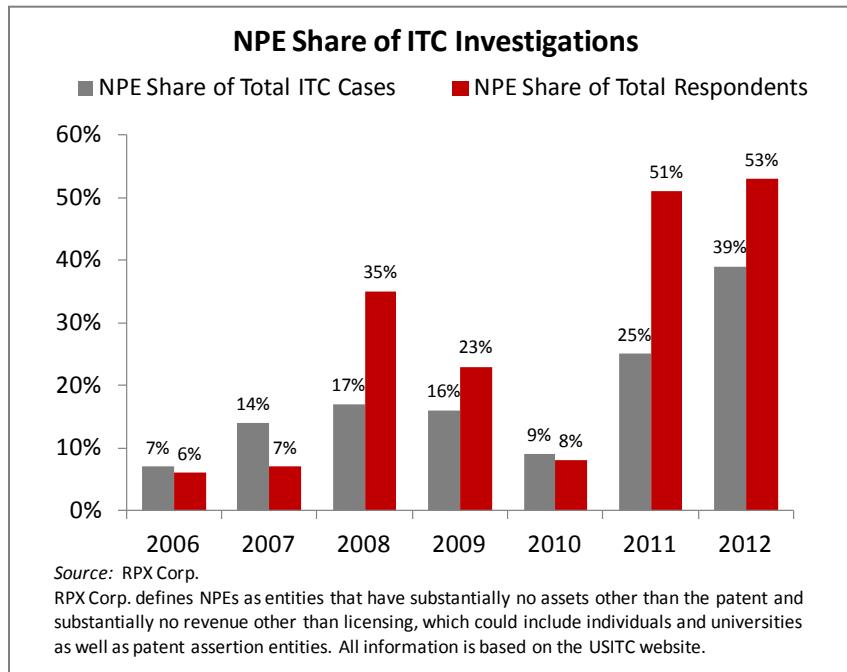


Figure 1

The Supreme Court's decision in *eBay v. MercExchange*³³ induced a sweeping change to PAEs' strategies. Following *eBay*, federal courts have denied injunctions to PAEs in 75% of cases, and when the injunction was contested it was denied in 90% of cases.³⁴ The one forum that has continued to issue virtually automatic injunctive relief (in the form of an exclusion order) is the ITC. The Federal Circuit has held that the ITC does not need to follow *eBay* in

³² Chien, *Patent Trolls by the Numbers*, *supra* note 2 (reporting data from RPX Corp.). The same study indicated that PAEs were responsible for 23% of investigations and 43% of total respondents named in 2011. *Id.*

³³ 547 U.S. 388 (2006).

³⁴ Colleen V. Chien & Mark A. Lemley, *Patent Holdup, The ITC, and the Public Interest*, 98 Cornell L. Rev 1, 9-10 (2012).

deciding whether to issue an exclusion order.³⁵ Accordingly, the ITC grants exclusion orders whenever it finds a violation of Section 337, including in instances where a district court would deny injunctive relief under *eBay*.³⁶ PAEs take advantage of the diverging standards by filing at the ITC concurrently with district courts to increase the threat of injunctions to defendants or by filing at the ITC after district courts deny injunctions in order to get a second bite at the apple.³⁷ Post-*eBay*, the ITC has even justified increasing its budget based on an influx of PAE activity, explaining that “since the U.S. Supreme Court’s 2006 *eBay* decision, which has made it more difficult for patent holders that do not themselves practice a patent to obtain injunctions in district courts, exclusion orders have increasingly been sought by non-practicing entities that hold U.S. patents.”³⁸ In the experience of the filing companies, the risk of an ITC exclusion order allows PAEs to demand royalties that far exceed the value of the patented inventions.³⁹

PAEs also have flocked to the ITC to circumvent Federal Circuit decisions limiting excessive damages awards in district court cases. Often the patent covers only a small aspect of a complex product,⁴⁰ or the accused company has invested in complementary, non-infringing products. In these instances, a PAE’s hold-up based on a single allegedly infringing component can distort competition in markets not directly covered by the patent, raising costs to consumers. However, in the past several years the Federal Circuit issued a series of decisions limiting the “reasonable royalty” that can be charged for a patent on a minor feature of complex tech products such as a computer or mobile phone.⁴¹ The appellate court has closed the door on speculative expert opinions and required that “reasonable royalty” claims be supported by evidence of the value of the actual contribution of the claimed invention. The result of these

³⁵ *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331, 1359 (Fed. Cir. 2010).

³⁶ See Colleen V. Chien, *Patently Protectionist? An Empirical Analysis of Patent Cases at the International Trade Commission*, 50 Wm. & Mary L. Rev. 63, 98-99 (2008) (indicating that ITC issued exclusion order in 100% of cases with violation); Robert W. Hahn & Hal J. Singer, *Assessing Bias in Patent Infringement Case: Review of International Trade Commission Decisions*, 21 Harv. J.L. & Tech. 457, 485 (2008) (finding that nearly 70% of the pre-*eBay* cases settled at the ITC would not have satisfied the *eBay* factors for an injunction).

³⁷ For example, after a district court denied Paice, a PAE, an injunction based on the *eBay* factors, Paice filed an investigation at the ITC seeking an exclusion order. *See Paice, LLC v. Toyota Motor Corp.*, No. 2:04-CV-211-DF, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006) (denying permanent injunction to Paice after considering *eBay* factors) and *Certain Hybrid Electric Vehicles*, Inv. 337-TA-688, Comm'n Op. (June 22, 2010) (seeking exclusion order).

³⁸ USITC, *Budget Justification: Fiscal Year 2012* at 21, available at http://www.usitc.gov/press_room/documents/budget_2012.pdf.

³⁹ See Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, Am. L. & Econ. Rev 1, 16, 19 (Oct. 19, 2010) (modeling of hold-up scenario due to injunctive threat shows large fraction of negotiated royalties due to hold-up, not to the value of the patented technology, with the fraction increasing for weak patents covering minor features of a high-margin product); Lemley & Shapiro, *supra* note 21, at 2009-2010 (finding that the proportionate royalty overcharge is not governed by the patent holder’s actual innovative contribution).

⁴⁰ See Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, *supra* note 39, at 6; *see also eBay*, 547 U.S. at 396-97 (Kennedy, J., concurring) (“When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest.”).

⁴¹ *E.g., LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 67-68 (Fed. Cir. 2012) (“in any case involving multi-component products, patentees may not calculate damages based on sales of the entire product ... without showing that the demand for the entire product is attributable to the patented feature”); *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1319-20 (Fed. Cir. 2011) (limiting “entire market value” rule); *Lucent v. Gateway*, 580 F.3d 1301, 1338 (Fed. Cir. 2009) (vacating jury damages award).

decisions has been to dramatically lessen the power of the holder of a single patent to extract “hold-up” settlements in federal district courts. PAEs have responded to these decisions by going to the ITC.

The ITC provides an attractive forum for PAEs for an additional reason: as a result of the America Invents Act of 2011, the ITC and district courts apply divergent joinder rules. In an effort to reduce PAEs’ leverage in district courts, Congress restricted a plaintiff’s ability to name multiple defendants in a suit by allowing plaintiffs to join only those defendants whose infringement arises from the same transactions or occurrences.⁴² No such limit on joinder of unrelated respondents has been applied by the ITC; PAEs continue to name numerous respondents whose only connection is the import or sale after importation of a component or product that potentially infringes the same patent. Avoiding the AIA’s joinder limits has increased the number of respondents named by PAEs at the ITC. In 2011, the year in which the AIA passed, PAEs filed a surge of new ITC investigations, naming an unprecedented number of respondents.⁴³ NPEs have named as many as thirty-three respondents in a single investigation.⁴⁴

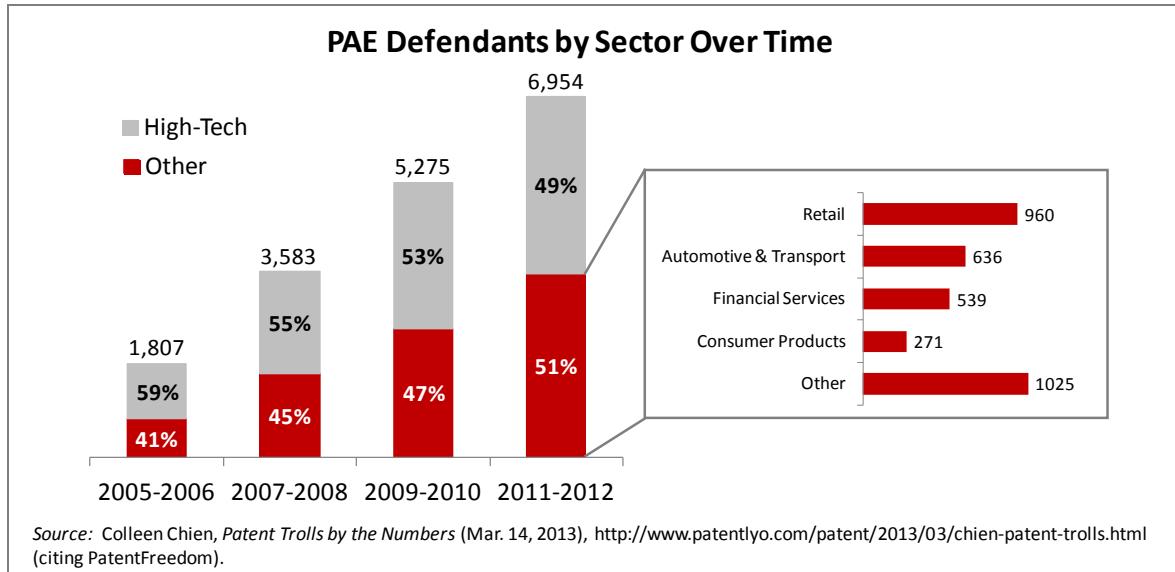
3. PAEs Often Exploit Multitudes of End-Users Who Merely Purchase or Use Products, Instead of Pursuing Upstream Manufacturers.

In addition to suing start-ups and larger companies, PAEs have begun to assert their patents against end-users of allegedly infringing products. In the most recent two year period, PAEs sued more non-tech companies than tech companies.

⁴² See Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 19(d), 125 Stat. 284, 332-33 (2011) (codified as amended at 35 U.S.C. § 299(a) (2012) (“parties that are accused infringers may be joined in one action as defendants . . . only if—(1) any right to relief is asserted . . . with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences . . . ; and (2) questions of fact common to all defendants . . . will arise in the action.”); see Bryan T. Yeh, Cong. Research. Serv., R42668, *An Overview of the “Patent Trolls” Debate* at 13 (Aug. 20, 2012). Prior to the amendment PAEs joined multiple unrelated defendants in a single district court action based solely on alleged infringement of the same patent.

⁴³ See Figure 1 above; Chien, *Patent Trolls by the Numbers*, *supra* note 2.

⁴⁴ USITC, *Facts and Trends Regarding USITC Section 337 Investigations* at 4 (June 18, 2012), available at http://www.usitc.gov/press_room/documents/featured_news/337facts.pdf (providing ranges, with 33 as the maximum named in an investigation).



PAE end-user campaigns typically involve either sending hundreds of threatening assertion letters or initiating hundreds of suits; both approaches aim to obtain hundreds of nuisance value licenses. For example, one PAE, Project Paperless, sent assertion letters to hundreds of small companies demanding that they pay \$1,000 per employee for the use of scanners that could scan images and send them as PDF attachments to e-mails. Project Paperless (and its shell corporations) alleged that their patents covered this process.⁴⁵ Another PAE, Innovatio, sent over 8,000 threatening letters and filed multiple law suits against end-users of Wi-Fi devices produced by Cisco, NetGear, and Motorola Solutions. Innovatio demanded lump-sum licensing fees of \$2,300 to \$5,000 – significantly more than what users paid for the product – to settle suits against end-users including hotels, coffee shops, retirement homes, and convenience stores.⁴⁶ And Geotag, a PAE who alleges its patent covers all online information that links with geographic areas, filed suit against more than 300 end-users of the Google Maps and Bing Maps systems, claiming that the maps on the end-users' websites, which show local

⁴⁵ See Joe Mullin, *Patent trolls want \$1,000—for using scanners*, Ars Technica, Jan. 2, 2013, available at <http://arstechnica.com/tech-policy/2013/01/patent-trolls-want-1000-for-using-scanners/> (providing a copy of one of these assertion letters). An anonymously created site, “Stop Project Paperless,” suggests that Project Paperless itself is a shell corporation. See Project Paperless, L.L.C., <http://stop-project-paperless.com/project-paperless-llc/> (last visited Mar. 3, 2013).

⁴⁶ See Gregory Thomas, *Innovatio’s Infringement Suit Rampage Expands to Corporate Hotels*, The Patent Examiner, Sept. 30, 2011, available at <http://patentexaminer.org/2011/09/innovatio-infringement-suit-rampage-expands-to-corporate-hotels/> (listing various coffee shop, restaurant and hotel chains that have been named in Innovatio’s suits and noting that Innovatio demanded lump-sum licensing payments from each of \$2,300 to \$5,000 to settle). Cisco, Motorola Solutions, and Netgear filed a complaint against Innovatio asserting a RICO claim as well as declaratory judgment of invalidity. Am. Compl., *In re Innovatio IP Ventures, LLC Patent Litig.*, No. 1:11-cv-09308 (N.D. Ill. Oct. 1, 2012).

store locations, infringe its patent.⁴⁷ PAEs have also begun pursuing podcasters and phone app developers who use allegedly infringing products or services provided by Apple or Google.⁴⁸

Such assertions allow PAEs to obtain nuisance value settlements without directly targeting the manufacturing companies. PAEs can obtain these settlements or licenses quickly because most end-users do not have the resources or information necessary to fight PAEs. Such assertions exploit the hold-up of the end-users who may have sunk costs in the technology, so that they would rather pay the nuisance value settlement than switch products. In addition, the information that end-users would need to mount a successful non-infringement defense often will lie predominantly with the manufacturer. The need for third party discovery increases the costs and complicates an end-user's ability to effectively defend a PAE infringement suit.

In at least one instance, such end-user assertion reportedly included an element of deception. According to Cisco's complaint, Innovatio's assertion letters to end-users failed to mention that certain of the asserted patents were standard essential patents and that Innovatio was obligated to license these patents on RAND terms.⁴⁹ Indeed, some of the patents were allegedly licensed to the manufacturers, a fact that Innovatio allegedly failed to acknowledge in its letters.⁵⁰ The letters also allegedly included infringement assertions based on expired patents. Such information non-disclosure to end-users would be misleading and cause harm by omitting or misrepresenting material information.

III. The Enforcement Agencies Should Advocate for Doctrinal Reforms To Combat PAE Abuses.

The Enforcement Agencies should continue to advocate that the ITC and the Federal Circuit apply § 337 to prevent abuses by PAEs that inflate the hold-up value of patents.

⁴⁷ See Compl., *Microsoft Corp. & Google Inc. v. Geotag, Inc.* ¶ 27 (D. Del. Mar. 2, 2011). The end-users include a diverse group of clothing retailers, fast food outlets (e.g., McDonalds), coffee shops (e.g., Starbucks), and Best Buy.

⁴⁸ For example, PAE Personal Audio has claimed that its patents cover podcasting technology and has sent numerous podcasters, including high-profile podcasters such as Adam Carolla and Sam Seder, threatening letters demanding they pay for licenses. See Julie Samuels, *Podcasting Community Faces Patent Troll Threat; EFF Wants to Help*, Electronic Frontier Foundation (Feb. 5, 2013), <https://www.eff.org/deeplinks/2013/02/podcasting-community-faces-patent-troll-threat-eff-wants-help>. Several PAEs have also asserted patents against various iPhone app developers. See, e.g., Charles Arthur, *Apple iPhone App Developers Hit by Patent Claims*, The Guardian (May 13, 2011), <http://www.guardian.co.uk/technology/2011/may/13/apple-iphone-developers-app> (reporting that Lodys is suing iOS app developers based on a patent claiming to cover Apple's in-app purchasing system); Julie Samuels, *The Real and Dangerous Effects of a Patent Troll*, Electronic Frontier Foundation (Feb. 27, 2013), <https://www.eff.org/deeplinks/2013/02/real-and-dangerous-effects-patent-troll> (reporting that an app developer is being sued by Uniloc for using source code provided by Google).

⁴⁹ Cisco's complaint alleged that Innovatio's assertion letters amounted to a RICO violation. The court dismissed the complaint holding Cisco did not establish that Innovatio's licensing campaign amounted to sham litigation under the Noerr-Pennington doctrine. The declaratory judgment claims are still pending. See Mem. Op. & Order, *In re Innovatio IP Ventures, LLC, Patent Litig.*, No. 1:11-cv-09308 (N.D. Ill. Feb. 4, 2013).

⁵⁰ Unless PAEs acknowledge these licenses in their assertion letters, end-users have no means to determine whether the asserted patents are subject to licenses without involving the manufacturers.

We note at the outset that the justifications Congress had in mind for creating the ITC's specialized patent forum are largely absent when PAEs are the complainants. Section 337's *in rem* jurisdiction was created to ensure U.S. patent holders were protected from importation of infringing articles manufactured abroad by foreign companies not subject to U.S. *in personam* jurisdiction.⁵¹ But PAEs do not need the ITC to obtain relief against the respondents they typically target. More than two thirds of the named respondents in PAE investigations are domestic companies that PAEs can sue in district courts.⁵² Indeed, approximately two thirds of ITC investigations have parallel district court cases.⁵³

The duplication of forums leads to duplicative effort. Even if a PAE's infringement theory fails or its patent is found invalid by the ITC, it can try the patent claims a second time in district court.⁵⁴ The lack of preclusive effect of ITC judgments on district court proceedings enables PAEs to test their claims and arguments prior to asserting them in district court.

ITC investigations generally are more expensive to defend than district court litigation.⁵⁵ For example, although ITC investigations comprise 10% of Cisco's litigation docket, they are responsible for almost half of the company's litigation budget.⁵⁶ Dual litigation against a PAE is a long, drawn out process because district court actions typically are stayed pending ITC investigations.⁵⁷

The ITC's purpose as a trade forum protecting domestic industries has been turned on its head by recent ITC investigations initiated by foreign PAEs against domestic respondents. For example, MOSAID, a Canadian patent acquisition and enforcement company, established a shell U.S. corporation and shortly thereafter filed an investigation at the ITC against Cisco, an

⁵¹ See H.R. Rep. No. 100-40, pt. 1, at 157 (1987) ("[t]he purpose of the commission is to adjudicate trade disputes between U.S. industries and those who seek to import goods from abroad."); Chien, *Patently Protectionist?*, *supra* note 36, at 73-74 (the ITC provides *in rem* jurisdiction to allow patentees to bring actions against foreign defendants who might otherwise evade service and who have few assets in the United States against which damage rewards could be enforced).

⁵² Chien & Lemley, *supra* note 34, at 24 & n.34. A review of 192 unique ITC respondents named in PAE investigations from 2006 to 2012 shows that at least 189 or 98 percent of them could have been sued for patent infringement in federal district court.

⁵³ See Colleen V. Chien, *Protecting Domestic Industries at the ITC*, 28 Santa Clara Computer & High Tech. L.J. 169, 171 ("two-thirds of ITC cases have a district court counterpart"); 2011 FTC Report, *supra* note 10 at 239 (65% of ITC cases have concurrent district court counterparts).

⁵⁴ See *Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1569 (Fed. Cir. 1996) (affirming "the rule that decisions of the ITC involving patent issues have no preclusive effect in other forums"); *Convertible Rowing Exercise Patent Litig.*, 721 F. Supp. 596, 598 (D. Del. 1989) (finding that the ITC's invalidation of a patent—which was affirmed by the Federal Circuit—did not preclude the patentee from asserting the patent's claims in district court, although the district court ultimately accepted the ITC's factual basis for invalidity).

⁵⁵ According to an informal survey by RPX, its clients indicated that the total legal costs in the ITC are roughly double what they are in district court. RPX, NPEs Increasingly Opt for ITC Action (last visited Mar. 19, 2012), <http://www.rpxcorp.com/index.cfm?pageid=14&itemid=20>.

⁵⁶ Int'l Trade Comm'n & Patent Disputes: Hearing Before the Subcomm. on Intellectual Prop., Competition, & the Internet of the H. Comm. on the Judiciary, 112th Cong. 33 (2012) (testimony of Neal A. Rubin, Vice Pres. of Litig., Cisco Sys., Inc.) (hereinafter ITC Hearing).

⁵⁷ See 28 U.S.C. § 1659.

American technology company.⁵⁸ Although the case was eventually dismissed, during the course of the assertion, MOSAID imposed \$13 million in costs on Cisco.⁵⁹ Beacon Navigation GmbH, a Swiss-based patent-holding company, brought one of the largest Section 337 investigations to date against every major American car manufacturer, including Ford, claiming a small GPS navigation component in American-made cars infringed its patent.⁶⁰ Beacon ultimately withdrew its complaint, but in the process cost those American car manufacturers tens of millions of dollars in defense fees.⁶¹

Since PAEs sell no products of their own, they do not actually want the only remedy the ITC can grant. An exclusion order is simply a means to create hold-up and extract greater royalties.⁶²

A. Give Appropriate Force to the “Domestic Industry” Requirement.

Section 337 investigations are available only to those who can establish that there is or will soon be a domestic industry “relating to the articles protected by the patent” that warrants protection from foreign infringers.⁶³ In 1988, Congress amended the ITC statutes to add engineering, research and development, and licensing as exploitative activities that can constitute a domestic industry under Section 337.⁶⁴ While PAEs have successfully argued that their licensing practices constitute a domestic industry under the amendment, it is clear from the statute’s context and the legislative history that this amendment extends only to industry-creating, production-driven licensing.

First, the term “exploitation” as applied to patent rights has been repeatedly interpreted to connote the development or use of the *articles covered by the patent*, not the legal-exclusivity right conferred by it.⁶⁵ This meaning of “exploitation” is the only sensible one given the other two terms enumerated in the amendment: “engineering” and “research and development,” both of which have nothing to do with the legal rights enjoyed by patent owners. Second, the legislative history explains that the amendments expanded domestic industry “to encompass universities and other intellectual property owners” who extensively license their patents to manufacturers and who are “actively engaged in steps leading to the exploitation of the

⁵⁸ ITC Hearing, *supra* note 56 (testimony of Neal A. Rubin, Vice Pres. of Litig., Cisco Sys., Inc.).

⁵⁹ *Id.* The dismissal was in large part prompted by emerging evidence that MOSAID had improperly bolstered its domestic industry evidence.

⁶⁰ *Id.* (testimony of David B. Kelley, Intellectual Property Counsel, Ford Global Technologies, Inc.).

⁶¹ *Id.* Of course, the problems of PAEs using the ITC are not limited to foreign PAEs attacking domestic producers. The examples in text simply demonstrate that inflicting hold-up costs on U.S. producers and consumers cannot be defended as somehow protecting U.S. producers.

⁶² See ITC Hearing, *supra* note 56, at 28-29 (testimony of Neal A. Rubin, Vice Pres. of Litig., Cisco Sys., Inc.).

⁶³ 19 U.S.C. § 1337(a)(2) (requiring “an industry in the United States, relating to the articles protected by the patent...exists or is in the process of being established”).

⁶⁴ 19 U.S.C. § 1337(a)(3)(C).

⁶⁵ See, e.g., *Air Turbine Tech., Inc. v. Atlas Copco AB*, 410 F.3d 701, 711 (Fed. Cir. 2005) (“exploitation” means patented technology is “put into practical use”); *Inamed Corp. v. Kuzmak*, 249 F.3d 1356, 1362 (Fed. Cir. 2001) (describing licensee as enjoying right to “exploit” the patents by selling covered products).

intellectual property, including application engineering, design work, or other such activities.”⁶⁶ These examples share a common thread – they involve patent holders whose licenses foster propagation or use of the inventions and encourage practical applications that bring the patented technology to market.⁶⁷ Nothing in the legislative history indicates that Congress intended after-the-fact, revenue-driven licensing that exploits the legal right embodied in a patent to warrant protection at the ITC.

The ITC’s broad and improper reading of this statute to include both after-the-fact revenue-driven licensing and before-deployment, production-driven licensing⁶⁸ has caused an influx of PAEs who base their domestic industry solely on licensing.⁶⁹ To ameliorate this misinterpretation, the agencies should not only continue to urge the ITC to properly interpret its statute, but also to raise the issue in ongoing cases. For example, in a divided opinion, the Federal Circuit recently held that InterDigital – a PAE – may bring suit at the ITC because it was seeking to license articles made by Nokia outside the United States. Without determining whether InterDigital was engaged in revenue-driven or production-driven licensing, the majority noted that InterDigital also invested in “substantial research and development leading to the patents.”⁷⁰ The dissent objected to the holding because there were no “articles protected by the patent” made in the United States, but “offer[ed] no view on the role of non-practicing entities.”⁷¹ If the Supreme Court calls for the views of the Solicitor General about this case, the Department and the FTC should seek to clarify the critical limits on licensing.

⁶⁶ S. Rep. No. 100-71, at 129-30 (1987); H.R. Rep. No. 100-40, pt. 1, at 157 (1987).

⁶⁷ Despite sharing this understanding of the legislative text and purpose, the ITC has inexplicably held that it must consider all licensing to determine if domestic industry exists. *See Certain Coaxial Cable Connectors*, USITC Inv. No. 337-TA-650, Comm’n Op. at 47-49 (Apr. 14, 2010).

⁶⁸ *Id.* at 49-50. The Commission classifies “production-driven licensing activity” as activity “which encourages adoption and use of the patented technology to create new products and/or industries,” and “revenue-driven licensing activity” as activity “which takes advantage of the patent right solely to derive revenue by targeting existing production.” *Certain Multimedia Display and Navigation Devices and Systems*, USITC Inv. No. 337-TA-694, Comm’n Op. at 25 (Aug. 8, 2011).

⁶⁹ Robert D. Fram & Ashley Miller, *The Rise of Non-Practicing Entity Litigation at the ITC: The State of the Law and Litigation Strategy* at 7 (Oct. 22, 2010) (unpublished manuscript) (finding an increase from 13% to 27% from 2000-2006 to 2007-2010 of a domestic industry based on licensing activity).

⁷⁰ *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, --- F.3d ---, No. 2010-1093, 2013 WL 124064, *13 n. 2 (Fed. Cir. Jan. 10, 2013).

⁷¹ *Id.* at *20, *21 (dissenting opinion of Newman, J.).

B. PAE Assertions Implicate the Public Interest Factors That Should Preclude Issuance of Injunctive Relief.

Even if revenue-driven licensing gives PAEs standing before the ITC, the exclusion order remedy should be denied under the four public interest factors the ITC must consider: (1) the effect of such exclusion upon the public health and welfare, (2) competitive conditions in the United States economy, (3) the production of like or directly competitive articles in the United States, and (4) the impact on United States consumers.⁷² The harm resulting from the potential grant of an exclusion order to PAEs implicates all of these factors.

For example, when a Section 337 violation is based on a minor or insignificant element of a larger product, it will cause the entire product to be excluded. Consumers will be denied access to many productive, non-infringing components as a result of the PAE's control over a single, small component.

In some instances there also will be a lack of production of like or directly competitive articles in the United States, implicating the third public interest factor. This is especially true when PAEs name a host of major producers of a product in a single complaint, as is permitted under the ITC's liberal joinder rules, and base their domestic industry on licenses with companies who do not produce the infringing product⁷³ or who do not have production capabilities to meet market demand, such as start-ups or small companies.⁷⁴ In such cases, exclusion orders enjoining major manufacturers may effectively deny consumers access to products.

For example, in a PAE investigation brought by Graphic Properties Holdings, the proposed respondents' products accounted for nearly 74% of the U.S. smart phone market, whereas licensees comprised only 11% of the market.⁷⁵ Another PAE, Technology Properties Limited, named thirteen respondents whose products constituted 50% of the smart phone market, 80% of the eReader market, 50% of the GPS market, and a substantial portion of the game console market.⁷⁶ Excluding these respondents' products would injure consumers since it would

⁷² 19 U.S.C. § 1337(d)(1). The statute requires similar considerations in the context of preliminary relief and cease and desist orders. *See* 19 U.S.C. § 1337(e)-(f). Although the ITC is required by statute to consider these factors, it has denied relief based on the public interest in only three cases, all of which occurred more than twenty-six years ago. *See Certain Fluidized Supporting Apparatus and Components Thereof*, USITC Inv. No. 337-TA-182/188, Comm'n Op. at 1-2 (Oct. 5, 1984); *Certain Inclined-Field Acceleration Tubes and Components Thereof*, USTIC Inv. No. 337-TA-67, Comm'n Op. at 1 (Dec. 29, 1980); *Certain Automatic Crankpin Grinders*, USTIC Inv. No. 337-TA-60, Comm'n Op. at 1 (Dec. 17, 1979).

⁷³ PAEs seeking to show a domestic industry based on licensing activity have been exempted from showing actual production. *See* Chien, *Protecting Domestic Industries at the ITC*, *supra* note 53, at 171 (arguing that PAEs should be required to establish that licenses establishing a domestic industry be production driven or *ex ante*, and involve manufacturers with capacity to serve a substantial part of the market).

⁷⁴ This was one of the bases for denying an exclusion order in *Certain Automatic Crankpin Grinders*, USITC Inv. No. 337-TA-60, Comm'n Op. at 1.

⁷⁵ Letter from Kevin Collins, Covington & Burling, to James Holbein, Secretary, U.S. Int'l Trade Com'n, 4-5 (Mar. 19, 2012) (filed on behalf Samsung Electronics).

⁷⁶ Letter from Andrew Valentine, DLA Piper, to Lisa R. Baron, Acting Secretary, U.S. Int'l Trade Com'n, 4-5 (Aug. 7, 2012) (filed on behalf of Samsung Electronics).

be unlikely that the small number of licensees could meet the market demand with alternative products.⁷⁷

The agencies should continue to press the ITC and appellate courts to properly implement the existing statutory requirements to better serve the public interest.

IV. Aggregation of Patents Warrants Investigation.

Acquisitions that increase hold-up and produce above-market pricing for patent licenses or other competitive harms are subject to scrutiny under Sections 1 and 2 of the Sherman Act, Section 7 of the Clayton Act, and Section 5 of the Federal Trade Commission Act.⁷⁸ Patent aggregators pose special threats to competition and warrant investigation. Aggregators use the size of their portfolios – and secrecy – to intimidate prospective licensees. In contrast to PAEs that pursue licensing and litigation involving a small number of patents allegedly covering critical technologies, the aggregators’ approach is different: aggregators attract investments in order to assemble masses of patents; their approach to potential licensees is based not on patent quality, but on quantity. An aggregator might show a prospective licensee a group of patents, then another group, and then another group, without disclosing the bulk of the portfolio. The large numbers combined with affirmative efforts by the aggregator to conceal the contents of the total portfolio make it difficult, if not impossible, for a prospective licensee to evaluate the entire portfolio or even to test a representative sample from it.⁷⁹ The decision whether to license the portfolio, therefore, is not based on an evaluation of the value of individual patents in the portfolio but instead on the threat of multiple lawsuits.⁸⁰

⁷⁷ *Id.* at 5.

⁷⁸ See U.S. Dep’t of Justice & Fed. Trade Comm’n, Antitrust Guidelines for the Licensing of Intellectual Property § 5.7 (1995); Ward S. Bowman, Jr., Patent and Antitrust Law: A Legal and Economic Appraisal 200 (1973) (“The problem of patent accumulation, the aggregation of several or numerous patents under single ownership or control, is conceptually indistinguishable from the merger problem under antitrust law.”); Hovenkamp et. al., IP and Antitrust § 14.3 (2d. ed. 2010) (noting that “patent acquisitions by dominant firms that threaten to increase or perpetuate the acquirer’s dominance have been treated as exclusionary practices under § 2 of the Sherman Act”). The concerns addressed in this paper do not apply when patents are granted – even in large numbers – as a result of firms innovating themselves, since innovation resulting in patents is procompetitive. See, e.g., Gregory Sidak, *Debunking Predatory Innovation*, 83 Colum. L. Rev. 1121, 1141-42 (1983).

⁷⁹ Intellectual Ventures, Acacia, and other aggregators reportedly have created thousands of unidentified shell companies in order to disguise their patent ownership. Robin Feldman & Tom Ewing, *The Giants Among Us*, 2012 Stan. Tech. L. Rev. 1, ¶ 21 (2012); Colleen V. Chien, *Eliciting More Complete Patent Assignment Information*, Comment to the USPTO 3 & n.10 (2012). These companies “deliberately withhold patent ownership information in order to gain strategic advantage,” in many cases not recording the assignment of the patent until after they file enforcement cases. Chien, *Eliciting More Complete Patent Assignment Information*, *supra* at 3; see FTC 2011 Report, *supra* note 10, at 130 & n.331 (some patent owners “mak[e] it as difficult as possible” to determine the ownership of a patent; they engage in “intentional hiding” and delay reporting of patent assignment); Colleen V. Chien, *From Arms Race to Marketplace*, 62 Hastings L.J. 297, 351 (2010) (“patentees use secrecy to increase hold-up”); Colleen V. Chien, *Predicting Patent Litigation*, 90 Tex. L. Rev. 283, 313 (2011) (“the ‘games’ companies play in order to hide their patent holding” make it difficult to determine ownership).

⁸⁰ Intellectual Ventures is often cited in public reports as making threats based on the size of its portfolio. “[I]ndustry participants have expressed concerns that IV’s ability to assert a virtual armada of patents gives it an unusually strong bargaining position. One panelist described IV as betting on a ‘volume strategy,’ based on approaching potential licensees with a large portfolio and asking them ‘how much do you want to bet that at least

Such activity is not only detrimental to the competitive process; it likely violates the antitrust laws and should render aggregators' patents unenforceable in the hands of the patent aggregators. Building the case against the aggregators will require – and merits – a significant investment in investigative resources because the aggregators' business model is built around secrecy and intimidation.

A. Attempting To Extract Licenses for Undisclosed or Tied Patents Constitutes Misuse.

Licensing that is based on a threat of tied patents rather than use and value, or that occurs without full disclosure of the patents, harms the competitive process and violates the basic patent bargain. Technologies (and the patents that grant partial property rights in technologies) are valued by comparison to their alternatives. Most technologies compete with alternatives. Licenses that are coerced will tend to foreclose other licenses to competing technologies that might have been entered voluntarily, based on a comparison of quality and cost. Interfering with or preventing a licensee from making a merits-based choice between alternative technologies harms the competitive process. *See NYNEX v. Discon*, 525 U.S. 128, 137 (1998) (“The freedom to switch suppliers lies close to the heart of the competitive process that the antitrust laws seek to encourage.”); *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 62 (1911) (“the freedom of the individual right to contract when not unduly or improperly exercised [is] the most efficient means for the prevention of monopoly”).

Licensing activity is most beneficial when it promotes new adoption of the technology. Even where revenue-driven licensing is permitted under patent law, it is no part of legitimate patent-licensing activity to demand a license for a patent that is *not* disclosed or not used but tied with other “deal driver” patents. To the contrary, such activity may constitute misuse: that is, an effort to expand the scope of the patent monopoly beyond the grant through improper conduct. This can particularly be a problem when large numbers of low value patents are acquired and tied in an effort to extract license fees greatly in excess of the inherent market value established by their acquisition. If the proposed license reflects the actual value of the licensed technology, then the patent owner has every reason to disclose the patents being licensed and not to tie large groups of patents together. When a patent owner keeps patents secret or hidden en masse but demands a license for all of them, it suggests that the patent owner intends to extract rents based

one of them is really good.”” FTC 2011 Report, *supra* note 10, at 66 (citations omitted). IV founder Nathan Myhrvold reportedly emphasizes the volume of Intellectual Venture’s holdings in licensing discussions, telling potential licensees “I can’t afford to sue you on all these, and you can’t afford to defend on all these.” Amol Sharma & Don Clark, *Tech Guru Riles the Industry By Seeking Huge Patent Fees*, Wall St. J., Sept. 17, 2008, <http://online.wsj.com/article/SB122161127802345821.html>. IV founder Peter Detkin acknowledges: “experience in the real world shows: the access and negotiating strength of a large portfolio provides a powerful market advantage.” Peter N. Detkin, *Leveling the Patent Playing Field*, 6 John Marshall Rev. Intell. Prop. L. 636, 641 (2007); *see* R. Polk Wagner & Gideon Parchomovsky, *Patent Portfolios*, 154 U. Pa. L. Rev. 1, 58 (2005) (“The value of a well-designed portfolio will always exceed the sum of the individual patents.”).

on the *in terrorem* effect of undisclosed patents – which may be without value, or which may have a much lower value than the license amount.⁸¹

In any event, the tactic of seeking to extract a license for undisclosed or tied patents should render all the patents in the subject portfolio unenforceable at a minimum while in the hands of the patent aggregator. That is the usual penalty for misuse, and it is particularly appropriate in this circumstance.⁸² Disclosure of technology in exchange for a right to exclude is at the heart of the patent bargain.⁸³ A patent owner thus should not have the right to request a license fee without clearly identifying the patent or patents that it seeks to license or without tying patents. Complete disclosure gives the target at least a chance of evaluating the patents and making a rational decision about validity, infringement, and the possibility of adopting alternatives.⁸⁴

The Enforcement Agencies should carefully investigate aggregators' licensing practices to ensure that they are properly disclosing information about the patents they seek to license and not improperly tying patents into bundles. The agencies should ask the aggregators what information they disclose to prospective licensees regarding the offered patents and also what

⁸¹ Huge undifferentiated pools of patents are not presumptively efficient, as large pools of copyrights such as offered by performing rights organizations might be. Copyrights tend to be generally valid. By contrast a large percentage – up to 40 percent – of litigated patents (and those are presumably the stronger ones, having been asserted in litigation) prove to be invalid. *See* James Bessen & Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk* 158 fig. 7.2 (2008). One aggregator reportedly gets low prices on patents by identifying prior art problems (using such problems to persuade the patent seller to lower the price of acquisition) but then nevertheless includes such patents in its portfolio despite previously expressing concerns about their validity. Tomas Kellner, *Patent Stalker*, *Forbes*, Nov. 14, 2005, *available at* <http://www.forbes.com/forbes/2005/1114/166.html>.

⁸² *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1373 (Fed. Cir. 1998) (“a holding of misuse renders the patent unenforceable”); *B. Braun Med., Inc. v. Abbot Labs.*, 124 F.3d 1419, 1427 (Fed. Cir. 1997) (“When used successfully, [the misuse] defense results in rendering the patent unenforceable. . .”).

⁸³ *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 498 U.S. 141, 150-51 (1989) (“The federal patent system . . . embodies a carefully crafted bargain for encouraging the creating and disclosure of new, useful and nonobvious advances in technology. . . in return for the exclusive right to practice the invention for a period of year.”); *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 262 (1979) (explaining one of the three purposes of the patent system is “it promotes disclosure of inventions, to stimulate further innovation and permit the public to practice the invention once the patent expires”); *Classen Immunotherapies, Inc. v. Biogen IDEC*, 659 F.3d 1057, 1072-73 (Fed. Cir. 2011) (“an important purpose of the system of patents is to negate secrecy, and to provide otherwise unknown knowledge to the interested public”).

⁸⁴ In fact, even if patents are disclosed, licensing demands based on large numbers rather than the quality of specific patents creates an information problem for the prospective licensee. Aggregators with massive numbers of patents present targets with a substantial threat of liability from somewhere in that pool, and targets cannot assess that threat (patent by patent, as would be required) without exorbitant cost, because of the size of the collection. “It is widely believed that intellectual property bundling is apt to affect private incentives to challenge the IP—most likely decreasing incentives to challenge it.” Dep’t of Justice & Fed. Trade Comm’n, *Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition* 108 (2007) (quotations omitted), *available at* <http://www.justice.gov/atr/public/hearings/ip/222655.pdf>. As Judge Moore noted in her concurrence in *Ohio Willowwood Co. v. Thermo-ply, Inc.*, there is a significant public interest in challenges to and determinations of patent invalidity; therefore, aggregations that deter licensees from challenging patent validity are contrary to the public interest. 629 F.3d 1374, 1376 (Fed. Cir. 2011) (Moore, J., concurring). The aggregator can exploit the risk of liability and the increase in information costs it has created to demand at least as much money as the high cost of evaluating the true value of each patent, one at a time.

information they possess regarding the weaknesses, inapplicability, potential invalidity, and lack of value of the patents that they *fail* to disclose, and why. Such an investigation is especially important because aggregators require non-disclosure agreements as a pre-condition of negotiations, and critical information may not be publicly available. To the extent aggregators have extracted licenses without full disclosure, the Enforcement Agencies should seek remedies which may include declarations that the subject patents are unenforceable.

B. Aggregators May Misuse Standard Essential Patents (SEPs), Including Gaming Disclosure and Licensing Obligations.

Our information about internal practices of PAE's related to standards, based on public sources, is limited. PAE secrecy, including about their investors, patent purchasing decisions, and information exchange practices with standards setting organization (SSO) member investors, makes it virtually impossible to determine, without eliciting information from the PAEs, whether and to what extent questionable conduct may occur with regard to SEPs. The Enforcement Agencies should use their investigative tools to request that PAEs provide the agency with information relevant to assessing whether abuse has occurred and how to avoid potential harm to U.S. businesses and consumers.

Several PAEs have made a point of acquiring standard-essential patents to offer as part of their license bundle.⁸⁵ If these SEPs were subject to FRAND obligations that limit the royalty that could be charged for licenses, that obligation might be circumvented if the aggregator insists on a license price for the rest of the portfolio bundle (consisting of non-FRAND-encumbered patents) that is more than those patents would be worth if valued separately. Tying presents anticompetitive risks when used to evade regulation by extending market power into adjacent unregulated markets.⁸⁶ The agencies should ask the aggregators to describe their practices for licensing SEPs both separately and as part of bundled licenses with non-SEPs, and what steps they have taken in pricing their portfolio licenses to comply with FRAND commitments.

⁸⁵ See Andrei Hagiu, David Yoffie, & Alison Berkley Wagonfeld, *Intellectual Ventures*, Harv. Bus. Rev. Case Study No. 710-423, at 7 (Feb. 3, 2010) (Donald Merino, IV's general manager of acquisitions, explained that in assessing whether to acquire certain patents for its portfolio, IV's team determines "if the IP was an essential patent, or is there a viable work around"); *see also* Intellectual Ventures Press Release, *NVIDIA and Intellectual Ventures Partner to Acquire Portfolio of Wireless Patent Assets* (May 14, 2012), available at

<http://www.intellectualventures.com/index.php/news/press-releases/nvidia-and-intellectual-ventures-partner-to-acquire-portfolio-of-wireless-p> (describing IV's acquisition of 500 granted and pending "essential" wireless patents involving "essential concepts in LTE, LTE-Advanced and 3G/4G technologies"; quoting IV executive vice president Loria Yeadon: "[t]his investment provides efficient access to important inventions and standards-essential patents").

⁸⁶ See, e.g., *Fortner Enters., Inc. v. United States Steel Corp.*, 394 U.S. 495, 513 (1969) (White, J., dissenting) ("tying arrangements may be used to evade price control in the tying product"); *Jefferson Parish Hosp. District No. 2 v. Hyde*, 466 U.S. 2, 36 n.4 (O'Connor, J., concurring) ("In a regulated industry a firm with market power may be unable to extract a super-competitive profit because it lacks control over the prices it charges for regulated products or services. Tying may then be used to extract that profit from sale of the unregulated, tied products or services.").

Beyond the problem of evading FRAND limits on pricing of standard-essential patents, a PAE may bundle a few SEPs (or other strong patents) to force licensing of patents to competitive technologies where, at the time of the initial license, the licensee had choices among multiple competing technologies. Once a licensee has licensed a particular technology – whether willingly or coercively – owners of rival technologies face a hurdle to convince the licensee to pay for a second license to use the alternative. In some circumstances, especially once substantial investments are made in the technology, there is a risk of foreclosing more efficient alternatives.⁸⁷ The agencies should ask the aggregators to describe their practices for offering individual patents or sub-bundles of patents, including the pricing charged to less-than-all-patent licensees. The agencies should investigate whether the pricing of individual patents or sub-bundles is set purposely high to effectively force licensees to take the entire bundle.

When a company directly participating in a standards-setting body that requires disclosure of relevant IP hides some of its patents during standards negotiation for later assertion, that conduct is anticompetitive. *See, e.g., Rambus Inc. v. FTC*, 522 F.3d 456, 463 (D.C. Cir. 2008) (assuming but not deciding “that if Rambus’s more complete disclosure would have caused JEDEC to adopt a different (open, non-proprietary) standard, then its failure to disclose harmed competition and would support a monopolization claim”). PAEs, through relationships with SSO members, can engage in the same anticompetitive practices, in an indirect manner.⁸⁸ Several SSO members have become investors in various PAEs, including some of the largest aggregators. Generally, as a part of the investment, these companies have access to patents in the PAE’s portfolio. And generally, the investors and PAEs may engage in significant information exchange regarding the acquisition of various patents and applications. The risks flowing from this information exchange can occur when PAEs reportedly provide their investors with acquisition notices that set forth the patents that PAEs acquire and to which investors have access.⁸⁹

⁸⁷ *See Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700, 704 (Fed. Cir. 1992); Business Review Letter from Joel I. Klein, Assistant Att’y Gen., Antitrust Division to Garrard R. Beeney, Esq., Sullivan & Comwell (Dec. 16, 1998), available at <http://www.justice.gov/atr/public/busreview/2121.pdf>; 10 P. Areeda & H. Hovenkamp, Antitrust Law 1782a5 at 544 (“[F]oreclosure can occur. Suppose that a licensee desiring access to patent A must also accept a license to patent B as well. If the licensee would, absent the tie, have purchased from a different supplier a patented or unpatented alternative to patent B, there is a foreclosure. Such a foreclosure would then be analyzed under general tying principles.”). The Federal Circuit’s decisions in *U.S. Philips Corp. v. ITC*, 424 F.3d 1179 (Fed. Cir. 2005) and *Princo Corp. v. ITC*, 616 F.3d 1318 (Fed. Cir. 2010) are not to the contrary. In those decisions, the Federal Circuit reversed a determination that bundling of non-essential with essential patents was *per se* patent misuse and held that the plaintiff failed to show the requisite adverse effect on competition. *Princo*, 616 F.3d at 1338.

⁸⁸ The use of PAEs to do indirectly what members of an SSO cannot do directly has already been raised in other contexts. For example, Google filed a complaint with the European Commission alleging that Nokia’s transfer of its standard essential patents to PAE MOSAID violates competition laws because it was done to avoid Nokia’s previously agreed upon RAND commitments. *See* John Letzing, *Google Points Finger at Microsoft, Nokia, Wall.* St. J., May 31, 2012, <http://online.wsj.com/article/SB10001424052702304821304577438740232322350.html>.

⁸⁹ *See* Second Am. Compl. ¶¶ 33-35, *Xilinx, Inc. v. Detelle Relay KG, LLC*, No. 5:11-cv-04407-SI (N.D. Cal. Feb. 6, 2012) (amended complaint against a PAE and its holding companies alleging investors receive acquisition notices when the PAE buys new patents).

If the investors are SSO members and if a part of the information exchange is either explicitly or implicitly influenced by an investor's knowledge from the SSO, this may give rise to a violation of Section 1 and 2 of the Sherman Act or, in the least, Section 5 of the FTC Act. For instance, an investor company can use its knowledge of what patents a PAE owns to steer the standard selecting process in the direction of those patents. Because the patents will be owned by the PAE, the company may not have to disclose them; thus, the company could avoid subjecting the patents to a FRAND commitment and benefit from higher revenue-driven licensing fees extracted from other SSO members (exacerbated by the greater availability of injunctive relief) while benefiting from its own pre-existing, relatively inexpensive license as an investor. In a similar manner, investing companies can pass on information gained during the standard setting process to a PAE and explicitly or implicitly guide a PAE to purchase patents or amend pending applications to cover the standard. Furthermore, if an investing company determines it owns a patent or pending application that may read on a standard, in lieu of disclosing the patent, it could transfer the patent to the PAE it is invested in, in exchange for proceeds on exploitation of the patent against other SSO members.⁹⁰

The agencies have warned that an SEP holder's failure to adhere to FRAND obligations may constitute a violation. For example, in *Negotiated Data Solutions*, the FTC found that N-Data's repudiation of its licensing commitment enabled it to raise prices that harmed consumers. The FTC found that the size and sophistication of the victimized businesses that had become locked-in to the standard did not negate the harm caused by N-Data's practices.⁹¹

⁹⁰ See Thomas Ewing, *Practical Considerations in the Indirect Deployment of Intellectual Property Rights By Corporations and Investors*, 4 Hastings Sci. & Tech. L.J. 109, 112-13 (2012) (operating companies may sponsor or provide patents or guidance to PAEs that act as "IP privateers"; "[t]he sponsor's benefits do not typically arise directly from the third party's case against a target but arise *consequentially* from the changed competitive environment brought about by the third party's IPR assertion").

⁹¹ Statement of Federal Trade Commission, *Negotiated Data Solutions, LLC*, File No. 0510094 (Jan. 22, 2008), available at <http://www.ftc.gov/os/caselist/0510094/080122statement.pdf>. The FTC found N-Data's departure from FRAND terms an unfair practice because (1) renegeing on pricing commitments involved "substantial consumer injury" in the form of increasing royalties and litigation costs that were passed on to consumers; (2) there was no countervailing benefit to the licensees, consumers or competition; and (3) the injury could not be avoided because there was no way to anticipate the repudiation of N-Data's licensing commitment before it occurred and once N-Data repudiated, those locked in to the standard had no way to avoid the threatened injury. Analysis of Proposed Consent Order To Aid Public Comment at 7-8, *Negotiated Data Solutions LLC*, File No. 0510094 (Jan. 22, 2008), available at <http://www.ftc.gov/os/caselist/0510094/080122analysis.pdf>.

C. Aggregators May Violate the Antitrust Law By Combining Technological Substitutes.

The aggregation of patents covering competing or potentially competing technologies creates anticompetitive effects because a common owner may demand a royalty that reflects market power resulting from *the elimination of competition* and not from the technological superiority of any single patent.⁹² “[I]f it were established that there were two nonconflicting competing processes for making the same product, each patented and separately owned, their combination would eliminate user alternatives and raise the user’s cost of production above that measured by the ‘competitive superiority’ of either of the patents.”⁹³ As the Department of Justice has noted, when a single economic entity “combin[es] … substitute patents” this has the effect of a “price-fixing mechanism, ultimately raising the price of products and services that utilize the pooled patents.”⁹⁴ Such elimination of competition among patented technologies was one of the anticompetitive effects that led the FTC to challenge the patent pooling arrangements between Summit and VISX, owners of competing laser eye-surgery patents.⁹⁵

Aggregators also pose special risks to competition because they may acquire patents that their investors would be barred from acquiring, effectively taking competing technology off the market and entrenching investors’ market power. Indeed, the aggregation of large numbers of patents within a particular field may entrench market power even if the patents are not substitutes and even if most of the patents are of low value. As the leading antitrust treatise notes, a “large and possibly growing hoard [of patents] blanketing the field would confront any new producer with the substantial possibility of patent infringement litigation. . . . *[E]ven if all the patents are relatively ‘weak,’ their sheer number threatens that one might be held valid and infringed.* The potential newcomer may therefore feel compelled to make its peace with the [patent aggregator] before committing substantial investments to the field. Or it may not enter at all.”⁹⁶

In recognition of the potentially competition-harming effect of patent aggregations, enforcement agencies have stressed that patent pools should include mechanisms for ensuring that the pools include only complementary patents.⁹⁷ The agencies should investigate whether PAEs have acquired patents covering substitute technologies in any area. In particular, the

⁹² *Antitrust Enforcement and Intellectual Property Rights*, *supra* note 84, at 2 (2007) (“[A] pool containing substitutable patents, i.e., patents covering technologies that compete with each other and that licensee producers would choose between, may have the anticompetitive effect of increasing the total royalty rate to licensees.”).

⁹³ Ward S. Bowman, Jr., *Patent and Antitrust Law: A Legal and Economic Appraisal* at 201 (1973).

⁹⁴ Business Review Letter from Joel I. Klein, Assistant Att’y Gen., Antitrust Division to Carey R. Ramos, Esq., Paul, Weiss, Rifkind, Wharton & Garrison, at 11 (June 10, 1999) *available at* <http://www.justice.gov/atr/public/busreview/2485.pdf>.

⁹⁵ See Compl., *In the Matter of Summit Technology & VISX Inc.*, Docket No. 9286 (FTC Mar. 24, 1998); Analysis of Proposed Consent Order To Aid Public Comment, *In the Matter of Summit Tech. & VISX Inc.*, Docket No. 9286 (Aug. 21, 1998), *available at* <http://www.ftc.gov/os/1998/08/d09286ana.htm> (noting that absent pooling of competing patents “Summit and VISX could have engaged in competition with each other in connection with the licensing of technology related to” laser surgery).

⁹⁶ 3 Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law* ¶ 707b (3d ed. 2008).

⁹⁷ See, e.g., Business Review Letter from Klein to Beeney, *supra* note 87, at 15; see also Steven C. Carlson, *Patent Pools and the Antitrust Dilemma*, 16 Yale J. Reg. 359, 389 (1999).

agencies should investigate whether aggregators are acting on behalf of investors or others to buy up patents to prevent competition.

* * * *

Further investigation of PAE activities by the agencies is warranted, and the agencies' continuing advocacy of patent law improvements and enforcement of the antitrust laws are likely to yield benefits to innovation and consumers.

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