

**TROLLS OR GREAT INVENTORS:  
CASE STUDIES OF PATENT ASSERTION ENTITIES**

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ABSTRACT

There has been much debate about the economic harms caused by patent infringement lawsuits filed by patent holders who do not make or sell products covered by their own patents—entities pejoratively referred to as “patent trolls.” This debate has thus far been largely theoretical or based on broad industry-wide data. The purpose of this Article is to present a focused empirical report that has previously been lacking—detailed information regarding the inventors themselves, the patent assertion entities (PAEs) that represent them, and the stories behind their patents. The research for this Article centers on two instructive case studies: (1) MercExchange, L.L.C., the prominent PAE whose seminal patent infringement action against eBay continued to the Supreme Court in *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006); and (2) Capital Security Systems, Inc., a lesser-known PAE that has sued some of the largest banks in the world on its patented electronic check processing technology. This Article explores the stories behind the inventors, the patented inventions, and the entities asserting the patents in order to develop a more complete contextualized picture of PAEs and their economic impact. Based on this more complete picture, the Article then assesses whether these patent holders warrant the “patent troll” moniker, lurking under the bridge of innovation waiting to harass and extort innovators attempting to pass, or whether they instead resemble the great American vision of a Horatio Alger novel protagonist, laboring to build that bridge of innovation brick-by-brick and eventually reaping a reward for their hard effort. The Article concludes that, while additional studies are needed, the two PAEs studied herein fall squarely into the latter honest laborer category.

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## INTRODUCTION

Much ado has recently been made of patent infringement lawsuits filed by patent holders who do not practice the patents they own. These non-practicing patent holders are often referred to as “non-practicing entities” (NPEs), “patent assertion entities” (PAEs), or, more pejoratively, “patent trolls.”<sup>1</sup> Regardless of name, the debate over these patent holders has regrettably been characterized more by contempt than praise.<sup>2</sup> Further, little has been done to contextualize the debate by examining the particularized facts concerning the patent holders themselves, the stories behind their inventions, or the entities that represent their interests.

The purpose of this Article is to provide some of the missing context. The research detailed here centers on two instructive PAEs, defining “PAEs” as a person or company who does not manufacture products or supply services related to patents it has rights to, but instead enforces the patent rights against accused infringers in an attempt to collect licensing fees.<sup>3</sup> First, MercExchange, L.L.C., a notorious patent infringement PAE whose seminal action continued through full trial, a Federal Circuit appeal, and a decision by the United States Supreme Court in *eBay Inc. v. MercExchange, L.L.C.*<sup>4</sup> Second, Capital Security Systems, Inc., a lesser-known PAE who has filed various patent infringement actions regarding electronic check processing technologies against the largest banks in the world with such actions generally ending in litigation settlements. These two PAEs were selected for case study in part because they both had a vast amount of records for independent review in building their history and because of the contrast between their respective litigation processes—MercExchange’s litigation against a limited number of defendants through trial and multiple appeals versus Capital Security Systems’ many lawsuits which generally result in quick settlement. The case studies extract the factual history of the inventor, invention, and entity creation that resulted in the patent assertions. Once those facts are drawn, analysis is made

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1. To walk a middle line regarding terminology, this Article uses the descriptive term “Patent Assertion Entities” (or “PAEs”), as the focus concerns business entities that assert patents. The definition of PAE is different than the original definition advanced by Colleen Chien. See Colleen V. Chien, *From Arms Race to Marketplace: The Complex Patent Ecosystem and Its Implications for the Patent System*, 62 HASTINGS L.J. 297, 300 (2010) (“The most visible buyers of patents have been ‘patent-assertion entities,’ which I define as entities that use patents primarily to get licensing fees rather than to support the development or transfer of technology.”).

2. See *infra* Part I.

3. MercExchange is deemed “instructive” of a PAE, as it was described as having patent troll qualities by academics during briefing before the U.S. Supreme Court. Capital Security Systems, Inc. (CSS) is deemed “instructive” of a PAE as it is a company that does not sell any products and, among other things, is partnered for patent licensing with IPNav. For further discussion, see *infra* Part II.B.

4. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006).

to compare the researched PAE story with the “troll” issues and broad empirical data that has previously been put forth. Results are scrutinized to determine if this initial focused case study research supports a PAE story that is more “patent troll” or historically great American “Horatio Alger Inventor.”<sup>5</sup>

This Article is divided into four parts. Part I reviews the current debate regarding PAEs, including current “troll” discussions, empirical research, and recently proposed patent law changes. Part II explains why case studies are vital in developing a more complete picture of the role PAEs play in the overall economy. Part III presents two instructive PAE case studies—MercExchange and Capital Security Systems—and explores in detail the factual background behind the patented inventions, the inventors themselves, the PAEs who enforced the patents against the respective industry leaders, and the current state of the invention, inventor, and entity. Part IV attempts to separate fact from fiction, analyzing how well the actual PAE data comports with the currently popular PAE theories advanced by proponents and opponents alike. The Article concludes that, while additional case studies are needed, those presented herein depict PAEs as honest laborers working hard to build a bridge to innovation, more so than trolls sulking beneath the bridge impending innovation and harming the economy.

#### I. REVIEW OF THE CURRENT PAE DEBATE

The debate around PAEs is most certainly the preeminent discussion in intellectual property law today. *The New York Times* and other newspapers have run innumerable articles on the actors,<sup>6</sup> National Public Radio has

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5. The descriptive term “Horatio Alger Inventor”—defined through a list of characteristics in Part I.D.—is based on the great American vision held by protagonist characters in novels written by 19th-century author Horatio Alger, Jr. The Alger subjects are most often characterized by rags-to-riches narratives, similar to Chris Cotropia’s “individual inventor motif” of a garage inventor wanting nothing more than to monetize his “Flash of Genius” invention. See Christopher A. Cotropia, *The Individual Inventor Motif in the Age of the Patent Troll*, 12 YALE J.L. & TECH. 52, 54 (2009) (“The garage inventor is as American as apple pie. We enjoy stories of independent inventors, working against all odds to provide society with amazing technological breakthroughs. The stories are so entertaining that popular movies are made about such individuals—such as *Flash of Genius*, telling the story of Robert Kerns, the inventor of the intermittent windshield wiper system.”). See also Steven L. Winter, *The Cognitive Dimension of the Agon Between Legal Power and Narrative Meaning*, 87 MICH. L. REV. 2225, 2268 (1989) (“[Legal] narrative is truncated, simple and highly formalized. We can see this same phenomenon in the case of an American cultural narrative like the ‘Horatio Alger story.’ Once an extensive *oeuvre* of over forty very specific novels and short stories written by the nineteenth-century author Horatio Alger, the concept of an ‘Horatio Alger story’ has become a schematized ‘rags to riches’ folk model that is a cultural template with which to measure a wide variety of social data from conversational stories to legal concepts . . .”).

6. See, e.g., Edward Wyatt, *House Bill Raises Bar for Suits Over Patents*, N.Y. TIMES, Dec. 6, 2013, at B4; Brad Feld, *A Bipartisan Plan to Clean Up the Patent Mess*, WALL ST. J. (Nov. 14,

featured multiple stories on the debate,<sup>7</sup> and companies, legal scholars, and economists around the world have written countless “troll” discussion pieces, and commissioned just as many empirical studies, on the issues involved.<sup>8</sup> Regarding changes within government, the debate appears to be at a climax: the new Chairwoman of the Federal Trade Commission has made PAEs her top priority;<sup>9</sup> President Obama has repeatedly urged Congress to enact new legislation,<sup>10</sup> even mentioning patent reform during his 2014 State of the Union Address;<sup>11</sup> and on December 5, 2013, the House of Representatives passed the Innovation Act by a vote of 325 to 91 to “take[ ] meaningful steps to address the abusive practices that have damaged our patent system and resulted in significant economic harm to our nation.”<sup>12</sup> Even state attorneys general have begun using state consumer protection laws to attack PAEs.<sup>13</sup> Beyond

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2013, 6:56 PM), <http://online.wsj.com/news/articles/SB10001424052702303763804579184444020604378>.

7. *When Patents Attack*, NPR (July 22, 2011, 8:04 PM), <http://www.npr.org/blogs/money/2011/07/26/138576167/when-patents-attack>; *When Patents Attack...Part Two!*, NPR (June 4, 2013, 10:00 AM), <http://www.npr.org/blogs/money/2013/06/07/188370495/when-patents-attack-part-two>.

8. *See infra* Part I.A.1.

9. Edith Ramirez, Chairwoman, Fed. Trade Comm’n, Address at the Computer and Communications Industry Association and American Antitrust Institute Program: Competition Law & Patent Assertion Entities: What Antitrust Enforcers Can Do 12 (June 20, 2013) (transcript available at [http://www.ftc.gov/sites/default/files/documents/public\\_statements/competition-law-patent-assertion-entities-what-antitrust-enforcers-can-do/130620paespeech.pdf](http://www.ftc.gov/sites/default/files/documents/public_statements/competition-law-patent-assertion-entities-what-antitrust-enforcers-can-do/130620paespeech.pdf)) (“The Commission can contribute to a broad policy response to PAEs by using its Section 6(b) authority to collect more comprehensive information on the variety of PAE business models and the scope of their activities. Antitrust and consumer protection enforcement, where warranted, can also have important roles to play in reducing the harm associated with certain PAE conduct. But patent reform and efforts by both the PTO and the courts, are critical to any effort to move the consumer welfare dial on PAEs from cost to benefit.”).

10. Edward Wyatt, *Obama Orders Regulators to Root Out ‘Patent Trolls,’* N.Y. TIMES, June 5, 2013, at B1 (noting that President Obama announced several executive orders “to protect innovators from frivolous litigation” by patent trolls); Gene Sperling, *Taking on Patent Trolls to Protect American Innovation*, WHITE HOUSE BLOG (June 4, 2013, 1:55 PM), <http://www.whitehouse.gov/blog/2013/06/04/taking-patent-trolls-protect-american-innovation> (President Obama stated that patent trolls “don’t actually produce anything themselves. They’re just trying to essentially leverage and hijack somebody else’s idea and see if they can extort some money out of them.”).

11. Diane Bartz, *Obama Urges Congress to Pass Anti-Patent Troll Bill*, REUTERS (Jan. 28, 2014, 9:49 PM), <http://www.reuters.com/article/2014/01/29/us-usa-obama-patent-idUSBREA0S07V20140129>.

12. Diane Bartz, *House Passes Tech Backed Bill to Rein in ‘Patent Trolls,’* REUTERS (Dec. 5, 2013, 3:42 PM), <http://www.reuters.com/article/2013/12/05/us-patents-congress-idUSBRE9B40Y820131205> (quoting Congressman Robert Goodlatte).

13. Pamela M. Prah, *State AGs Target Patent Trolls to Protect Business*, USA TODAY (Nov. 25, 2013, 9:29 AM), <http://www.usatoday.com/story/news/nation/2013/11/25/state-ag-patent->

discussion points and studies, however, there is no denying current PAE litigation has an impact on the economy and invention generally.<sup>14</sup>

For the purposes of this Article, and its case study analysis focus, this Part will survey the PAE literature available to extract discussion themes that are useful for comparison to the factual case studies later presented.<sup>15</sup> The current PAE discussion will be broken into three sections: the “troll” debate, empirical points, and focused changes in patent laws regarding PAEs. Each of the sections will focus on discussion regarding the inventions and entities within a PAE classification, as opposed to a broad multi-party problem that could not be addressed within an individual-entity case study. This review and accompanying discussion is not intended to be comprehensive. Like the limited case study focus, it is merely representative of an initial building block upon which further research can be tailored.

#### A. *The Two Sides of the “Troll” Debate*

##### 1. One Side of the “Troll” Debate: PAEs Are a Plague on the Patent System

Perhaps the best place to begin a review of the “troll” discussion is with the now commonplace term “patent troll.”<sup>16</sup> In early deliberations regarding

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trolls/3696889/ (“A handful of attorneys general this year began using state consumer laws to combat trolling, a strategy pioneered by Vermont Attorney General William Sorrell . . .”).

14. Ronald Bailey, *Patent Trolls or Tech Fairy Godmothers?*, REASON.COM (Jan. 24, 2012), <http://reason.com/archives/2012/01/24/patent-trolls-or-tech-fairy-godmothers>. See also James Bessen et al., *The Private and Social Cost of Patent Trolls*, REGULATION, Winter 2011–12, at 26, 26 (“We find that NPE lawsuits are associated with half a trillion dollars of lost wealth to defendants from 1990 through 2010. During the last four years, the lost wealth has averaged over \$80 billion per year. These defendants are mostly technology companies that invest heavily in R&D. . . . That is, these lawsuits substantially reduce their incentives to innovate.”); Robin Feldman & Thomas Ewing, *The Giants Among Us*, STAN. TECH. L. REV., Jan. 9, 2012, at 1, 5 n.22, available at <https://journals.law.stanford.edu/sites/default/files/stanford-technology-law-review-stlr/online/feldman-giants-among-us.pdf> (“The size of Intellectual Ventures’ portfolio can also be estimated based upon how much the company has spent acquiring this portfolio and how much they have spent per patent. . . . Intellectual Ventures had spent \$1.163 billion acquiring patents by May, 2009. In a study of Ocean Tomo patent auctions, we concluded that Intellectual Ventures had spent a little more than \$61 million acquiring 410 US patents . . . at an average cost of \$148,966 per US patent obtained.”).

15. See *infra* Part IV.

16. Of interesting note is that the term “patent troll” was first coined in 2001 by Peter Detkin, former in-house counsel for Intel Corporation, while describing a set of small companies suing Intel for patent infringement. Brenda Sandburg, *You May Not Have a Choice. Trolling for Dollars*, THE RECORDER (July 30, 2001), <http://www.phonetel.com/pdfs/LWTrolls.pdf>. See also Steve Seidenberg, *Troll Control*, A.B.A. J., Sept. 2006, at 50, 53. Mr. Detkin’s current position is founder and vice-chairman of the patent aggregator Intellectual Ventures. See *Leadership*,

the term's definitions, potential descriptors have used it to refer to: "somebody who tries to make a lot of money off a patent that they are not practicing and have no intention of practicing and in most cases never practiced";<sup>17</sup> "an entity that owns a single patent or a small group of patents and essentially is looking for nuisance-value settlements";<sup>18</sup> "[a]nybody who tries to enforce a patent in an area where they are not actively competing with a product or process";<sup>19</sup> or "anyone who threatens litigation on dubious patents."<sup>20</sup> Through further debate and research, the scholarship has grown to understand that there are different types of PAEs in the marketplace.<sup>21</sup> However, all descriptors do seem to come with a negative undertone.

In summarizing the "troll" debates, broad themes do seem to emerge—PAEs force commercializing companies to pay for patent infringement damages or to purchase a patent license without adding any value to society themselves.<sup>22</sup> Robert Merges has stated that the "true distinction . . . concerns the difference between patentees who make real contributions to innovation and those who do not."<sup>23</sup> In a brief Merges et al. prepared for the U.S. Supreme Court in the case of *eBay Inc. v. MercExchange, L.L.C.*—the case study discussed *infra*—Merges et al. advocated on behalf of amicus curiae Yahoo!

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INTELL. VENTURES, <http://www.intellectualventures.com/about/leadership> (last visited Oct. 9, 2014).

17. Sandburg, *supra* note 16 ("Detkin spends much of his time these days fighting off claims of patent infringement by companies that have never made a semiconductor device. In 1999 alone, the claims topped \$15 billion, Detkin said, and he hurls the epithet 'patent trolls' at the companies that want Intel to pay up. He even keeps a couple of troll dolls on his desk in the gray warren of buildings at Intel's Santa Clara headquarters just as a reminder of his company's legal enemies.").

18. Seidenberg, *supra* note 16.

19. *Id.*

20. *Id.*

21. John R. Allison et al., *Extreme Value or Trolls on Top? The Characteristics of the Most-Litigated Patents*, 158 U. PA. L. REV. 1, 10 tbl.1 (2009) (listing a dozen entity status categories including the following: Entity Class 1 (acquired patents); Entity Class 2 (university heritage or tie); Entity Class 3 (failed startup); Entity Class 4 (corporate heritage); Entity Class 5 (individual-inventor-started company); Entity Class 6 (university/government/NGO); Entity Class 7 (startup, pre-product); Entity Class 8 (product company); Entity Class 9 (individual); Entity Class 10 (undetermined); Entity Class 11 (industry consortium); and Entity Class 12 (IP subsidiary of product company)).

22. James E. Bessen & Michael J. Meurer, *The Direct Costs from NPE Disputes*, 99 CORNELL L. REV. 387, 421 (2014) ("Large numbers of expensive lawsuits by NPEs impose substantial costs on society regardless of whether the patents involved are valid or not.").

23. Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583, 1587, 1599–1600 (2009) ("Many patent assertion companies do not perform research and development as those terms are commonly understood. They do not participate in the growth of knowledge and technology. True trolls do not really innovate at all. . . . And this stark fact explains succinctly why the market for true troll activity is not worth defending. It is a market for a product that has no social value at all.").



Inc. that “entities that have engaged in strategic ‘troll-like’ behavior should not be entitled to injunctions.”<sup>24</sup> Specifically, problems with PAEs were summarized as:

- “[PAEs] do not innovate, but rather seek to acquire broad and nebulous patent claims that arguably encompass existing technologies . . . .”<sup>25</sup>
- “[PAEs] in the computer and Internet industry . . . . [result in] a ‘patent thicket’: ‘a dense web of overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology.’”<sup>26</sup>
- “[PAEs] manipulate [Patent Office] processes to delay patent issuance and thereby set a ‘trap’ for claimed infringement . . . . [or] delay invoking the patent, knowing that the value of the infringing use to the infringer will increase during the delay.”<sup>27</sup>

In a more recent article discussing PAE growth, increasing costs of patent litigation, and seemingly excessive damages awards, Mark Lemley and Doug Melamed summarize three distinct business models for PAEs: (1) “a company that owns a patent and hopes to strike it big in court”; (2) those “interested in quick, low-value settlements for a variety of patents”; and (3) those “engaged in the business of patent aggregation[,] . . . . collect[ing] many patents—sometimes tens of thousands[—to] demand royalties to license the portfolio

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24. *Brief of Amicus Curiae Yahoo! Inc. in Support of Petitioner, eBay Inc. v. MercExchange L.L.C.*, 21 BERKELEY TECH. L.J. 997, 1003 (2006). The argument against MercExchange receiving an injunction was differentiated from “legitimate companies” as follows: “the Federal Circuit has carefully interpreted Section 284, which authorizes damages, to ensure that patent holders receive relief that is proportionate to the contribution of their invention to the overall economic value of the end product. . . . At the same time, the courts should continue to award injunctions to legitimate companies producing socially valuable products to continue to encourage innovation consistent with the underlying principles of patent law.” *Id.* at 1014–15.

25. *Id.* at 1004–05 (“The enormous complexity of the computer and Internet sector has, however, given rise to a ‘new breed of entrepreneurs’ known as ‘patent trolls.’ These entities do not innovate, but rather seek to acquire broad and nebulous patent claims that arguably encompass existing technologies relied on by companies with deep pockets. By acquiring these claims and threatening or pursuing litigation, the patent trolls seek and often receive economic settlements from genuine innovators and producers that greatly exceed the true economic value of the patents in question.”).

26. *Id.* at 1005 (quoting Carl Shapiro, *Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting*, in *INNOVATION POLICY AND THE ECONOMY* 119, 120–21 (Adam Jaffe et al. eds., 2001)). The authors continue: “To compound the problem, no computer or Internet company can be confident that its product will not ultimately be found by a court to infringe existing patents, even if it engages in an extensive patent search that may substantially delay release of a product and cost millions of dollars.” *Id.* at 1107.

27. *Id.* at 1002.

and threaten to sue those that do not pay.”<sup>28</sup> Lemley and Melamed agree with others that “there is little evidence that [PAEs] significantly increase rewards to inventors”<sup>29</sup> and find support for similar theories as those advanced by Merges et al.:

- PAEs result in “‘royalty stacking’—the cumulative burden of the royalty obligations resulting from the large number of patents on technologies used in IT products.”<sup>30</sup>
- PAEs “aggregate too many patents.”<sup>31</sup>
- Litigating against PAEs “is more costly than dealing with practicing entities . . . . [PAEs] are more willing to prolong and broaden patent litigation.”<sup>32</sup>
- PAEs are more inclined “to defer licensing discussions until technology users have developed and invested in products that include the patented technologies and are thus less able to switch to alternatives.”<sup>33</sup>

While Lemley and Melamed conclude that patent assertions by practicing entities create problems just as costly as those created by PAEs, the recent review of problems commonly associated with PAEs provides a partial necessary starting point for the analysis here.

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28. Mark A. Lemley & A. Douglas Melamed, *Missing the Forest for the Trolls*, 113 COLUM. L. REV. 2117, 2126–27 (2013). It is important to note that this Article concludes that many of the complaints regarding PAEs as the source of problems with the patent system have little substance.

29. *Id.* at 2125, 2129 (“[T]rolls engage more frequently than practicing entities in conduct that increases the costs of technology users while providing little if any countervailing benefit.”). For a counter argument to Lemley and Melamed’s conclusions and a discussion of the benefits patent mass aggregators may provide, see David L. Schwartz, *On Mass Patent Aggregators*, 114 COLUM. L. REV. SIDEBAR 51 (2014), available at [http://www.columbialawreview.org/On-mass-patent-aggregators\\_Schwartz](http://www.columbialawreview.org/On-mass-patent-aggregators_Schwartz).

30. Lemley & Melamed, *supra* note 28, at 2148.

31. *Id.* at 2153. While Lemley and Melamed do support a conclusion that PAEs aggregate too many patents, to the extent that PAEs aggregate large numbers of patents, they conclude that the aggregation likely reduces the costs to technology users. *Id.* at 2167 (“The advent of trolls has probably led to the monetization of patents that would otherwise have been ignored, but it is not clear that that is a bad thing as a matter of public policy or that the broadening of the secondary market for patents that trolls have stimulated will remain unique to trolls in the future.”).

32. *Id.* at 2161–62. Regarding litigation, Lemley and Melamed also conclude that litigation is generally much less costly for PAEs than practicing entities “because [PAEs] have less complex business operations—and thus fewer witnesses and far fewer documents—to produce in discovery.” *Id.* at 2162. *But see id.* at 2176 (“[H]igh costs and uncertainty of litigation encourages bottom-feeder suits aimed at [quick] settlement rather than at winning.”).

33. *Id.* at 2165.

## 2. The Other Side of the “Troll” Debate: PAEs Can Be a Positive Part of the Patent System

While the overwhelming amount of PAE literature is negative, a few commentators have noted positive attributes. In his recent book *The Falcon’s Gyre: Legal Foundations of Economic Innovation and Growth*, professor of law and economics, Robert Cooter, explains:

Innovating, marketing, and enforcing are different specialties . . . . By prosecuting infringers who use an invention to produce consumer goods, [PAEs] transfer resources from consuming to innovating, which speeds progress in the useful arts. To increase progress in the useful arts, law should facilitate sales of patent rights to [PAEs] for innovations used in consumption or production.<sup>34</sup>

In short, Cooter finds the specialty that PAEs provide in transferring resources from consuming/consumers to innovating/inventors a necessary value in the patent system—different people and firms have comparative advantage in different activities.<sup>35</sup>

Following on Cooter’s analysis, Michael Risch argues that PAEs may play a key middleman role in the patent system by purchasing patents from non-employed, non-practicing individual inventors and supporting the “ethos” of the individual inventor.<sup>36</sup> This “ethos” has been described by Christopher Cotropia “as American as apple pie.”<sup>37</sup> Risch goes on to argue that PAEs accumulating patents into portfolios treated like securities would (1) subject them to new regulatory framework to improve market integrity, and (2) “encourage the formation of transparent market clearinghouses and development of methods for determining pricing.”<sup>38</sup>

While discussing the intent of the 1952 Patent Act and historically reviewing patent entities, Scott Kieff, former professor and current commissioner of the International Trade Commission, raises another useful point applicable to current PAEs: patents, and the ability to own and assert

34. ROBERT COOTER WITH AARON EDLIN, *THE FALCON’S GYRE: LEGAL FOUNDATIONS OF ECONOMIC INNOVATION AND GROWTH* 6.23–6.24 (1.4 ed. 2014).

35. *Id.* See also Timothy Holbrook, *Not All Patent Trolls Are Demons*, CNN.COM (Feb. 21, 2014, 9:08 AM), <http://www.cnn.com/2014/02/21/opinion/holbrook-patent-trolls-demons> (“What is lost in this mudslinging is that much of what PAEs do is laudable—paying inventors. Patents don’t grow on trees. Someone came up with the invention and incurred considerable expense to obtain the patent. Many inventors can’t bring their invention to market themselves, however, so selling the patent may be the only way for them to make money. By buying these patents, PAEs compensate inventors, one of patent law’s objectives.”).

36. Michael Risch, *Patent Portfolios as Securities*, 63 DUKE L.J. 89, 98 (2013). See also Schwartz, *supra* note 29, at 61–63 (discussing the role of patent aggregators in returning profits to individual inventors).

37. Cotropia, *supra* note 5.

38. Risch, *supra* note 36, at 95–96.

patents as property rights regardless of the status of the owner, “provide an incentive to invest risk capital for commercialization[,] . . . considered to be ‘usually the most expensive part of the long haul from the mental conception of the invention to the delivery of something useful into the hands of the consumer.’”<sup>39</sup> Taking that notion a step further, some commentators have argued that the business of PAEs, separate from individual inventors, is already spawning innovation through small and large companies alike by way of promoting invention through licensing dollars.<sup>40</sup> The sum of these ideas is that individual inventors are being encouraged to invent through economic return from patent licensing allowed by PAEs.

### B. *The Two Sides of the Empirical Debate*

#### 1. One Side of the Empirical Debate: PAEs are a Problem for the Patent System

Many recent empirical studies have reviewed PAE impact broadly. Perhaps most controversial is the James Bessen and Michael Meurer study entitled *The Direct Costs from NPE Disputes*.<sup>41</sup> That study found PAEs cost society \$29 billion annually.<sup>42</sup> A comprehensive discussion of this study has

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39. F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697, 743 (2001) (citing Giles S. Rich, *Patents Are Bait* 11 (1945) (unpublished manuscript on file with Scott Kieff)). Rich was the co-author of the 1952 Patent Act. *See also* Eriq Gardner, *The Best Intentions*, IP LAW & BUS., March 2006 (“Venture capitalists won’t even fund new businesses without an assurance they can keep competitors out of the marketplace.”).

40. Bryan P. Lord, *Evolution of the Technology Firm: IP Rights and the Business of Licensing*, in FROM ASSETS TO PROFITS: COMPETING FOR IP VALUE AND RETURN 19, 33–36 (Bruce Berman ed., 2009) (discussing the growth of technology through an IP licensing model). *See also* 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, 190, 209–11 (2006) (“Patent trolls actually benefit society. These trolls act as a market intermediary in the patent market. Patent trolls provide liquidity, market clearing, and increased efficiency to the patent markets . . .”). Indeed, often times practicing entities also choose to monetize patents they do not practice, behavior very similar to entities in a licensing-only business.

41. Bessen & Meurer, *supra* note 22, at 388–89 (2014) (“The costs disclosed by this [study] are significant and should play a prominent role in policy debates about the treatment of NPE patent lawsuits.”). *See also* David L. Schwartz & Jay P. Kesan, *Analyzing the Role of Non-Practicing Entities in the Patent System*, 99 CORNELL L. REV. 425, 455 (2014) (“With respect to the debate about NPEs, we believe that focusing on costs and transfers from NPEs are somewhat beside the point. The bigger picture, and the better question, is whether the lawsuits are being brought because the defendants are infringers of a valid patent or whether the defendants are merely easy targets for a nuisance lawsuit.”).

42. Bessen & Meurer, *supra* note 22, at 389. A previous study found that PAEs have cost a total of \$500 billion over the past twenty years. *See* Bessen et al., *supra* note 14.

continued—with published response<sup>43</sup>—and does not need to be replicated here; however, of key interest to this Article is the finding that:

[A]bout 70% of the payments that defendants make go to the legal costs of both parties or to operating costs of the [PAEs]. . . . [M]ost of the money that defendants pay does not represent a transfer to inventors; instead, it is largely consumed by legal and operating costs.<sup>44</sup>

Regarding a distinguishing of certain valuable PAEs in the study, Bessen and Meurer conclude that certain PAEs that “administer patent pools” or “facilitate technology transfer [or] outsourcing of R&D” are likely desirable, but “standard economic-welfare analysis implies that patent litigation even over valid patents can be socially harmful.”<sup>45</sup>

Other studies directly addressing the targets of PAEs have concluded that PAEs disproportionately focus lawsuits on startups and small companies. Colleen Chien’s 2014 study *Startups and Patent Trolls* found that “small companies are *vulnerable* targets” for three fundamental reasons: they are more likely to pay nuisance settlements regardless of the merits of a lawsuit; they are regular users of technology; and they increase the returns to PAEs through lawsuit settlement-validation of PAE patents, regardless of their validity.<sup>46</sup> In a 2013 New America Foundation study, Chien further concluded that PAEs have a large impact on startup companies and that, according to survey respondents, any “benefits do not appear to offset the harms.”<sup>47</sup>

Finally, in a 2011 study by John Allison et al. descriptively titled *Patent Quality and Settlement Among Repeat Patent Litigants*, the authors reviewed patent litigation results of the 343 most-litigated patents.<sup>48</sup> The results of the study included that “the most-litigated patents that go to judgment are far more likely to be held invalid or not infringed[;] . . . [o]nce-litigated patents win in court almost 50% of the time, while the most-litigated—and putatively most

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43. Schwartz & Kesan, *supra* note 41, at 428.

44. Bessen & Meurer, *supra* note 22, at 417. These conclusions have been questioned through further analysis of the research data set. Among other things, the Bessen and Meurer licensing revenue data was from only ten publicly traded companies. See Schwartz & Kesan, *supra* note 41, at 433.

45. Bessen & Meurer, *supra* note 22, at 420–21.

46. Colleen V. Chien, *Startups and Patent Trolls*, 17 STAN. TECH. L. REV. 461, 485–86 (2014), available at <https://journals.law.stanford.edu/sites/default/files/stanford-technology-law-review/online/startupsandpatenttrols.pdf>.

47. Colleen V. Chien, *Patent Assertion and Startup Innovation*, NEW AM. FOUND. 1, 4 (Sep. 2013), [http://newamerica.net/sites/newamerica.net/files/policydocs/PatentAssertionandStartupInnovation\\_updated.pdf](http://newamerica.net/sites/newamerica.net/files/policydocs/PatentAssertionandStartupInnovation_updated.pdf).

48. John R. Allison et al., *Patent Quality and Settlement Among Repeat Patent Litigants*, 99 GEO. L.J. 677, 683 (2011).

valuable—patents win in court only 10.7% of the time.”<sup>49</sup> Allison et al. offer preliminary thoughts regarding explanations for the results:

- “[D]efendants rather than plaintiffs are driving the decision to take a weak patent to judgment by simply refusing to settle.”<sup>50</sup>
- “[T]he enforcement of a patent against multiple infringers is an indication of widespread simultaneous invention and, hence, of obviousness.”<sup>51</sup>
- “[T]he economics of patent litigation make it profitable to enforce . . . patents that are overwhelmingly likely to lose in court.”<sup>52</sup>

The authors admit that “[n]one of these explanations [are] entirely satisfactory,” but they conclude that “as a society, we are spending a disproportionate amount of time and money dealing with a class of weak patents.”<sup>53</sup>

## 2. The Other Side of the Empirical Debate: PAEs Can Be Good for the Patent System

In addition to theoretical pieces regarding PAEs, Michael Risch has further conducted empirical studies of PAEs in comparison to other types of patent litigants. In a 2012 study regarding the top ten most litigious PAEs entitled *Patent Troll Myths*, Risch concludes that a PAE bringing a lawsuit was very

49. *Id.* at 680 (“[C]ases involving the most-litigated patents are indeed more likely to settle than ordinary-litigated patents with a high degree of significance. But to our great surprise, we find that the willingness of these patentees to litigate their cases to judgment is a mistake. . . . [T]he most-litigated patents that go to judgment are far more likely to be held invalid or not infringed.”).

50. *Id.* at 681 (“We first investigate whether the outcome data are the result of clustering—a few cases in multidistrict litigation that invalidate or hold not infringed multiple patents at once. We find some evidence of clustering but not enough to explain the full differences in the outcomes. One possible explanation is that defendants rather than plaintiffs are driving the decision to take a weak patent to judgment by simply refusing to settle.”).

51. *Id.* at 679, 681 (“If you are a patent owner who faces multiple infringers, the deck is stacked against you. . . . One possible option is to sue all the defendants at once. Doing so makes the resulting case more complex, but it insulates the patentee from the risk of having to litigate validity again and again.”).

52. *Id.* (“Alternatively, patentees that are involved (or expect to be involved) in multiple lawsuits might reasonably be more likely to settle cases rather than risk taking them to judgment because an adverse judgment wipes out all the other lawsuits as well.”).

53. Allison et al., *supra* note 48, at 681. The authors go on to state:

Nonpracticing entities and software patentees almost never win their cases. That may be a good thing, if you believe that most software patents are bad or that NPEs are bad for society. But it certainly means that the patent system is wasting more of its time than expected dealing with weak patents. And it also suggests that both our measures of patent value and our theories of litigation behavior need some serious reconsideration.

*Id.* at 712.

likely to be the same entity that filed the patent application initially.<sup>54</sup> Risch further opines that individuals face a “significant disadvantage in high-stakes patent litigation unless they allow [PAEs] to enforce their patents.”<sup>55</sup> In his study, Risch determined the following six common assertions regarding PAEs were “myths”:

- Litigious PAEs are a recent phenomenon.
- PAE patents are business method patents.<sup>56</sup>
- PAE patents and infringement claims are low quality.
- PAE patents come from nonproductive endeavors.
- PAEs obtain their patents from fire sales.<sup>57</sup>
- PAEs wait for the industry to develop to file suit.<sup>58</sup>

Risch states that “believers in individual inventing will favor [PAEs] because they provide a remedy to such inventors.”<sup>59</sup>

Other authors have come to conclusions comparable to Risch’s when conducting similar empirical studies regarding patenting and litigation behavior of non-practicing PAEs.<sup>60</sup> Those conclusions include the following: PAEs “own patents that are of significantly higher value or importance than other litigated patents”; PAE patents “rank higher than the litigated patents that share the same technological class in every value measure employed”; and “the

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54. Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 458, 470–72, 498–99 (2012) (“[The research reviews] [t]he top ten NPE . . . involved in 971 unique litigations. These litigations involved 347 patents. In turn, the 347 patents resulted from 208 initial patent applications, many of which spawned multiple patents.”).

55. *Id.* at 494, 498 (“A . . . justification of NPEs is that they provide better opportunities for individual inventors to enforce their patents. There are two reasons NPEs might do so. First, they may provide cost, money, and other resources to continue litigation in cases when contingent-fee lawyers may not provide such resources. Second, they may provide better credibility for settlement purposes. Each of these reasons explains why NPEs might serve the needs of individuals in ways unnecessary for small companies.”).

56. Business method patents generally relate to a method of doing business regarding automated businesses and e-commerce.

57. A fire sale is a sale of goods at extremely discounted below-market prices.

58. Risch, *supra* note 54, at 497–99. Risch goes on to conclude that PAEs may be the best option for smaller inventors: “Individuals may face a significant disadvantage in high-stakes patent litigation unless they allow NPEs to enforce their patents. This means that NPE litigation may be the best way for garage inventors to capitalize on their patents if infringers refuse to license.” *Id.* at 498.

59. *Id.* at 499 (“[O]ne’s beliefs about individual inventors should inform one’s beliefs about NPEs. Strong believers in individual inventing will favor NPEs because they provide a remedy to such inventors. On the other hand, those who believe individual inventors contribute little to innovation and growth will not favor NPEs.”).

60. Sannu K. Shrestha, *Trolls or Market-Makers? An Empirical Analysis of Nonpracticing Entities*, 110 COLUM. L. REV. 114, 117–18 (2010).

success rate of [PAEs] in patent infringement litigation is quite similar to that of other litigants.”<sup>61</sup>

Beyond current empirical research, some authors have studied historical cases regarding inventors and patent litigants. In his 1995 article discussing the history of medical-procedure patenting, Dr. William Noonan reviewed the history of Charles Goodyear, the 1839 inventor of vulcanized rubber, who filed multiple lawsuits against individual end-user dentists in furtherance of monetizing his invention through licensing.<sup>62</sup> In similar fashion—discussed by Adam Mossoff in a recent article regarding the sewing machine wars of the 1850s—Elias Howe, the inventor of the lockstitch, made royalty demands through suing patent-infringing retailers and manufacturers, even threatening liability for all purchasers of unlicensed sewing machines.<sup>63</sup> Finally, in her 2005 book, *The Democratization of Invention: Patents and Copyrights in American Economic Development, 1790–1920*, the economist Zorina Khan explains that “[e]xtensive markets in patent rights allowed inventors to extract returns from their activities through licensing and assigning or selling their rights.”<sup>64</sup> In short, these researchers have concluded that a patent licensing business model is not a new phenomenon and that licensing has provided a profound incentive to initial innovation.<sup>65</sup>

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61. *Id.* at 118.

62. William D. Noonan, *Patenting Medical and Surgical Procedures*, 77 J. PAT. & TRADEMARK OFF. SOC’Y 651, 652 (1995).

63. Adam Mossoff, *The Rise and Fall of the First American Patent Thicket: The Sewing Machine War of the 1850s*, 53 ARIZ. L. REV. 165, 184–85 (2011). Howe’s newspaper ad read: “You that want sewing machines, be cautious how you purchase them of others than [Howe] or those licensed under [Howe], else the law will compel you to pay twice over.” *Id.* at 185 (quoting RUTH BRANDON, *A CAPITALIST ROMANCE* 90 (1977)). *See also* Christopher Beauchamp, Professor of Brooklyn Law School, Panel Discussion at the George Mason University School of Law Teleforum Panel: End-User Lawsuits in Patent Litigation: A Bug or a Feature of Patent Law (Aug. 29, 2013) (recording available at <http://cpip.gmu.edu/events/teleforum-panel-end-user-lawsuits-in-patent-litigation-a-bug-or-a-feature-of-patent-law/>). During the discussion, legal historian Professor Christopher Beauchamp discussed his research regarding over a thousand patent infringement lawsuits filed in the Southern District of New York alone in 1883 against farmers for infringing a single patent on well drilling technology. *See id.* These end-user lawsuits were brought by a company that Professor Beauchamp recognizes as falling within the definition today of a PAE—a firm engaged solely in patent licensing. *See id.*

64. B. ZORINA KHAN, *THE DEMOCRATIZATION OF INVENTION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790–1920*, at 10 (2005).

65. Patent litigation causing national upset might not be a new phenomenon either. The Goodyear Vulcanite litigations were terminated in 1879 when Goodyear’s patent infringement manager, and company treasurer, was shot dead in San Francisco “by a particularly irate dentist who objected to the use of the Vulcanite patents to interfere with his dental practice.” Noonan, *supra* note 62, at 653.



### C. Proposed Changes in Patent Law Regarding PAEs

In 2013, multiple members of Congress proposed sweeping amendments to current patent laws in an effort to combat perceived problems with PAEs. Proposals included Senator John Cornyn's Patent Abuse Reduction Act, Senator Orrin Hatch's Patent Litigation Integrity Act, Representatives Peter DeFazio and Jason Chaffetz's SHIELD Act, and Representative Robert Goodlatte's Innovation Act.<sup>66</sup> After a single hearing, on December 5, 2013, the U.S. House of Representatives passed the Innovation Act in what was described as an effort to combat "abusive practices that have damaged [the] patent system."<sup>67</sup> The "abusive practices" referenced are—in the words of the bill's author, Rep. Goodlatte—"patent trolls . . . fil[ing] numerous patent infringement lawsuits against American businesses with the hopes of securing a quick payday."<sup>68</sup> The Innovation Act would make a number of changes to current patent law, including increasing allowances for defendants to stay cases, increasing disclosure requirements for all patent owners and investors with financial interests in the litigation, and forcing patent infringement case management rules on district court judges regarding pleadings, discovery timing, and cost-shifting.<sup>69</sup>

In response to Rep. Goodlatte's bill, Sen. Patrick Leahy, chairman of the Senate Judiciary Committee, introduced a companion bill in the U.S. Senate entitled the Patent Transparency and Improvements Act.<sup>70</sup> Although Sen. Leahy's bill is regarded as a "less ambitious" version of the House's Innovation Act, it comparably includes many of the same litigation procedural changes as the Innovation Act.<sup>71</sup> The White House has already expressed future approval for the passage of the House patent reform bill, with President Obama even voicing support during his 2014 State of the Union address—

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66. *Current Legislative Proposals for Patent Reform*, ELEC. FRONTIER FOUND., <https://www.eff.org/issues/current-legislative-proposals-patent-reform> (last updated Dec. 9, 2013).

67. Bartz, *supra* note 12 (quoting Congressman Robert Goodlatte); Andrew Williams, *House Judiciary Committee Holds Hearing on Innovation Act*, PATENT DOCS (Oct. 29, 2013), <http://www.patentdocs.org/2013/10/house-judiciary-committee-holds-hearing-on-innovation-act.html>.

68. Bartz, *supra* note 12.

69. Jessica M. Karmasek, *Obama Pushes for Patent Reform Bill During State of the Union*, LEGAL NEWSLINE (Jan. 29, 2014, 10:30 AM), <http://legalnewsline.com/news/federal-government/246846-obama-pushes-for-patent-reform-bill-during-state-of-the-union>.

70. Tom Risen, *Bipartisan Innovation Act Clears House*, U.S. NEWS & WORLD REP. (Dec. 6, 2013, 11:46 AM), <http://www.usnews.com/news/articles/2013/12/06/bipartisan-innovation-act-clears-house>.

71. Karmasek, *supra* note 69.

“[L]et’s pass a patent reform bill that allows our businesses to stay focused on innovation, not costly, needless litigation.”<sup>72</sup>

As with the “troll” and empirical discussions regarding PAEs, opinions on the proposed patent reform bills have been split. Some commentators have argued that the Innovation Act’s changes will protect America’s businesses from unnecessary “predatory patent troll” litigation, while others have accused Congress of wanting to “create an unfair patent system where our taxpayer-funded courts protect major corporations . . . but leave individual inventors, universities and start-ups out in the cold.”<sup>73</sup> Perhaps the most notable opponent to the current legislative proposals is David Kappos, former director of the U.S. Patent and Trademark Office. In his testimony before the House Judiciary Committee at the single hearing before the Innovation Act was passed, he stated: “[W]e are not tinkering with just any system here; we are reworking the greatest innovation engine the world has ever known . . . . If there were ever a case where caution is called for, this is it.”<sup>74</sup>

*D. Summary of Currently Popular PAE Perceptions: Patent Trolls vs. Horatio Alger Inventors*

The preceding analysis of recent PAE literature seems to split into two very divergent themes. On one hand, the bulk of literature supports the proverbial “patent troll” image for PAEs with bad actors and numerous negative effects on the economy and consumers. On the other hand, a minority of literature supports the idea of Cotropia’s described “individual inventor motif”—bringing profit to the garage inventor wanting nothing more than to monetize his “*Flash of Genius*” through a properly functioning patent system.<sup>75</sup> To shorten the descriptor classes for the purposes of further discussion, the PAE-problem literature points will be categorized as supporting proverbial “Patent Trolls.” Alternatively, the PAE-positive literature points will be categorized as supporting proverbial “Horatio Alger Inventors.”<sup>76</sup> The resulting analysis points, in comparison to the case studies, will then better determine if PAEs are in actuality more “Patent Trolls” or “Horatio Alger Inventors.”

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72. *Id.*

73. *Id.*

74. *H.R. 3309 Innovation Act: Improving the Patent System to Promote American Innovation and Competitiveness: Hearing on H.R. 3309 Before the Comm. on the Judiciary, 113th Cong. 2 (2013)* (statement of David J. Kappos, Partner, Cravath, Swain & Moore).

75. Cotropia, *supra* note 5.

76. *See supra* Introduction and note 5 (explaining the historical descriptive term “Horatio Alger Inventors”).

Characteristics supporting an image of PAEs as Patent Trolls:

1. PAEs do not innovate; they seek to acquire broad patent claims that encompass existing technologies.
2. PAEs work to create a patent thicket—overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology.
3. PAEs delay patent issuance, asserting patents or licensing negotiations in furtherance of the infringing use value to the infringer increasing during delay.
4. PAEs are more willing to prolong and broaden patent litigation.
5. PAEs do not transfer earned profits to inventors.
6. PAEs prey on startups and small companies.

Characteristics supporting an image of PAEs as Horatio Alger Inventors:

1. PAEs transfer resources from consumer-commercializing activities to innovation.
2. PAEs stand for individual inventors who are not in the business of practicing inventions.
3. PAEs spawn innovation through creation of a licensing marketplace for inventions.
4. PAEs bringing a lawsuit are likely to be the same entity that filed the patent application initially.
5. Individuals face a significant disadvantage in high stakes patent litigation unless they allow PAEs to enforce their patents.

With these descriptor classes in hand, we can then compare the currently popular PAE theories gathered against case study data.

## II. CASE STUDIES AS A TYPE OF EMPIRICAL DATA

### A. *Usefulness and Limitations of Case Studies*

Case studies are an important part of empirical research used to illustrate or disprove theories proposed in other analyses.<sup>77</sup> They are an “empirical inquiry that investigates a contemporary phenomenon in depth and within its

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77. “Case studies . . . are important genres of empirical research that not only can yield important insights but have the additional virtue that legal scholars with limited resources can undertake them.” Peter H. Schuck, *Why Don't Law Professors Do More Empirical Research?*, 39 J. LEGAL EDUC. 323, 323–24 (1989). “Case studies are a social scientific research method of particular value to lawyers and public health advocates.” Julie Graves Krishnaswami, *Nicholas Freudenberg: A Selected Bibliography to Accompany A Conversation on Health and Law*, 12 N.Y. CITY L. REV. 55, 57 (2008). See, e.g., KHAN, *supra* note 64, at 23; Mossoff, *supra* note 63, at 203.

real-life context.”<sup>78</sup> Further, as a preliminary step in research, case studies are an initial building block scholars can undertake and use to tailor greater research plans.<sup>79</sup> As discussed *supra*, while historical case studies of PAEs have been conducted,<sup>80</sup> and much current empirical research has been undertaken,<sup>81</sup> thus far no research has investigated detailed facts regarding the inventors PAEs represent and the invention stories behind patents asserted by PAEs.

The case study analysis here is neither generalizable nor intended to represent a sampling for scientific generalizations.<sup>82</sup> Instead, the purpose is to test the previously developed PAE theories on a new research focus to develop hypotheses that may then be tested systematically with a larger number of cases.<sup>83</sup> “If two or more cases are shown to support the same theory, replication may be claimed. The empirical results may be considered yet more potent if two or more cases support the same theory but do not support an equally plausible, *rival* theory.”<sup>84</sup>

To begin the case study research for this Article, the author contacted numerous legal academics, practitioners, and the largest PAE holding companies. The author, and a fellow academic colleague, also posted an anonymous request for PAEs willing to share information on the popular patent law websites, Patently-O<sup>85</sup> and IPWatchdog.<sup>86</sup> The focus of the search

78. ROBERT K. YIN, *CASE STUDY RESEARCH: DESIGN AND METHODS* 18 (4th ed. 2009).

79. Schuck, *supra* note 77, at 324. *See also* David L. Faigman, *To Have and Have Not: Assessing the Value of Social Science to the Law as Science and Policy*, 38 EMORY L.J. 1005, 1056 n.183 (1989) (“Although the case method represents a less than scientific way to test hypotheses, it often provides stimulus for hypothesis development and thus scientific advancement.”).

80. *See, e.g.*, KHAN, *supra* note 64; Mossoff, *supra* note 63; Adam Mossoff, *Who Cares What Thomas Jefferson Thought About Patents? Reevaluating the Patent “Privilege” in Historical Context*, 92 CORNELL L. REV. 953 (2007); Beauchamp, *supra* note 63.

81. *See supra* Part I.B.

82. YIN, *supra* note 78, at 15 (“[C]ase studies . . . provide little basis for scientific generalization. . . . [The investigator’s] goal will be to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization).”).

83. “The detailed examination of a single example of a class of phenomena, a case study cannot provide reliable information about the broader class, but it may be useful in the preliminary stages of an investigation since it provides hypotheses which may be tested systematically with a larger number of cases.” NICHOLAS ABERCROMBIE ET AL., *THE PENGUIN DICTIONARY OF SOCIOLOGY* 34 (1984).

84. YIN, *supra* note 78, at 38–39.

85. Dennis Crouch, *What Is Your Experience with Patent Assertion Entities and Patent Licensing?*, PATENTLY-O (Oct. 8, 2013), <http://www.patentlyo.com/patent/2013/10/what-is-your-experience-with-patent-assertion-entities-and-patent-licensing.html> (posting anonymous request for information).

was to interview PAEs that were willing to share a patent conception and entity creation story from start to finish. The initial requests for information, however, were left generic regarding the use of the information. The emphasis was to find PAEs that had original source materials to verify the validity of information, thus ensuring independent verification of entity and invention history.<sup>87</sup>

Surprisingly, despite the seemingly infinite amount of information available discussing PAEs, there was very little factual detail regarding PAEs obtainable. While countless practitioners, patent entity representatives, and large PAE holding companies were willing to share information in confidence, there were a variety of reasons presented that limited the sharing of information or review of original source materials concerning invention or the entity. Reasons included:

- The PAEs contacted were mostly all involved in active litigation that presented too great a risk to have original, and potentially privileged, documents shared with a third party or to have inventors speaking openly on-the-record regarding the history of their invention or company.
- The patent licenses between the PAEs and licensees prohibit disclosure of the patent detail, license detail, or dealings with any licensees.
- Licenses between inventors and PAE holding companies require that inventors not disclose any information regarding the history of their invention or patent.
- Any litigation regarding patents asserted by PAEs is not in the public record due to sealed orders or agreements between the parties to not disclose documents exchanged or details regarding the litigation.

Further, PAEs that successfully assert their patents and obtain licenses without litigation are almost impossible to locate due to the lack of any public record of the assertion or license.

Thankfully, through both the anonymous website requests and contact leads through academic colleagues, four PAEs that were initially willing to share information were identified. From these four, it was decided that two entities would be ideal for the case study.<sup>88</sup>

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86. Gene Quinn, *Call for Information: Study on Patent Assertion Entities*, IPWATCHDOG (Oct. 9, 2013, 10:08 AM), <http://www.ipwatchdog.com/2013/10/09/call-for-information-study-on-patent-assertion-entities/id=45658> (posting anonymous request for information).

87. Given the emphasis to find PAEs with original source material, it is recognized this could skew selection of PAEs—those willing to provide materials, potentially of a certain type. Since the purpose was case study research, as opposed to generalizable empirical research, the potential selection bias is acceptable.

88. Due to the limited space allowed in this Article, it was determined that only two case study entities should be used. The two entities preliminarily investigated for case study but not used were Civix-DDI, LLC and OIP Technologies, Inc. These entities were not used for the

### B. *The Two Case Study PAEs*

The first case study entity, MercExchange, was selected for a variety of reasons. First, the case and parties are quite well known in all legal circles after the appeal from the Federal Circuit to the Supreme Court and the resulting Supreme Court opinion. Second, MercExchange is often referred to as the quintessential PAE or “troll” due to, among other things, its request for an injunction to restrict eBay’s online business.<sup>89</sup> Third, the inventor of the MercExchange patent, Tom Woolston, and the lead counsel for MercExchange, Greg Stillman, partner at Hunton & Williams LLP, were both willing to share information and documents regarding the patent and case, and they were also both willing to communicate on the record. Fourth, the patent infringement dispute between eBay and MercExchange went through full litigation proceedings, including lengthy discovery, trial, and appeal. Much of the record created through the proceedings, including over 5000 pages of trial transcripts and thousands of exhibit pages, were all publicly available. These original documents, with much detailed direct and cross-examination testimony, serve as an excellent base for understanding Woolston’s invention and the true history of MercExchange. While certain details are based on interviews with Woolston, as the citations indicate, a vast majority of detail is strictly based on review of the original documents.

In contrast to MercExchange, the second case study entity, Capital Security Systems (CSS), was selected for its relatively unknown prominence. First, while existing for almost as long as MercExchange (over fifteen years), and having filed infringement actions against many large companies (including Diebold, Inc., JPMorgan Chase Bank, and Wells Fargo Bank), CSS has had very little media coverage and its infringement litigations have ended relatively quickly. Second, and similar to MercExchange, CSS would fit the mold of a PAE as it has been understood in the current literature. CSS is a company that does not sell any products and is partnered for licensing with IPNav, a company described by *The New York Times* as “[having] a batch of patents,

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following reasons: due to active litigation, some factual resources related to the entity could not be provided; due to active litigation, entity counsel advised that on-record communication directly with inventors should not be allowed; and only a limited number of publicly available documents concerning the entities and inventions could be located. It should be noted, however, that from preliminary research regarding these entities, the general factual story of these inventors, inventions, and entities was no different than the two case study entities utilized.

89. *Brief of Amicus Curiae Yahoo! Inc. in Support of Petitioner, eBay Inc. v. MercExchange L.L.C.*, *supra* note 24, at 1005–09; Lemley & Melamed, *supra* note 28, at 2141–42. *See also* Colleen V. Chien & Mark A. Lemley, *Patent Holdup, the ITC, and the Public Interest*, 98 CORNELL L. REV. 1, 2 (2012) (“In the wake of the Supreme Court’s 2006 *eBay Inc. v. MercExchange, L.L.C.* decision, district courts rarely grant injunctions in patent infringement cases to patent-assertion entities (PAEs, also known as ‘patent trolls’).”).

demanding a license fee from what it contends is an infringer, usually a titan in the tech realm.”<sup>90</sup> IPNav describes its approach to doing business as follows:

Because the patent system is based on patent holders being willing to go to court to enforce their rights, many patent monetization firms are litigation driven. At IPNav we’re not afraid to litigate, and we work with first-rate patent litigators, but we’ve found that alternatives to litigation often produce better and faster results.<sup>91</sup>

Third, CSS owner and primary inventor, Robin Gustin, was willing to share information and documents regarding CSS and its patents and was also willing to communicate openly regarding the invention and entity history. Obtaining primary historical documents regarding CSS was most important for the CSS case study since there was no lengthy litigation or media record.<sup>92</sup>

### III. CASE STUDIES OF INSTRUCTIVE PAES

#### A. *MercExchange, L.L.C. and Inventor Thomas G. Woolston*

##### 1. The History of Thomas G. Woolston

The sole inventor of the MercExchange-owned patents is Thomas G. Woolston.<sup>93</sup> Mr. Woolston was born in Michigan and raised in Ohio.<sup>94</sup> After completing high school, he enlisted in the United States Air Force and was trained for a year in electronics, computers, and radar systems, and a second year in modern computers, telecommunications systems, and cryptography.<sup>95</sup> After serving for a few years on a crew stationed in Japan doing peacetime aerial reconnaissance, Mr. Woolston was assigned to the National Security Agency in Maryland and began taking classes in computer science at the University of Maryland.<sup>96</sup>

Upon honorable discharge from the Air Force, Mr. Woolston began work with the Central Intelligence Agency (CIA), assigned to build and maintain

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90. David Segal, *Has Patent. Will Sue*, N.Y. TIMES, July 14, 2013, at BU1.

91. *Our Core Beliefs*, IPNAV, <http://www.ipnav.com/about-us/our-philosophy> (last visited Oct. 9, 2014).

92. For these reasons the two case study PAEs fit the majority mold of ideal “trolls” discussed in the previous Parts and are accordingly labeled as “instructive.”

93. U.S. Patent No. 5,845,265 (filed Nov. 7, 1995); U.S. Patent No. 6,085,176 (filed Mar. 8, 1999).

94. Transcript of Record at 304, *MercExchange, L.L.C. v. eBay, Inc.*, 275 F. Supp. 2d 695 (E.D. Va. 2003) (No. 2:01-CV-736); Julia Wilkinson, *The eBay Patent Wars: Interview with MercExchange CEO Thomas Woolston*, ECOMMERCEBYTES (Sept. 30, 2004), <http://www.commercebytes.com/cab/abn/y04/m09/i30/s01>.

95. Transcript of Record, *supra* note 94, at 305.

96. *Id.* at 306.

CIA global communications networks.<sup>97</sup> While at the CIA, Mr. Woolston worked primarily as an engineer, planning and finding uses for CIA computer networks.<sup>98</sup> Mr. Woolston also continued his studies at The George Washington University, focusing in electrical and computer engineering and completing a degree in electrical engineering in 1991.<sup>99</sup>

Before leaving the CIA, Mr. Woolston continued his studies and began attending The George Washington University School of Law at night.<sup>100</sup> He worked at the CIA for a total of six years before beginning work as a law clerk and attorney at several private law firms.<sup>101</sup>

## 2. The History of the Primary MercExchange Patents

The MercExchange-owned patents Mr. Woolston invented relate to e-commerce and the internet. Mr. Woolston had knowledge of technology in these areas since the 1980s when he spent time working with supercomputers at the Los Alamos National Laboratory in New Mexico.<sup>102</sup> In 1993, when Mr. Woolston learned that the United States government was going to privatize the internet for business use, he started thinking about commercial uses that a large internet network would allow.<sup>103</sup> His breakthrough idea occurred in the summer of 1994, when he heard a radio news report regarding the Major League Baseball players' strike.<sup>104</sup> The radio report discussed a baseball-card store in McLean, Virginia (close to Woolston at the time) that was going out of business due to loss of customers and anti-baseball resentment in Northern Virginia caused by the strike.<sup>105</sup>

In 1994, Mr. Woolston saw three primary options for a small business collectible baseball-card store to advertise and sell cards to a customer far outside their geographical area.<sup>106</sup> The first option was advertising bulletin boards and electronic versions of bulletin boards.<sup>107</sup> These boards and similar newspaper classified postings posed a variety of problems, including the fact that the advertisement continues to be viewed after the good is sold, and despite there being an advertisement for the good, the seller is under no

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97. *Id.* at 307.

98. *Id.*

99. *Id.* at 307–08.

100. Transcript of Record, *supra* note 94, at 308.

101. *Id.* at 308–09.

102. *Id.* at 309.

103. *Id.*

104. *Id.* at 310, 448; Wilkinson, *supra* note 94.

105. Transcript of Record, *supra* note 94, at 310.

106. *Id.*

107. *Id.*



obligation to sell—the advertisement is just an invitation to continue negotiations.<sup>108</sup>

The second existing option Mr. Woolston saw for a coast-to-coast collectible sale was a catalog or electronic version of a catalog.<sup>109</sup> Like bulletin boards or classified ads, Mr. Woolston saw catalog sales as problematic in that the seller could run out of stock for an item prior to a customer seeing the item in the catalog and wanting to purchase.<sup>110</sup> In Woolston's mind, the limited inventory and delay in communication was a fundamental problem for a small-inventory collectible sale.<sup>111</sup>

Finally, the third option for a coast-to-coast collectible sale was a television show like the Home Shopping Channel—where a viewer watches a show, sees an item that is currently available being advertised and sold, and viewers across the country are given the opportunity to call and purchase the item.<sup>112</sup> Mr. Woolston was impressed by the immediate nature of the Home Shopping Channel advertisement and sale but hoped to innovate on it.<sup>113</sup> Woolston thought there would be value in an expanded version of the Home Shopping Channel, where a viewer could contact the Channel, describe an item for sale, and then the Channel would advertise the item across the country until another viewer called in to purchase and the item was sold.<sup>114</sup> Woolston envisioned that the opportunity created by private uses of the internet would allow for an invention that innovated on a live-Home Shopping Channel type sales environment for collectible items.<sup>115</sup>

Accordingly, in the summer of 1994, Mr. Woolston used his background in computers, computer networks, and a voice-over-network application he built for the CIA, to create a solution that used the newly available internet in an e-commerce collectible sales invention.<sup>116</sup> Woolston knew about communication interfaces to allow computers to communicate with other computers in a network and also knew about databases, credit card processing, and credit card encryption necessary for an internet sales system.<sup>117</sup> He put all that unique personal knowledge together and for eight months worked to create “a

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108. *Id.* at 310–11.

109. *Id.* at 312.

110. Transcript of Record, *supra* note 94, at 312.

111. *Id.*

112. *Id.* at 312–13.

113. *Id.* at 313.

114. *Id.* at 312–13.

115. Transcript of Record, *supra* note 94, at 312–14.

116. *Id.*

117. *Id.* at 314.

technical document that could actually perform the concept” for which he filed a patent on in April 1995.<sup>118</sup>

While testifying under oath at trial in *MercExchange v. eBay*, Mr. Woolston described how his invention would likely be “very helpful to small businesses and individual sellers.”<sup>119</sup> He described how the invention would provide great value to the “small-town collector get[ting] to the bigger markets and get[ting] a fair price for his item and sell[ing] them when he wanted to.”<sup>120</sup> Woolston further testified that he wanted to build a business from the invention, for profit, and how getting a patent “was what you were supposed to do[,] . . . [what] you needed to do to build a business.”<sup>121</sup> He understood the process to be: “file for a patent application, . . . organize a company around the idea, . . . then try to get people interested in investing or joining . . . , and then build[ ] a company.”<sup>122</sup>

In discussing his motivation to invent almost two decades later, Mr. Woolston states that his motivation came from the patent system’s function to give inventors the right to exclude. “Patents give inventors the tangible right to do it alone.”<sup>123</sup> He went on to say that “in 1994, no one thought anyone would ever buy an antique or collectible sight unseen on the Internet.”<sup>124</sup> Without patent protection, Woolston assumes, “why [would an inventor] educate the marketplace and work on an independent idea if someone else could copy the idea?”<sup>125</sup> Accordingly, Woolston’s business plan for his invention anticipated that “once he got the patent, investors would want to move forward.”<sup>126</sup>

### 3. The History of MercExchange

The first step in Mr. Woolston’s plans to create profit and implement his invention was to form a company.<sup>127</sup> This was particularly important because the invention’s fundamental system would “cost a lot of money . . . to build.”<sup>128</sup> While working full time at his day job, Woolston founded his first

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118. Wilkinson, *supra* note 94. See also Brief for Respondent at 1, *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (No. 05-130); Transcript of Record, *supra* note 94, at 316, 649. Spring 1995 was also when Mr. Woolston graduated from law school. See *id.* at 308.

119. Transcript of Record, *supra* note 94, at 314.

120. *Id.* at 315.

121. *Id.*

122. *Id.*

123. Telephone Interview with Thomas G. Woolston, Founder, MercExchange (Oct. 15, 2013).

124. *Id.*

125. *Id.*

126. *Id.*

127. Transcript of Record, *supra* note 94, at 490–91.

128. *Id.* at 487–88. In some correspondences, Mr. Woolston details development and operating costs for the Fleanet business plan at over \$100,000.00 per month. *Id.* at 516–19.

company, Fleanet, in 1995.<sup>129</sup> Its purpose was to “attract capital, attract people and talent necessary to build e-commerce [and an] e-commerce company . . . in Virginia.”<sup>130</sup>

Once Fleanet was formed, Mr. Woolston began reaching out to friends and close acquaintances for business investment.<sup>131</sup> Mr. Woolston drafted business plans describing his invention, including what he saw as the best way to implement the system, and began corresponding with whoever would listen and be interested in partnering with him or investing in Fleanet.<sup>132</sup> In January 1996, Mr. Woolston was in communication with many individuals and companies, including MCI WorldCom and a series of venture capitalists, travel agencies, web developers, antique dealers, art dealers, and George Mason University.<sup>133</sup> While the initial patent application was still pending, but after gaining some business partners and investors, the Fleanet name was dropped, and Woolston’s company became “MercExchange.”<sup>134</sup> Between 1996 and 1998, raising capital continued to be difficult for Mr. Woolston and MercExchange, with conversations with one venture capital firm resulting in “screaming [at Woolston] . . . that no one will ever buy an antique or collectible over the internet.”<sup>135</sup>

MercExchange’s breakthrough for investment finally came in December 1998 when its first patent issued and the *Wall Street Journal* published a January 1999 article on MercExchange regarding its patent interference proceeding pending against PriceLine.com.<sup>136</sup> Mr. Woolston said “[i]t was like magic within six weeks [of patent issuance], we had our first licensee; and within six months, I’d been lured out of the legal profession into the dot-com world.”<sup>137</sup> The first licensee of the MercExchange technology was Aden Enterprises, an internet incubator company based out of Omaha, Nebraska.<sup>138</sup>

Mr. Woolston began full-time work with Aden in October of 1999 to begin development of auction software for a subsidiary of Aden known as LeftBid.<sup>139</sup> Unfortunately for Mr. Woolston, Aden was not a focused enterprise, was

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129. *Id.* at 490, 495.

130. *Id.* at 491.

131. *Id.* at 494–96.

132. Transcript of Record, *supra* note 94, at 497–500.

133. *Id.* at 503–04, 532–36. *See also* Joint Appendix at 311, eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006) (No. 05-130), 2006 WL 236430.

134. Wilkinson, *supra* note 94.

135. *Id.* *See also* Transcript of Record, *supra* note 94, at 535–38 (discussing numerous other companies Woolston and MercExchange attempted to raise capital from and difficulties in communicating with investors).

136. Transcript of Record, *supra* note 94, at 542–44, 546–47; Wilkinson, *supra* note 94.

137. Wilkinson, *supra* note 94. *See also* Transcript of Record, *supra* note 94, at 548.

138. Joint Appendix, *supra* note 133; Transcript of Record, *supra* note 94, at 548; Wilkinson, *supra* note 94.

139. Transcript of Record, *supra* note 94, at 567, 571.

attempting to build an online auction system that was different from his invention,<sup>140</sup> and became too entangled with other companies and subsidiaries.<sup>141</sup> Woolston eventually left the Aden companies in early 2000 and began communications with other potential partners including I-Fly, Christie's, and Tiger Direct.<sup>142</sup>

#### 4. MercExchange's Communications with eBay

In the spring of 2000, Mr. Woolston also began communications with eBay—a multi-million dollar online auction business—in an attempt to build a MercExchange system that would, in part, gather information from online auctions held on ebay.com.<sup>143</sup> eBay was not facilitating transactions on its website at that time, so there were fundamental differences between eBay's processes and what MercExchange was hoping to build with Woolston's invention.<sup>144</sup> Through the communications with eBay, in the summer of 2000, eBay became interested in purchasing MercExchange's patents.<sup>145</sup> The timing could not have been better for Woolston “because [his] company was falling apart.”<sup>146</sup> To further the conversation, MercExchange gave eBay's attorneys a confidential presentation regarding all its pending patents and their current status in the Patent Office.<sup>147</sup> The presentation seemed to go well, and, as Woolston recalled, the eBay attorneys communicated, “Wow, we're really interested. . . . This is it; we can put the top back on the Genie[']s bottle.”<sup>148</sup> Soon thereafter, however, eBay requested that MercExchange provide the full prosecution histories of the MercExchange patents.<sup>149</sup> The requests continued, and through the negotiations requesting that MercExchange send all patent files to eBay's attorneys' offices in California, Mr. Woolston began to get “the distinct . . . impression that eBay was trying to get a jump on [a] lawsuit, because [they] weren't dealing in good faith.”<sup>150</sup>

140. *Id.* at 344–45.

141. *Id.* at 344, 577–78; Wilkinson, *supra* note 94.

142. Transcript of Record, *supra* note 94, at 579–81, 592.

143. *Id.* at 581–82, 590. The MercExchange system being developed in early 2000 would be effectively outlawed when eBay's new tort of computer trespass was established in *eBay, Inc. v. Bidder's Edge, Inc.*, 100 F. Supp. 2d 1058 (N.D. Cal. 2000). E-mail from Thomas G. Woolston, Founder, MercExchange, to author (Jan. 9, 2014, 11:02 PM) (on file with author).

144. Transcript of Record, *supra* note 94, at 352, 597. Specifically, eBay did not offer “buy it now” features on its website and sent all eBay transactions to separate partner-company websites to facilitate payments. Accordingly, prior to 2000, eBay could not have infringed MercExchange's patents. *See id.*

145. *Id.* at 584. *See also* Brief for Respondent, *supra* note 118, at 3.

146. Wilkinson, *supra* note 94.

147. *Id.*

148. *Id.*

149. Transcript of Record, *supra* note 94, at 593–94.

150. *Id.* at 595.

After a few months of negotiations with eBay, it became MercExchange's position that eBay was "looking for ways to kill the patents instead of buying them."<sup>151</sup> The negotiations ended, and, according to Mr. Woolston, within three months "eBay was infringing every patent we had."<sup>152</sup> MercExchange made the decision to file suit against eBay for patent infringement in mid-2001.<sup>153</sup> The case was filed on September 26, 2001 in the U.S. District Court for the Eastern District of Virginia.<sup>154</sup>

### 5. The Current Status of MercExchange

The *MercExchange v. eBay* patent infringement lawsuit resulted in a five-week trial and a May 27, 2003 jury verdict for MercExchange with a \$29.5 million judgment entered on August 7, 2003.<sup>155</sup> The parties then continued disputes up to the United States Supreme Court in 2006 regarding the issue of whether an injunction should issue against eBay.<sup>156</sup> The parties returned to the district court in late 2006 regarding further proceedings related to an injunction and patent reexaminations.<sup>157</sup>

MercExchange's request for an injunction was again denied on July 27, 2007, and the parties returned to the Court of Appeals for the Federal Circuit in December 2007 after eBay was required to post a bond of \$31 million.<sup>158</sup> The dispute between MercExchange and eBay finally settled in 2008.<sup>159</sup> The settlement resulted in the sale and full assignment, from MercExchange to eBay, of all MercExchange patents and patent applications related to online

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151. Wilkinson, *supra* note 94.

152. *Id.*

153. Transcript of Record, *supra* note 94, at 597.

154. Docket, *MercExchange, L.L.C. v. eBay, Inc.*, 275 F. Supp. 2d 695 (E.D. Va. 2003) (No. 2:01-CV-736).

155. *MercExchange*, 275 F. Supp. 2d at 698–99, 722. The trial judge described the *eBay Inc. v. MercExchange, L.L.C.* trial as being "one of the more, if not the most, contentious cases that [his] court [had] ever presided over." *Id.* at 714.

156. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006). It has been suggested that the denial of injunction related to the general comparison of MercExchange's focused patent to the multifaceted eBay.com website. Peter Lee, *The Accession Insight and Patent Infringement Remedies*, 110 MICH. L. REV. 175, 218–19 (2011) ("eBay itself already embraces this notion of comparing the relative values of patented inventions and accused products . . . which compels courts to compare the relative values of an underlying patent and a broader, infringing technology when determining the appropriateness of injunctive relief.").

157. *MercExchange, L.L.C. v. eBay, Inc.*, 467 F. Supp. 2d 608, 609–10 (E.D. Va. 2006).

158. *MercExchange, L.L.C. v. eBay, Inc.*, 500 F. Supp. 2d 556, 556, 591 (E.D. Va. 2007); Telephone Interview with Thomas G. Woolston, *supra* note 123. *See also* *MercExchange, L.L.C. v. eBay, Inc.*, 660 F. Supp. 2d 653 (E.D. Va. 2007).

159. Telephone Interview with Thomas G. Woolston, *supra* note 123.

auctions.<sup>160</sup> Neither MercExchange nor Mr. Woolston have been involved in any further patent infringement lawsuits since settling with eBay.<sup>161</sup>

The MercExchange company still exists and currently holds two patents related to “using internet router hardware as massively parallel sort engines for topographically organizing web content like an auction instance.”<sup>162</sup> The current MercExchange patents are available for purchase or license but there are no current marketing or development efforts for those inventions.<sup>163</sup>

#### 6. The Current Status of Thomas G. Woolston

Mr. Woolston is currently the listed inventor of twenty-four patents, with his most recent patent related to an “Electronic Gaming Device with Feedback.”<sup>164</sup> He is on the Advisory Board of the Krasnow Institute for Advanced Study,<sup>165</sup> the Intellectual Property Advisory Committee to the Virginia Joint Commission on Technology and Science,<sup>166</sup> and also has an active consulting practice specializing in raising capital for university research and technology startup companies.

#### B. *Capital Security Systems, Inc. and Robin H. Gustin*

##### 1. The History of Robin H. Gustin

The primary inventor of the Capital Security Systems patents is Robin Haley Gustin.<sup>167</sup> Ms. Gustin was born and raised in the suburbs of Chicago, Illinois.<sup>168</sup> She attended the University of Illinois at Chicago and graduated in 1986 with a BS degree in Business Sciences.<sup>169</sup> After completing her degree, she worked in the insurance and financial planning industry at a family business, the Gustin Financial Services firm, until 1990.<sup>170</sup>

Following her interest in manufacturing and her talents in sales, in 1990, Ms. Gustin accepted an account representative position with iVEX Protective

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160. E-mail from Thomas G. Woolston, *supra* note 143.

161. Telephone Interview with Thomas G. Woolston, *supra* note 123.

162. Email from Thomas Woolston, *supra* note 143.

163. *Id.*

164. *Id.* See also U.S. Patent No. 8,485,903 (filed Dec. 10, 2010).

165. *Thomas G. Woolston*, KRASNOW INST. FOR ADVANCED STUDY, <http://krasnow.gmu.edu/trustees/thomas-g-woolston/> (last visited Oct. 9, 2014).

166. *Intellectual Property Advisory Committee Membership*, COMMONWEALTH OF VA. DIV. OF LEGAL SERVS., [http://dls.virginia.gov/commission/jcots\\_IntProp2013.htm](http://dls.virginia.gov/commission/jcots_IntProp2013.htm) (last visited Oct. 9, 2014).

167. U.S. Patent No. 5,897,625 (filed May 30, 1997).

168. Telephone Interview with Robin H. Gustin, Founder, Capital Security Systems, Inc. (Oct. 17, 2013).

169. ARTHUR GINGRANDE, MARKET RESEARCH REPORT ON THE SUPER ATM PLATFORM 50 (2001) (Capital Security Systems, Inc. Marketing Publication) (on file with author).

170. *Id.*

Packaging Inc., a Hillside, Illinois based industrial packaging manufacturer.<sup>171</sup> Ms. Gustin worked at iVEX for three years, distinguishing herself as the top sales person in the Midwest Region.<sup>172</sup> In 1993, she was recruited to work for Bemis Company, Inc., a Minneapolis, Minnesota business specializing in industrial plastics packaging.<sup>173</sup> While at Bemis, Ms. Gustin traveled throughout the Midwest helping manufacturers of all types improve their production packaging efficiency.<sup>174</sup> Her position at Bemis was as much technical as it was client relations; through this experience, Ms. Gustin greatly expanded her knowledge of automating systems and human-computer processes.<sup>175</sup>

## 2. The History of the Primary Capital Security Systems Patents and Capital Security Systems

In 1993, while visiting a friend in Arizona who owned a number of check cashing stores, Ms. Gustin began thinking of ways to help her friend resolve an issue of employee theft.<sup>176</sup> The theft problem related to multiple employee-only processes involved in check cashing and a lack of electronic systems to review and confirm the high cash-on-hand check cashing process.<sup>177</sup> When Ms. Gustin returned to Illinois from the trip, she used her “background in manufacturing and automating systems” to create a method for electronically “emulate[ing] the primary functions of [the] check cashing” process.<sup>178</sup> Ms. Gustin’s solution to the check cashing store problem centered around automating the cashing of checks through a machine process that included “machine recognition of printed and handwritten amounts on checks.”<sup>179</sup> For the next two years, Ms. Gustin spent countless hours—many at the Harold Washington Library in downtown Chicago—researching automation technology, bank networks, automated teller machine (ATM) systems, and electronic payments within check cashing processes.<sup>180</sup> A key portion of her research focused on components to automate a new type of ATM machine, originally called “The Money Exchange Machine.”<sup>181</sup> Ms. Gustin also worked

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171. *Id.*

172. *Id.*

173. *Id.*

174. GINGRANDE, *supra* note 169.

175. Telephone Interview with Robin H. Gustin, *supra* note 168.

176. *Id.*

177. *Id.*

178. *Id.*

179. Business Report, Capital Securities Systems, Inc., Timeline of Events Regarding CSS Patents 1 (Oct. 29, 2013) (on file with author).

180. Telephone Interview with Robin H. Gustin, *supra* note 168; GINGRANDE, *supra* note 169.

181. Business Report, *supra* note 179.

to find recognition software “that could intelligently scan hand printed and cursive field data in order to process the checks in an ATM environment.”<sup>182</sup>

After two years of painstaking research and analysis, in late 1995, Ms. Gustin formalized her discovery of unfulfilled needs in the electronic funds transfer (EFT) market, particularly in the areas of ATM banking for recognizing handwritten check fields for electronic check processing.<sup>183</sup> Sensing a business need in the EFT market, and the government-sponsored electronic benefits transfer market, Ms. Gustin left her position at Bemis to start her own company called Capital Security Systems, Inc. (CSS).<sup>184</sup> Her intent with CSS was to work as an inventor, complete designs and prototype building of an electronic check depositing machine, and partner with other companies for manufacturing.<sup>185</sup> Ms. Gustin personally raised approximately \$1 million in seed capital to fund CSS and began work on the “ATM PowerBuilder” and “Super ATM” platform.<sup>186</sup>

From 1995 to 1997, Ms. Gustin worked full time at CSS to perfect the designs, systems, and prototype for the CSS Super ATM.<sup>187</sup> She hired Livingston Products, Inc. to build a prototype ATM machine, and she hired Arthur Gingrande, a leading expert in text recognition technology, to consult for CSS regarding sourcing of software components into the prototype.<sup>188</sup> In 1996, Mr. Gingrande referred Ms. Gustin to Mitek Systems in San Diego, California, a company specializing in “technology that facilitates courtesy amount recognition (CAR) and legal amount recognition (LAR) on checks.”<sup>189</sup> After contracting with Mitek to begin work for CSS, Ms. Gustin relocated to San Diego to help with the process of “incorporat[ing] their CAR/LAR software engines into an ATM environment.”<sup>190</sup>

In May of 1997, after completing an early version of the Super ATM prototype, Ms. Gustin and CSS filed for three patents related to enhancements on the electronic cashing and ATM systems being developed.<sup>191</sup> The patents related to: “Check fraud detection (signature verification)”; “Wiring funds from one account to another in an ATM environment”; and “Downloading

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182. *Id.*

183. GINGRANDE, *supra* note 169; Business Report, *supra* note 179.

184. GINGRANDE, *supra* note 169.

185. Telephone Interview with Robin H. Gustin, *supra* note 168.

186. GINGRANDE, *supra* note 169; *Three More Patents Approved for ATM PowerBuilder*, BUS. WIRE (July 13, 1999), <http://www.thefreelibrary.com/Three+More+Patents+Approved+for+ATM+PowerBuilder.-a055135162>.

187. Business Report, *supra* note 179.

188. *Id.*

189. *Id.*

190. *Id.*

191. U.S. Patent No. 5,897,625 (filed May 30, 1997); U.S. Patent No. 5,987,439 (filed May 30, 1997); U.S. Patent No. 6,012,048 (filed May 30, 1997).



dollars and cents left over from a transaction on an ATM network to a smart card.”<sup>192</sup> When making the decision for CSS to file for patent protection, Ms. Gustin communicated with other inventors who owned patents and discussed the issues with her design partners who helped build the CSS Super ATM.<sup>193</sup> She “knew patents would be the only protection for the idea[s] [she] spent many years...develop[ing].”<sup>194</sup> To her, patents were the “sole protection to further invention”—before she spoke with other companies about her ideas, she needed to protect them with patent filings.<sup>195</sup>

After filing for patent protection in May 1997, Ms. Gustin went on a multi-year “road show” to banks and other large financial institutions in the hopes of finding commercial partners.<sup>196</sup> She contacted banks directly, created marketing materials and videos of her Super ATM prototype in operation,<sup>197</sup> and attended various banking industry events.<sup>198</sup> Ms. Gustin’s log of activity from 1997 to 2001 included hundreds of meetings, including prototype Super ATM demonstrations to Diebold, Inc., Siemens-AutoTell, and IBM.<sup>199</sup> Throughout the process of communicating with large commercial partners, Ms. Gustin encountered much opposition to the potential success of her design.<sup>200</sup> At one point, in 1998, a high-level manager from IBM remarked that “electronic transfers of cash will replace checks, making the Super ATM platform obsolete.”<sup>201</sup>

After the September 11 terrorist attacks, seeing an opportunity to help increase the tracking of funds to prevent further terrorist attacks, in 2002, Ms. Gustin hired a Washington, D.C. law firm to assist with introducing the Super ATM platform to government agencies.<sup>202</sup> Related to these efforts and the national security need to track funds, in October 2003, Congress passed legislation known as the Check Clearing for the 21st Century Act (Check 21 Act) that allowed the recipient of an original paper check to create a digital version of the original check and eliminate the need for further handling of the

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192. Business Report, *supra* note 179, at 2.

193. Telephone Interview with Robin H. Gustin, *supra* note 168.

194. *Id.*

195. *Id.*

196. *Id.*

197. Robin Gustin, *SuperATM*, YOUTUBE (Feb. 24, 2014), <https://www.youtube.com/watch?v=xREmHNYKD6A>; Robin Gustin, *Super ATM*, YOUTUBE (Feb. 24, 2014), <https://www.youtube.com/watch?v=GH-WPQAbqBI>.

198. Telephone Interview with Robin H. Gustin, *supra* note 168. *See also Three More Patents Approved for ATM PowerBuilder*, *supra* note 186.

199. Business Report, *supra* note 179.

200. *Id.* at 2.

201. *Id.*

202. *Id.*

physical document.<sup>203</sup> The law was scheduled to take effect in October 2004, and Ms. Gustin hoped that the Check 21 Act would serve as a “catalyst [to] spur the banking industry to license the Super ATM patented platform.”<sup>204</sup> Unfortunately for Ms. Gustin, the timing was still not right.

### 3. Capital Security System’s Communications with Commercial Partners

Given the already widespread use of electronic check scanning ATM machines, Ms. Gustin continued to reach out to large ATM manufacturing companies, including Diebold and NCR,<sup>205</sup> this time looking for commercial partners or licensors of her patent portfolio.<sup>206</sup> Coming up short with the larger companies again, Ms. Gustin began to contact smaller financial institutions. It was during these communications in 2005 that the business development manager of a smaller financial services company said, “[W]hy should [we] take a license or buy the Super ATM platform when everyone is infringing?”<sup>207</sup> In response to communications along these lines, Ms. Gustin began to accept the conclusion that legal action to prosecute infringers would have to be her final option.<sup>208</sup>

### 4. The Current Status of Capital Security Systems

In 2006, seeing little option for business partners and widespread infringement of her patent portfolio, Ms. Gustin began communications with various attorneys regarding the prospect of patent infringement lawsuits to

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203. Jeffrey Barry, Comment, *The Check Clearing for the 21st Century Act (“Check 21”), in Developments in Banking Law: 2004*, 24 ANN. REV. BANKING & FIN. L. 1, 130–31 (2005) (“Check 21 is a ‘financial modernization act’ that was passed after the September 11 terrorist attacks. The attacks, and the subsequent interruption of commercial air travel, stimulated the adoption of the new law. Check 21 was signed into law by President Bush on October 28, 2003, and took effect on October 28, 2004. The purpose of the legislation is threefold: (1) to authorize substitute checks, (2) to encourage innovation in the check cashing system, and (3) to make the Nation’s payment systems more efficient. Check 21 is expected to lower check processing costs and reduce the vulnerability of the check cashing system to disruptions in air and ground transportation.”).

204. Business Report, *supra* note 179, at 3; E-mail from Robin H. Gustin, Founder, Capital Security Systems, Inc., to author (Oct. 29, 2013, 7:19 PM) (on file with author) (providing presentation slides used in the CSS meeting with the U.S. Department of Justice on June 27, 2005). The provisions of the Check 21 Act would further the electronic scanning and processing of traditional paper checks. These processes are very closely related to the processes covered in the CSS patents.

205. Diebold, Inc. and NCR, Corp. are two of the world’s largest ATM manufacturers. Diebold is the largest United States maker of ATM machines. See Scott Hamilton, *Carlyle to Buy De La Rue Unit for 360 Million Pounds*, BLOOMBERG (June 16, 2008, 11:49 PM), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ah0ErBvRdJd0&refer=uk>.

206. Business Report, *supra* note 179, at 3.

207. *Id.*

208. *Id.*

enforce CSS's patent portfolio.<sup>209</sup> Ms. Gustin initially had issues with finding law firms that would represent her against large banking clients; however, between 2006 and 2008, she began the organization of materials necessary to prepare for a large patent infringement lawsuit.<sup>210</sup> At this time, CSS also filed multiple international patents and continued its U.S. patent prosecution activities.<sup>211</sup>

Among other legal actions,<sup>212</sup> in 2010, CSS sent a letter to Diebold asserting that Diebold infringed at least two of the CSS-owned patents.<sup>213</sup> In January 2011, Diebold filed a complaint in the U.S. District Court for the Northern District of Ohio seeking declaratory relief under the Declaratory Judgment Act for harms associated with CSS's 2010 letter.<sup>214</sup> This became the first substantive case of patent infringement for CSS, and litigation continued until a September 2011 mediation report stated, "Settlement was reached, subject to preparation and agreement on the settlement documents."<sup>215</sup> A November 2011 order from the district court dismissed the case "pursuant to . . . the parties' confidential License and Settlement Agreement."<sup>216</sup>

Moving on to the banks that utilize ATM machines, in September 2012, after seeking expertise and funding partnership with IPNav,<sup>217</sup> CSS filed suit against JPMorgan Chase Bank NA, JPMorgan Chase & Co., Wells Fargo Bank NA, Wells Fargo & Co., Compass Bank, and BBVA Compass Bancshare, Inc.

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209. *Id.*

210. *Id.* at 3–4.

211. Business Report, *supra* note 179, at 4.

212. The first patent infringement case involving CSS was filed in the United States District Court for the Central District of California on September 30, 2010. *See* Complaint for Patent Infringement at 1, Capital Security Systems, Inc. v. CU Cooperative Systems, Inc., No. CV-10-07322 (C.D. Cal. Sept. 30, 2010). CSS, as plaintiff, asserted patent infringement against CU Cooperative Systems, Inc. *See id.* The action was soon dropped based on misunderstandings of the defendant's business practices. E-mail from Robin H. Gustin, Founder, Capital Security Systems, Inc., to author (Jan. 16, 2014, 10:54 PM) (on file with author). A second case involving CSS was filed in the United States District Court for the Northern District of Oklahoma on November 2, 2010. *See* Complaint at 1, U.S. Payments, L.L.C. v. Capital Security Systems, Inc., No. 10-CV-701 (N.D. Okla. Nov. 2, 2010). The action, with CSS as defendant, was for declaratory judgment that U.S. Payments, LLC did not "violate[ ] any U.S. patent rights held by CSS." *Id.* The complaint cited an October 2010 letter CSS sent U.S. Payments CEO. *Id.* at 4. A notice of dismissal was filed six days after the complaint based on an understanding between the parties regarding U.S. Payments' operations not infringing any CSS patents. E-mail from Robin H. Gustin, *supra*.

213. Complaint at 2, Diebold, Inc. v. Capital Security Systems, Inc., No. 5:11-CV-26 (N.D. Ohio Jan. 5, 2011).

214. *Id.* at 1.

215. Notice of ADR Administrator at 1, *Diebold, Inc.*, No. 5:11-CV-26 (N.D. Ohio Sept. 20, 2011).

216. Order at 1, *Diebold, Inc.*, No. 5:11-CV-26 (N.D. Ohio Nov. 30, 2011).

217. *See supra* Part II.B; E-mail from Robin H. Gustin, *supra* note 212.

for patent infringement in the U.S. District Court for the Eastern District of Texas.<sup>218</sup> Litigation continued for a little over one year until a November 19, 2013 filing stated that the plaintiff and defendants “hereby move for an order dismissing all claims . . . subject to the terms of that certain agreement entitled ‘AGREEMENT’ and dated November 13, 2013, with each party to bear its own costs, expenses and attorneys’ fees.”<sup>219</sup> An Order of Dismissal With Prejudice was entered by the court on November 21, 2013.<sup>220</sup>

As of January 2014, CSS currently has multiple licenses of its patent portfolio but does not have any litigation pending.<sup>221</sup> CSS is currently still partnered with IPNav.<sup>222</sup>

#### 5. The Current Status of Robin H. Gustin

Ms. Gustin is now the listed inventor of six U.S. patents with over 780 forward citations, including some from leading ATM manufacturers and financial institutions.<sup>223</sup> After nineteen years of working full-time and “sinking her life savings into CSS,” she now assists her patent monetization legal team full-time with documentation and coordination of company materials.<sup>224</sup>

### IV. INTERPRETATIONS OF THE CASE STUDIES

#### A. *Fundamental Differences and Similarities Within the PAE Case Studies*

Comparing the two PAE case studies reveals both fundamental differences and similarities in the inventor and invention stories leading up to the patent assertions. Regarding differences, first, Mr. Woolston and Ms. Gustin are from geographically different parts of the United States: Mr. Woolston went to school, worked, and started his company in northern Virginia; Ms. Gustin went to school, worked, and started her company in metropolitan Chicago. Second, both inventors have very different educational backgrounds: Mr. Woolston was initially trained in the Air Force and then went on to study engineering and law

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218. Complaint at 1, *Capital Security Systems, Inc. v. JPMorgan Chase Bank, N.A. et al.*, No. 2:12-CV-604 (E.D. Tex. Sept. 18, 2012).

219. Joint Stipulated Motion for Dismissal with Prejudice, *JPMorgan Chase Bank*, No. 2:12-CV-604 (E.D. Tex. Nov. 19, 2013).

220. Order of Dismissal with Prejudice, *JPMorgan Chase Bank*, No. 2:12-CV-604 (E.D. Tex. Nov. 21, 2013).

221. E-mail from Robin H. Gustin, *supra* note 212 (confirming status of CSS).

222. *Id.*

223. *Quick Search*, U.S. PAT. & TRADEMARK OFF., <http://patft.uspto.gov/netahtml/PTO/search-bool.html> (select “Inventor Name” in Field 1 and search for “Robin Haley”) (last visited Oct. 10, 2014). Forward citations are the number of citations received by a particular patent by subsequent patents. They are often seen as a sign of patent value.

224. E-mail from Robin H. Gustin, *supra* note 212; Telephone Interview with Robin H. Gustin, *supra* note 168.

at university; Ms. Gustin studied business in university and then learned manufacturing and automation processes while working at packaging companies before independently studying the ATM check cashing industry.

Regarding further differences, third, Mr. Woolston and Ms. Gustin's inventions relate to completely different markets and products: Mr. Woolston's inventions relate to new commercial uses for the internet in commerce and the sale of goods through internet commerce; Ms. Gustin's inventions relate to electronic financial processes and the capabilities of modern ATM machines. Fourth, Mr. Woolston and Ms. Gustin followed different inventive steps: Mr. Woolston had an invention idea in the summer of 1994, then spent months working by himself to create a detailed technical document that could perform the concept before filing for patent protection individually in 1995; Ms. Gustin learned of the check cashing process shortfalls in 1993, then spent a few years learning about the ATM and financial industry before founding a company, raising capital, hiring engineers to build a prototype, and filing for patent protection—with other inventors listed—in 1997.

Regarding similarities between the case studies, first, Mr. Woolston and Ms. Gustin both operated on similar timelines: they both conceived of inventions and filed for patent protection in the early/mid 1990s, they both attempted to build companies and raise capital around the inventions for five to ten years, and then they both made the decision to enforce their patent rights through litigation. Second, both Mr. Woolston and Ms. Gustin began enforcing their patent rights against companies they originally sought business partnership relationships from long before the companies infringed the patents.

Regarding further similarities, third, Mr. Woolston and Ms. Gustin both initially attempted to build and manage their own companies around their inventions—even putting careers on hold and investing life savings into the companies; neither inventor founded their company with a business model associated with patent litigation. Fourth, Mr. Woolston and Ms. Gustin were both met with great skepticism during the initial discussions with investors and partners regarding the feasibility of their inventions.<sup>225</sup> Fifth, both Mr. Woolston and Ms. Gustin saw obtaining a patent for their invention as the *only* protection possible to protect their business, the protection to give them the ability to share their ideas and raise capital for their business, and the fundamental motivation for them to invest in and develop revolutionary new ideas. It is noteworthy that two inventors with no relationship to each other—who have never met or spoken and who have completely different backgrounds—both describe such similar motivations to invent: Mr. Woolston noted that “[without a patent,] why [would an inventor] educate the marketplace and work on an independent idea if someone else could copy the

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225. *See supra* Parts III.A.3, III.B.3.

idea?"; Ms. Gustin noted that "[patents are] the sole protection to further invention."<sup>226</sup>

*B. Comparison of Case Study Facts to the Currently Popular PAE Theories*

As discussed in Part I, the recent PAE literature splits in two very different directions regarding PAEs exemplifying pre-described "Patent Trolls" or "Horatio Alger Inventors" characteristics. Accordingly, the following section will analyze the case study facts to each characteristic identified in Part I. As discussed in Part II, the following comparisons—based on two limited case studies—cannot be used to draw general conclusions regarding a class of *all* PAEs. The purpose instead is to test the currently popular PAE theories on a new research focus to create an additional incremental data point. The research focus may then be tested systematically with a larger number of cases.

1. Characteristics of PAEs Refuting a Patent Troll Image

*PAEs do not innovate; they seek to acquire broad patent claims that encompass existing technologies.*

The facts concerning both case studies refute this assertion. The ideas of both Mr. Woolston and Ms. Gustin were very innovative at the time both inventors began development—so innovative they were rejected by industry leaders as impractical. Further, both inventors filed for initial patent protection with the intent of building their own companies and commercializing their own ideas. There is no material to support a notion that the MercExchange or CSS patents were initially filed for any future patent litigation use.<sup>227</sup>

*PAEs work to create a patent thicket—overlapping intellectual property rights that a company must hack its way through in order to actually commercialize new technology.*

The facts concerning both case studies refute this assertion. The initial patent filings of both Mr. Woolston and Ms. Gustin were completed with the strict intent of protecting their own ideas in furtherance of commercializing their own inventions. The single patent that Mr. Woolston filed in April 1995 was focused around his own collectible sales business plan. The three patents Ms. Gustin filed in May 1997 were for enhancements to the existing electronic check cashing and ATM systems in the marketplace—all patents were

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226. See *supra* Part III.

227. The only caveat to this conclusion is that after the initial MercExchange and CSS patents were filed, at a point when litigation seemed more apparent, claim amendments and ongoing patent prosecution could have been broadened as a future litigation strategy. Further research into the prosecution history of all patents involved in litigation would have to be conducted to better understand the timelines of those events and patent claim amendments.

developed from an early version of the Super ATM prototype she had worked on for years with multiple consultants.

*PAEs delay patent issuance, asserting patents or licensing negotiations in furtherance of the infringing use value to the infringer increasing during delay.*

The facts concerning both case studies refute this assertion. For Mr. Woolston and MercExchange, patent issuance was always seen as the solution to delays with raising capital. Accordingly, expediting the patent review process to more quickly fund and expand MercExchange was a primary goal. Additionally, when MercExchange began communicating with eBay regarding patent licenses, eBay was not infringing. Once eBay did begin to infringe the MercExchange patents, MercExchange filed suit in less than a year—there was no delay. In the same way, CSS filed for patent protection as quickly as possible so Ms. Gustin could begin her “road show” to banks and other financial institutions in the hopes of finding commercial partners. She also repeatedly contacted companies, like Diebold, to engage in partnership discussions and, years later, to discuss patent licensing. While Diebold’s filing of a declaratory judgment action might support a notion that CSS was delaying a lawsuit, the fact that Diebold had been contacted by Ms. Gustin almost a decade before (regarding a partnership to manufacture her Super ATM) negates any notion of delay on the part of CSS.

*PAEs are more willing to prolong and broaden patent litigation.*

The facts concerning both case studies refute this assertion. Regarding MercExchange, the trial litigation tactics, procedural facts regarding appeals, and the district court’s forcing of a bond to be posted after the Supreme Court appeal (because there was still no resolution between the parties), most certainly draws the inference that it was eBay prolonging the litigation, settlements, and proceedings. Regarding CSS, the facts are unclear since there has not been an infringement trial or other substantive litigation proceeding involving the patents. In the short litigation that has ensued, it does appear that quick settlement—or simply a quick end to litigation in cases of non-infringement—has occurred in every proceeding.

*PAEs do not transfer earned profits to inventors.*

The facts concerning both case studies refute this assertion. Perhaps most clear from Mr. Woolston’s and Ms. Gustin’s stories is that the initial individual inventor behind each of the patents asserted in litigation are still the owners of the patents and the primary recipients of profits earned from the infringement litigation. While one of the most prominent patent monetization firms did partner with Ms. Gustin (IPNav), that partnership was only in furtherance of Ms. Gustin being able to earn profits from her invention and not be unfairly

disadvantaged in litigation against large companies with large litigation budgets.

*PAEs prey on startups and small companies.*

The facts concerning both case studies refute this assertion. Regarding Mr. Woolston and MercExchange, the case against eBay was filed in 2001. While eBay was a startup internet success story in the mid-1990s, by 2001 eBay was already a huge multi-million dollar company. Beyond the eBay lawsuit, there is no evidence to suggest that MercExchange was ever planning to assert its patents against any small startup companies.<sup>228</sup> Regarding Ms. Gustin and CSS, neither of the two patent infringement suits CSS filed were against small companies. The September 2010 Central District of California case<sup>229</sup> was filed against Co-Op Financial Services (CU Cooperative Systems, Inc.), “the nation’s largest credit union service organization,”<sup>230</sup> and the September 2012 Eastern District of Texas case targeted some of the largest banks in the country—JPMorgan Chase Bank, Wells Fargo Bank, and Compass Bank.<sup>231</sup>

In fact, when looking for a proverbial “David vs. Goliath” story regarding patent infringement, both case studies show numerous examples of a small startup patent owner—attempting to gain investors or build a product based on intellectual property—being exploited by large already-existing companies that did not respect patent rights. For MercExchange, eBay spent considerable time learning of Mr. Woolston’s business and patent filing history before making the decision to infringe Mr. Woolston’s patents.<sup>232</sup> Similarly, for CSS, large ATM companies, like Diebold, learned of her Super ATM product capabilities years before introducing their own infringing ATM products. Accordingly, from the case studies, the only evidence of large actors using size or resources to their advantage is on the part of the large-company defendant patent infringers.<sup>233</sup>

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228. MercExchange was involved in one other patent litigation case, filed in 2000, against GoTo.com. *MercExchange v. GoTo.com*, No. 2:00-CV-826 (E.D. Va. dismissed June 19, 2001). The case settled favorably for MercExchange in 2001 for \$4 million shortly after discovery commenced. See *eBay Patent Wars*, ECOMMERCEBYTES.COM, <http://www.ecommercebytes.com/cab/pages/patent> (last visited Oct. 10, 2014). GoTo.com was not a small startup company in 2000 when MercExchange filed suit. GoTo.com was eventually purchased by Yahoo!, Inc. in 2003 for \$1.63 billion. See *Yahoo! Search Engine Analysis*, SEO LOGIC, <http://www.seologic.com/guide/history/yahoo> (last visited Oct. 9, 2014).

229. This case was quickly dismissed after filing. See *supra*, note 212.

230. CO-OP FINANCIAL SERVICES, ANNUAL REPORT 2013, at 3 (2014), available at <https://co-opfs.uberflip.com/i/335402>.

231. Complaint, *supra* note 218.

232. See *supra* Part III.A.4.

233. Given this implication, one noteworthy aspect of PAEs might be that they promote social justice balance within intellectual property law. See Steven D. Jamar & Lateef Mtima, *The Centrality of Social Justice for an Academic Intellectual Property Institute*, 64 SMU L. REV.



## 2. Characteristics of PAEs Supporting a Horatio Alger Inventor Image

*PAEs transfer resources from consumer-commercializing activities to innovation.*

The facts concerning both case studies support this assertion. For all legal actions reviewed where resources transferred due to judgment or licensing settlement, the transfer was from an active consumer-commercializing entity to the initial technology innovator. While the consumer-commercializing entity might also be an innovation entity, the primary business was one of commercialization and not innovation.<sup>234</sup> Further, looking at the post-litigation history of both Mr. Woolston and Ms. Gustin, both inventors have continued to develop new technology. Both inventors have been issued additional patents, and in the case of Mr. Woolston, he has expanded his subject areas of innovation far beyond anything MercExchange was initially founded to develop.

*PAEs stand for individual inventors who are not in the business of practicing inventions.*

The facts concerning both case studies weigh in favor of this assertion but the analysis is not perfectly clear. Both MercExchange and CSS were founded to design and develop commercial products. Both companies were also founded by inventors who had never owned or managed a company before. While both companies did originally plan to do more than simply own patents, as time went on, both entities eventually consisted of only the individual inventor and the patents. It is also worth noting that both companies had great difficulties with raising capital, communicating with larger existing business partners, and—on the part of MercExchange—internal company management.

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1127, 1130 (2011) (“The advent of digital technology and related advances provide a means by which to utilize intellectual property regimes to bridge the societal goals of social justice and equality with those of cultural progress and global competition and hegemony. Indeed, a principal justification for protecting intellectual property is to encourage the creation and dissemination of information and knowledge, and the ultimate efficacy of this civic agenda is dependent upon the pervasiveness of its reach: every citizen should have effective access to both.”). *See also* Anupam Chander & Madhavi Sunder, *Is Nozick Kicking Rawls’s Ass? Intellectual Property and Social Justice*, 40 U.C. DAVIS L. REV. 563, 578–79 (2007) (“No human domain should be immune from the claims of social justice. Intellectual property, like property law, structures social relations and has profound social effects. . . . Intellectual property law will help define the possibilities and human capabilities of this Age.”).

234. By way of tangible example, eBay is an internet commerce company that owns multiple patents but creates profit from consumer commercial activity, not innovation sales. In contrast, while MercExchange was founded with different plans in mind, its primary output has been to develop technology, file for patent protection covering the technology, and then disperse the technological know-how to investors and commercial companies.

Amongst other things, if the success of the patents within litigation can be considered a sign of innovative value, then that would most certainly be the greatest value added—certainly a greater value added than either entity practicing the inventions. In short, while the original entity intent and evolution does not make this a clear analysis, a conclusion that both Mr. Woolston and Ms. Gustin are primarily best at innovation can certainly be drawn.

*PAEs spawn innovation through creation of a licensing marketplace for inventions.*

The facts concerning both case studies weigh in favor of this assertion but the analysis is not perfectly clear. Both MercExchange and CSS have licensed their patents, and both entities have transferred resources from commercialization of an invention to the original inventor; however, it is unclear if there is any increased marketplace for licensing inventions or any growth in innovation broadly through invention licensing. The CSS litigation facts do draw the inference that once companies begin to license a patent, similar companies would be more willing to license; but this is certainly not a marketplace open to other invention licensing. There is no evidence of innovation outside MercExchange/Mr. Woolston or CSS/Ms. Gustin occurring as a result of the MercExchange and CSS litigation.

*PAEs bringing a lawsuit are likely to be the same entity that filed the patent application initially.*

The facts concerning both case studies support this assertion. The case studies make perfectly clear that the entities and individuals who originally filed the patent applications—MercExchange/Mr. Woolston and CSS/Ms. Gustin—are the entities and individuals bringing the patent assertion lawsuit.

*Individuals face a significant disadvantage in high stakes patent litigation unless they allow PAEs to enforce their patents.*

The facts concerning both case studies support this assertion. Regarding MercExchange, as the trial testimony of Mr. Woolston made clear, at the time MercExchange thought eBay was genuinely working to purchase MercExchange's patents, "eBay was [in fact] trying to get a jump on [a] lawsuit."<sup>235</sup> After a few months of patent sale negotiations with eBay, it became MercExchange's position that eBay was simply "looking for ways to kill the patents instead of buying them."<sup>236</sup> In the same way, when CSS sent letters asserting that certain companies were infringing their patents rights, those companies, as plaintiffs, filed declaratory judgment actions of non-

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235. Transcript of Record, *supra* note 94, at 595.

236. Wilkinson, *supra* note 94.

infringement instead of waiting to see if CSS would file a lawsuit. Further, as evidenced by the *MercExchange v. eBay* trial and appeals, all litigation options possible—including appeals to the United States Supreme Court—will potentially be waiting for anyone who attempts to assert patents. While legal freedoms to negotiate under any motivation, file a lawsuit preemptively, or appeal any judgment are certainly options, both case studies illustrate how individual patent owners could not possibly assert and litigate their own patents without an extensive legal team of support and a large amount of financial resources to cover the litigation costs.

### C. *The Need for Further Empirical Research*

While the case studies described here support the Horatio Alger Inventor view of PAEs, this research is extremely limited. First, both case studies could be outliers of PAE circumstances—a larger sampling of PAE case studies is needed to draw formal final conclusions. Second, while the author has attempted to understand the PAE literature and compare the two case study facts to the most important PAE characteristics being discussed, there could be additional analysis points that these—and other—PAE case studies can be evaluated against. Third, additional analysis into any case study can always be conducted—for example, as discussed in Part IV.B.1, research into the patent prosecution history of the PAE patents may provide further insights into the business or litigation strategy of PAEs.

## CONCLUSION

The case studies discussed here repudiate the common view of PAEs as patent trolls lurking beneath the bridge of innovation exacting tolls on the patent system and overall economy. To the contrary, the case study research here, while only a preliminary investigative step to provide a hypothesis, supports the countervailing view of PAEs representing the interests of “Horatio Alger Inventors” who tirelessly labor to build bridges of innovation and who seek only their fair share. Specifically, these two case studies illustrate that:

1. Modern inventors see obtaining a patent covering their invention as the fundamental motivation to invent and the only protection possible to protect their business, share ideas, and raise capital.
2. PAEs enforce patent rights against companies they originally sought business partnership relationships from long before the companies infringed their patents.
3. PAEs represent the original inventors and patent applicants who initially intended to build and manage their own companies based on their inventions. Accordingly, PAEs transfer resources from consumer-commercializing companies to original inventors.

4. PAEs assert inventions which were revolutionary at the time of conception but, for a variety of reasons, did not themselves become a commercially successful business enterprise.
5. PAEs do not: seek to acquire patents that encompass existing technology; work to create a patent thicket; seek to delay patent issuance, asserting patents, licensing negotiations, or litigation.
6. PAEs represent small companies that were ignored by large companies when business partnership and patent licensing offers were initially communicated.
7. Individuals and small companies face a significant disadvantage in patent assertion pursuits unless they have extensive legal support and sufficient financial resources to cover litigation expenses.<sup>237</sup>

These insights are at odds with most current “troll” and empirical research regarding PAEs. Accordingly, this Article counsels for further research and analysis regarding the individuals PAEs represent and the patented inventions asserted by PAEs. This broader research should be conducted before any sweeping changes to the patent system are considered.

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237. For a reminder of the limitations on the applicability of these points, see *supra* Part II.A and note 82.