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Navigating a Post America Invents Act World: How the Leahy-Smith America Invents Act Supports Small Businesses

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Navigating a Post America Invents Act World: How the Leahy–Smith America Invents Act Supports Small Businesses

By Melissa Cerro*

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I. INTRODUCTION

Patent applications and lawsuits have tripled in the last thirty years.¹ In 2012 alone, over 5,000 patent suits were filed² and the number of patents granted increased by 11% for a total of 270,258.³ Patent examiners at the United States Patent and Trademark Office (USPTO) and the district courts are striving to keep up with the work, but this can be a daunting task.⁴ Such burdens are partly

*Pepperdine University School of Law, J.D. candidate 2014. I would like to thank my family and friends for their invaluable support and encouragement over the years. I would also like to recognize the Journal of the National Association of Administrative Law Judiciary staff for their tireless efforts in preparing this piece for publication.

¹ Shawn P. Miller, *Where's the Innovation: An Analysis of the Quantity and Qualities of Anticipated and Obvious Patents*, 18 VA. J.L. & TECH. 1, 5 (2013).

² CHRIS BARRY, ET AL., 2013 PATENT LITIGATION STUDY: BIG CASES MAKE HEADLINES, WHILE PATENT CASES PROLIFERATE 3 (2013), available at http://www.pwc.com/en_US/us/forensic-services/publications/assets/2013-patent-litigation-study.pdf. See generally Xun (Michael) Liu, *Joinder Under the AIA: Shifting Non-practicing Entity Patent Assertions Away from Small Businesses*, 19 MICH. TELECOMM. & TECH. L. REV. 489, 490–91, 502 (2012). While there has been a steady increase in patent litigation over the past few years, it is likely a portion of the 2012 increase is due to the America Invents Act's stricter joinder rules for patent cases, making it more difficult to join together parties in patent lawsuits. As a result, more suits are being filed individually. *Id.* See also Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 593 (2012) (acknowledging an increase in patent suits with multiple defendants just prior to the AIA taking effect, such as the 175 defendants who were sued by one plaintiff in the final hour before the new joinder law took effect). For a further discussion of the AIA's joinder impact on small businesses, see *infra* Part VI.

³ BARRY, *supra* note 2, at 6.

⁴ *Id.* at 20–21. After examining 685 cases, it is noted that 70% of those cases begin trial within three years from the point the complaint is filed to the first day of trial. As the courts have seen an increase in caseload, there has been a slight increase in the amount of time it takes to begin trial, but this has not been significant. *Id.* See generally DATA VISUALIZATION CENTER: DECEMBER 2013 PATENTS DATA, AT A GLANCE, USPTO, available at <http://www.uspto.gov/dashboards/patents/main.dashxml> (last visited Jan. 13, 2014). As of December 2013, the USPTO had a backlog of a little more than 595,000 unexamined patent applications and an average traditional application was pending for a little less than two and a half years. At the time, there were about 8,000 patent examiners. *Id.*; Alexander R. Trzeciak, *Taboo, the Game: Patent Office Edition—The New Preissuance Submissions Under the America Invents Act*, 63 DUKE L.J. 245, 250 (2013) (noting it has also been estimated that patent

responsible for the “inconsistent quality” seen in recently granted patents⁵ and likely what led to the results of a 2013 study that estimated 28% of already granted patents, if examined for obviousness or anticipation, would fail.⁶ Concerns from the patent community about bad patents passing through approval and their impact on the economy are not new.⁷ An additional concern, until recently, was that the U.S. was the last country to have a “first to invent” patent system as opposed to a “first to file” system.⁸ All of these concerns and many others are what prompted Congress in 2011 to pass what has been described by some as the most dramatic

examiners “spend only about eighteen hours reviewing a given patent application”).

⁵ David Trilling, Note, *Recent Development: Recognizing a Need for Reform: The Leahy–Smith America Invents Act of 2011*, 2012 U. ILL. J.L. TECH. & POL’Y 239, 240 (2012) (citing U.S. DEPT. OF COMMERCE, PATENT REFORM: UNLEASHING INNOVATION, PROMOTING ECONOMIC GROWTH & PRODUCING HIGH-PAYING JOBS 4 (2010), available at http://www.esa.doc.gov/sites/default/files/reports/documents/patentreform_0.pdf).

⁶ Shawn P. Miller, *supra* note 1, at 6–7 (noting that certain technological industries are worse than others, namely software and business methods would be expected to be invalid 39% and 56% of the time, respectively, while other areas such as medical, semiconductor, and energy patents tend to perform better than average); *see also* Trzeciak, *supra* note 4, at 249 (finding in a 1998 study on patent validity that “46 percent of challenged patents had been held invalid”).

⁷ Trzeciak, *supra* note 4, at 249–50 (citing Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1515–20 (2001) (“discussing ‘the social costs of bad patents’”)); FED. TRADE COMM’N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 5–6 (2003), available at <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>; *see also* ECONOMICS AND STATISTICS ADMINISTRATION AND UNITED STATES PATENT AND TRADEMARK OFFICE, INTELLECTUAL PROPERTY AND THE U.S. ECONOMY: INDUSTRIES IN FOCUS, v (Mar. 2012), available at http://www.uspto.gov/news/publications/IP_Report_March_2012.pdf. This U.S. Commerce Department study, released in 2012, found that “IP [intellectual property]-intensive industries accounted for about \$5.06 trillion . . . or 34.8 percent of U.S. gross domestic product (GDP), in 2010.” This included about 3.9 million jobs in “patent-intensive industries.” *Id.*

⁸ David S. Abrams & R. Polk Wagner, *Poisoning the Next Apple? The America Invents Act and Individual Inventors*, 65 STAN. L. REV. 517, 520 n.10 (2013). The United States was last to abandon the “first to invent” system, following the Philippines, which made the conversion in 1998. *Id.*

legislation to affect patent law in the United States, at least since the 1950s—the Leahy–Smith America Invents Act (AIA).⁹

The AIA makes a number of significant changes to the patent laws, one of the most publicized being the conversion from a “first to invent” system to a “first inventor to file” system.¹⁰ One of the largest concerns with the AIA is that it disproportionately and negatively impacts small businesses while favoring big businesses.¹¹ Despite their size, small business inventors make important contributions to the economy beyond hiring, such as promoting

⁹ Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 28 and 35 U.S.C.) [hereinafter AIA]; *see* AIA, 125 Stat. at 293 (describing a motivation of Congress to “provide inventors with greater certainty regarding the scope of protection provided by the grant of exclusive rights to their discoveries” and to harmonize the U.S. patent system with foreign patent systems); Abrams & Wagner, *supra* note 8, at 519 (“On September 16, 2011, President Barack Obama signed into law the Leahy–Smith America Invents Act (AIA or the Act), almost certainly the most sweeping set of changes to the U.S. patent system in almost sixty years.”).

¹⁰ Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 4, 5, 78 (2012); *see* Abrams & Wagner, *supra* note 8, at 519 n.8. The AIA was passed on September 16, 2011, with certain sections being phased in through March 16, 2013. Many of the changes will be addressed farther on in this Comment. Abrams & Wagner, *supra* note 8, at 519 n.8.

¹¹ *See* Eric A. Kelly, *Is the Prototypical Small Inventor at Risk of Inadvertently Eliminating Their Traditional One-Year Grace Period Under the American Invents Act?—Interpreting “Or Otherwise Available to the Public” Per New § 102(a) and “Disclosure” Per New § 102(b)*, 21 TEX. INTELL. PROP. L.J. 373, 374 (2013); Jennifer L. Case, *How the America Invents Act Hurts American Inventors and Weakens Incentives to Innovate*, 82 UMKC L. REV. 29, 30–31, 62 (2013) (raising the fact that large corporations’ lobbying efforts were a motivator behind the AIA and that the predecessor to the AIA, discussed since 2005, failed to include testimony from “startup companies or individual inventors” in the Senate Judiciary Committee and had minimal input from these groups in the House Judiciary Committee until 2009); *see also* U.S. SMALL BUSINESS ADMINISTRATION, Table of Small Business Size Standards Matched to North American Industry Classification System Codes, *available at* http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf (last visited Apr. 5, 2014). The Small Business Administration describes a small business as having anywhere from 50 to 1500 employees, depending on the industry. *Id.* A significant number, however, are defined as qualifying as a small business if they have 500 or fewer employees. An exact number is not important for this Comment, but rather helps to give an idea of the size of company that qualifies as a small business.

technological change.¹² A sense of protection for the homegrown inventor, like Steve Jobs and Steve Wozniak with the first Macintosh computer or Thomas Edison with the first light bulb, is also somewhat justified given that big businesses appear to have been a motivator behind patent reform.¹³ However, further examination of the AIA suggests that small businesses are not without significant protections. While not written with only the small business inventor in mind, the AIA provides several key advantages for small businesses such as converting the U.S. to a first inventor to file system,¹⁴ revising the definition of § 102 prior art,¹⁵ providing new joinder requirements,¹⁶ a new inter partes review proceeding,¹⁷ and revising the fee schedule at the USPTO.¹⁸ These advantages will each be discussed in turn, but before that, Part II will give a brief

¹² See Abrams & Wagner, *supra* note 8, at 530 (recognizing the contributions small inventors make to the “innovation ecosystem” including “moving the pace of technological change forward” and “serv[ing] as important innovation inputs into larger, established companies” such as in the pharmaceutical industry); see Liu, *supra* note 2, at 499–500 (referencing a U.S. Small Business Administration posting that small businesses in the U.S. are responsible for “half of all private sector employees” and “generated 65% of new jobs in the last seventeen years”).

¹³ See Charles E. Miller & Daniel P. Archibald, *Beware the Suppression of District-Court Jurisdiction of Administrative Decisions in Patent-validity Challenges Under the America Invents Act: A Critical Analysis of a Legislative Black Swan in an Age of Preconceived Notions and Special-interest Lobbying*, 95 J. PAT. & TRADEMARK OFF. SOC'Y 124, 135 (2013); Case, *supra* note 11, at 60, n.205 (citing Renee Kaswan et al., *Patent Reform: Effects on Medical Innovation Businesses*, 2 MED. INNOVATION & BUS. 11, 11 (2010)) (“As introduced in 2005, the Patent Reform Act reflected the concerns of two large lobbying coalitions, the Coalition for 21st Century Patent Reform headed by several large pharmaceutical and manufacturing companies, and the Coalition for Patent Fairness headed by the large information technology companies.”).

¹⁴ See Hung H. Bui, *An Overview of Patent Reform Act of 2011: Navigating the Leahy-Smith America Invents Act Including Effective Dates for Patent Reform*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 441, 467 (2012). The first inventor to file system dictates that the application received by the USPTO first, when there are multiple applications for the same invention are filed, will receive priority. *Id.*

¹⁵ See *id.* at 468. Prior art is a listing of categories or occurrences that will bar approval of a patent application due to the fact that the invention is not novel.

¹⁶ *Id.* at 453. The AIA specifically restricts the reasons why parties in a lawsuit may be joined together into one suit. *Id.*

¹⁷ *Id.* at 459. Inter partes review serves as a method for the non-patent owner to challenge the validity of a patent on limited grounds. *Id.*

¹⁸ *Id.* at 447–48. The fee schedule determines the costs for specific services with the USPTO depending on what type of inventor or company is seeking the service. *Id.*

history of patent law in order to provide some perspective on the substantial changes made by the AIA. Part III will briefly address the AIA. This will be followed by a discussion on how the AIA's development has affected small businesses in the United States. Part IV will specifically address the advantages of the "first inventor to file" system for small businesses, followed by the § 102 prior art changes in Part V, the joinder changes in Part VI, the revised fee structure at the USPTO in Part VII, and the new inter partes review proceedings in Part VIII. Finally, Part IX will discuss possible future improvements to the AIA that could further aid small businesses, followed by the conclusion in Part X.

II. BRIEF HISTORY OF PATENT LAW

Congress's ability to create patent laws stems from Article I, Section 8, Clause 8 of the U.S. Constitution, which states Congress has the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."¹⁹

The patent laws have been significantly revised only a handful of times since the first Patent Act of 1790, including in 1793, 1836, 1839, 1939, 1952, 1994, 1999, and 2011.²⁰ The most recent significant patent revision, outside of the AIA, was the Patent Act of 1952, which structured federal law into statute, serving as a "culmination of 160 years of developing patent law, selectively incorporating some of the provisions in prior statutes, [and] codifying sensible judicial precedents."²¹ The Patent Act of 1952 also created a key patent requirement that the invention could no longer be obvious

¹⁹ U.S. Const. art. I, § 8, cl. 8.

²⁰ Case, *supra* note 11, at 52; Armitage, *supra* note 10, at 9. Prior to the 1800s, it was notable that patents were not granted if they were publicly or commercially used before a patent application was filed. Case, *supra* note 11, at 52. In the 1800s, the patent office was created, the "novelty" requirement for all patents was created, and a two-year grace period for public or commercial use was introduced. *Id.* This grace period for a patent owner to file a patent application after a public or commercial use was later reduced to one year in 1939. *Id.*

²¹ Miller & Archibald, *supra* note 13, at 134; Trilling, *supra* note 5, at 243; *see also* Case, *supra* note 11, at 54. Rules pertaining to conception of an idea, reduction to practice, diligent efforts to reduce that idea to practice, and abandonment of an idea were among the many rules codified in the 1952 Patent Act. Case, *supra* note 11, at 54. These were all pertinent to patent prosecution up until the implementation of the AIA. *Id.*

and still receive the luxury of a limited monopoly.²² Still, maintained in the Patent Act of 1952 was the first to invent system and the requirement that patent applicants had to act with good faith and had “an affirmative duty to disclose information” related to their invention.²³ The time frame for patents also could vary widely depending on the motivation level of the patent applicant since patents expired seventeen years after the patent was issued, not after it was requested.²⁴ This left an expiration range between eighteen and fifty years for some patents.²⁵ Additionally, until recent decades, invalid but granted patents could not be contested.²⁶ Lastly, the court process for challenging patents gave challengers great freedom in allowing them to attack any decision made by the patent holder in the application process, and did not limit attacks to material similarities in the inventions.²⁷

In 1980, the Patent Act created the “ex parte reexamination” procedure,²⁸ which meant the public could address some concerns of an already issued patent with the USPTO.²⁸ After the 1980s, there were two pieces of legislation, the Uruguay Round Agreements Act of 1994²⁹ and the American Inventors Protection Act of 1999,³⁰ which further expanded patent rights.³¹ Combined, these two laws required the majority of patent pending applications to be published within eighteen months of the initial filing date, restricted most patents to twenty year terms from the filing date, rather than the date the patent was granted, and created an inter partes reexamination process for specific issues.³²

²² Patent Act of 1952, ch. 950, § 103 (1952). Nonobviousness has served as a key requirement for patentability since the 1952 Act.

²³ Armitage, *supra* note 10, at 6, 8.

²⁴ *Id.* at 7.

²⁵ *Id.*

²⁶ *Id.* at 6.

²⁷ *Id.* at 7–8.

²⁸ *Id.* at 9. The ex parte reexamination procedure restricted the public’s involvement in the process and has not been put to widespread use. *Id.*

²⁹ Act of Nov. 29, 1999, Pub. L. No. 106-113, § 4001, 113 Stat. 1501, 1501A-552 (1999).

³⁰ *Id.*

³¹ Armitage, *supra* note 10, at 9.

³² *Id.* The inter partes reexamination process, like the ex parte reexamination, was very limited in this case “to very narrow patentability issue arising from patents and printed publications.” *Id.*

III. THE AMERICA INVENTS ACT

As mentioned above, many have expressed that the AIA is a significant piece of legislation. Even the USPTO considers it one of the most impactful pieces of legislation since 1836.³³ President Obama signed the AIA into law on September 16, 2011; however, it took Congress six years and several attempts to write the bill and get it passed through both houses of Congress.³⁴

The AIA made both procedural and substantive changes to the U.S. patent system, with some of the most impactful changes being a conversion to the “first inventor to file system”; altering the prior art language, which directly impacts both the novelty and obviousness assessments; revising and creating new procedures to address challenges to granted patents, such as the inter partes review; and revising the fee structure.³⁵ The AIA also set up an implementation timeline, which phased different sections in over an eighteen-month period. For example, while the first inventor to file system did not take effect until March 16, 2013, the new fee schedule took effect immediately on September 16, 2011.³⁶

³³ Kelly, *supra* note 11, at 375. It should be noted that the author Eric Kelly is a law student and patent examiner who self-admittedly framed the analysis of his article in favor of the small inventor.

³⁴ Trilling, *supra* note 5, at 245 (citing a statement by Senator Leahy); Bui, *supra* note 14, at 441–42 (noting that Congress had been trying to pass patent reforms since 2005 and since that time unsuccessfully passed the Patent Reform Act of 2005, the Patent Reform Act of 2006, the Patent Reform Act of 2007, the Patent Reform Act of 2009, and the Patent Reform Act of 2010); *see also* Trilling, *supra* note 5, at 244–45. Even still, the AIA was at risk of not being passed either, when after voting on it and sending it to the House of Representatives for approval, it was returned to the Senate with an amendment “creat[ing] a ‘reserve fund’” for money received by the USPTO beyond what Congress appropriated for it. *Id.* Due in large part to efforts on Senator Leahy’s part, the amended version passed the Senate without alteration. *Id.* at 245.

³⁵ Armitage, *supra* note 10, at 11; Christopher Brown, *Survey: Intellectual Property Law: Developments in Intellectual Property Law*, 45 IND. L. REV. 1243, 1243 (2012). *See generally* Trilling, *supra* note 5.

³⁶ Brown, *supra* note 35, at 1243–44; Bui, *supra* note 14, at 447–48.

IV. ADVANTAGES OF FIRST INVENTOR TO FILE UNDER THE AIA

One of the more publicized changes in the AIA is the switch from a first to invent system to a first inventor to file system.³⁷ The previous first to invent system generally granted the patent to the inventor who could prove—sometimes by swearing in an oath—that she was the first to invent the invention.³⁸ At times, this could mean that even if one inventor filed her patent application before another application for the same invention, even though she was unaware of the other invention, she may not receive the patent since her application was filed later.³⁹ For example, if inventor B arrived at the same invention, Widget X, independently and close in time with but after another inventor A, and if B filed her patent application in April 2010, before A's application in June 2010, A will still be awarded the patent so long as she can show she was the first to invent widget X.

Section 3 of the AIA sets the “effective filing date” to be “the actual filing date of the patent or the application for the patent containing a claim to the invention; or (B) the filing date of the earliest application for which the patent or application is entitled,” essentially transforming the U.S. from a first to invent system to a type of first to file system.⁴⁰ This change now means that inventor B in our example above would be granted the patent since she filed her patent application prior to inventor A, regardless of the fact that inventor A created the invention first. As Congress made clear, this is not a shift to a purely first to file system, but rather a first *inventor* to file system.⁴¹ This means that a non-inventor, absent one of the approved legal rights to the invention, may not be awarded a patent.⁴²

³⁷ AIA, 125 Stat. at 285; *see also*, Paul M. Janicke, *Overview of the Patents Law of the United States*, 21 TEX. INTELL. PROP. L.J. 63, 64–65 (2013); Gene Quinn, *A Simple Guide to the AIA Oddities: First to File*, IPWATCHDOG (Sept. 11, 2013, 8:30 AM), <http://www.ipwatchdog.com/2013/09/11/a-simple-guide-to-the-aia-oddities-first-to-file/id=45104/>. The U.S. does not have a strict “first to file” system as understood internationally, but rather a “first inventor to file” system. Quinn, *supra* note 37. One key difference between the two systems is the retention of a grace period for public disclosures of the invention made by the inventor or a third party who derived the invention from the inventor. *Id.*

³⁸ *See* 35 U.S.C. §§ 102–103, 135, 291 (2006); Dargaye Churnet, Article, *Patent Claims Revisited*, 11 NW. J. TECH. & INTELL. PROP. 501, 510–11 (2013).

³⁹ Churnet, *supra* note 38.

⁴⁰ AIA § 3(a)(2)(i)(1)(A)–(B), 125 Stat. at 285.

⁴¹ *See id.* Section 3 is entitled “FIRST INVENTOR TO FILE.” *Id.* Subsections 3(o)–(p) also explain that it was the sense of Congress to shift to a

The rationale behind the first inventor to file change was in part to better align the United States with other patent systems around the world, such as Japan and Europe, in order to promote better “certainty” for inventors interested in pursuing other international patents.⁴³ First inventor to file promotes this goal because many other countries will not patent an invention that has been previously disclosed to the public.⁴⁴ This would have been the case with our earlier example where B filed first but invented second. Under the old first to invent system, A would be able to receive a U.S. patent, but would be denied a patent in many other countries due to B’s public disclosure of the invention prior to the filing of A’s patent application. An additional rationale, as described by Congress, was to promote the constitutional fundamentals of securing limited monopolies in exchange for patents, and also to “provide inventors with greater certainty regarding the scope of protection provided by” those monopolies.⁴⁵

There are several arguments against the first inventor to file system. Firstly, that the first inventor to file system creates a “race to

“first inventor to file” system. AIA § 3(o)–(p), 125 Stat. at 293. Ironically, while it is clear Congress intended to create a “first inventor to file” system, and permitted inventor(s) to file a patent application, Congress also permitted non-inventors to be able to successfully file patents. AIA § 4(b), 125 Stat. at 296. *See* Armitage, *supra* note 10, at 20, 94 (citing that while pre-AIA legislation required the patent applicant and inventor to be one and the same, § 118 of the AIA permits both direct assignees and assignees by obligation to file patent applications independently so long as the inventor is named in the application).

⁴² *See* AIA §§ 3(a)(2)(f), 4(b), 125 Stat. at 293 (to be codified at 35 U.S.C. §§ 100 and 118 respectively). Section 3(a)(2)(f) defines an inventor as the person or persons “who invented or discovered the subject matter of the invention.” *Id.* Section 4(b) of the AIA also sets the parameters for patents filings by parties other than the inventor, including those who are assigned or have a legal right to be assigned the invention and those who “show[] sufficient proprietary interest in the matter.” *Id.*

⁴³ Alexa L. Ashworth, *Race You to the Patent Office! How the New Patent Reform Act Will Affect Technology Transfer at Universities*, 23 ALB. L.J. SCI. & TECH. 383, 395 (2013); AIA § 3(p), 125 Stat. at 293. Congress felt that by making the U.S. a “first inventor to file” country it would “promote harmonization of the United States patent system with . . . nearly all other countries throughout the world with whom the United States conducts trade and thereby promote greater international uniformity and certainty in the procedures used for securing the exclusive rights of inventors to their discoveries.” AIA § 3(p), 125 Stat. at 293.

⁴⁴ Brown, *supra* note 35, at 1252.

⁴⁵ AIA § 3(o), 125 Stat. at 293.

file” with the patent office, which promotes more patent applications, some of which will not encompass the full invention but rather only the part of the invention that is ready for patenting at that time.⁴⁶ This in turn will require additional future patent applications to encompass the rest of the invention’s improvements.⁴⁷ Furthermore, it is argued that such behavior is more suited for larger businesses that have legal teams and adequate funding to file multiple patents in piecemeal.⁴⁸ Supporters of this view also point to the first to invent system as protecting small businesses from this type of activity because as long as the inventor was still making progress on her invention, she could seek a patent—and pay the expense only once—at the end of making the invention.⁴⁹ A further consequence offered by the first inventor to file system, is that due to staffing and funding, a small inventor will be at a disadvantage for even completing the invention before a large company completes its invention.⁵⁰ Lastly, it is argued that the lawsuits filed, under the first inventor to file system, against small businesses, will result in high litigation costs before the inventor has had an opportunity to recoup some of her investment and therefore before she is in a financial position to afford litigation.⁵¹

The change to the first inventor to file system, while it may not affect many businesses overall,⁵² provides small businesses with

⁴⁶ Bui, *supra* note 14, at 468 (noting that in the rush, an applicant may also draft the patent application too quickly, leading to a lesser quality in the finished product); Ammon Leshner & Tom Vanderbloemen, *Patent Reform 101: What Every South Carolina Lawyer Should Know*, 24 S.C. LAW. 28, 30 (2012).

⁴⁷ Leshner & Vanderbloemen, *supra* note 46, at 30.

⁴⁸ *Id.*; Richard G. Braun, *America Invents Act: First-to-file and a Race to the Patent Office*, 8 OHIO ST. ENTREPRENEURIAL BUS. L.J. 47, 58 (2013). Larger companies usually have legal teams on retainer and larger legal budgets. Braun, *supra* note 48, at 58. For example, it is Apple, Inc.’s policy to file a patent for all new ideas, regardless if the company has an intention at the time to use that idea. *Id.* To accomplish this goal, Apple’s engineers and attorneys meet monthly to discuss such ideas. *Id.*

⁴⁹ Leshner & Vanderbloemen, *supra* note 46, at 30; Case, *supra* note 11, at 50 (noting this type of behavior is more beneficial for those parties sensitive to cost).

⁵⁰ Abrams & Wagner, *supra* note 8, at 520.

⁵¹ Case, *supra* note 11, at 61 (presuming this will particularly be the case in derivation proceedings, which under the AIA are used to determine if a third party unfairly derived the invention from another).

⁵² Bui, *supra* note 14, at 467 (noting that many businesses already operate under a first inventor to file system due to the international implications of not for attaining foreign patents).

many important advantages that the opposition fails to consider. Firstly, by converting to a first inventor to file country, the U.S. aligns with the rest of the international community, preventing the unknowing small business from accidentally losing her ability to file international patents, due to an acceptable public disclosure under the U.S.'s old first to invent system, but an unacceptable public disclosure around the world, as demonstrated in the example above.⁵³ Due to their inexperience with the patent system domestically and internationally, small businesses are more susceptible to this type of mistake, leading to an invention that may only be patentable in the U.S. This protection of future international expansion may also make small businesses in particular more attractive to venture capitalists or larger companies that would be interested in purchasing them later because of the financial incentive to expand in other countries.⁵⁴ Essentially, by maintaining the possibility of patenting in other countries, the first inventor to file system helps to make U.S. small business patents more valuable than they may otherwise have been under the first to invent system.

One concern mentioned above of the new first to invent system is that it puts small businesses in a financially undesirable position when they have to defend lawsuits at an early stage in their patent. However, this argument fails to consider that the interference proceedings under the first to invent system ran a very similar risk. The interference proceedings were previously a way to prove up, in a mini-trial like setting during the patent application stage, that one inventor invented the patentable subject matter before the other inventor.⁵⁵ These proceedings could be expensive and often required extensive documentation that had to meet certain validation

⁵³ This presumes that, under the new first inventor to file system, the inventor does not publicly disclose his or her invention prior to filing the application. The risks associated with public disclosure will be addressed in Part V of this Comment. Because a small business may not originally have international expectations for patenting, the old first to invent system left them vulnerable to being locked out of international patents in the future.

⁵⁴ Jay P. Kesan, *Rebuttal: The Potential to Make Progress*, 160 U. PA. L. REV. PENNumbra 234, 236 (2012) (noting that small businesses engaged in the life sciences and pharmaceuticals are already familiar with the importance of foreign patents, however with the global economy this is becoming increasingly important in various technological areas as well).

⁵⁵ *See id.* (noting that due to rules favoring larger businesses in interference proceedings, many small businesses prior to the AIA were not “relying predominantly on the first to invent system”).

requirements, which may have been unknown to an individual inventor or small business and therefore never maintained.⁵⁶ Instead, the first inventor to file system saves the applicant from the time and expense of such a proceeding by setting a clear rule for which party should receive the patent if both parties made the same invention.⁵⁷

A final benefit of the first inventor to file system is that it encourages applicants to file early.⁵⁸ While it is argued by the opposition that this is a detriment, such a promotion furthers the values of the Constitution in that limited monopolies are given in exchange for the disclosure of the invention to the public. The first inventor to file system, by promoting early filing, benefits the public by permitting access to such information sooner than it may have otherwise been provided. This will benefit small businesses by furthering the development and progress of the “the useful arts” and making the information of large company competitors accessible to small businesses sooner. All in all, the underling intentions of Congress and the potential benefits internationally and financially make the change to the first inventor to file system a benefit to small businesses.

V. ADVANTAGES OF § 102 PRIOR ART CHANGES UNDER THE AIA

One key area of patent law is what constitutes prior art.⁵⁹ Before the AIA took effect, a patent could be invalidated using prior

⁵⁶ See Bui, *supra* note 14, at 467–68. It is often easier to train small businesses to file early than to teach them how to keep proper documentation to satisfy an interference proceeding. *Id.* at 468. Additionally, Bui recognized that an American Intellectual Property Law Association (AIPLA) Report of the Economic Survey of 2011 found that a more simplistic “preliminary phase or discovery” could cost nearly half a million dollars. *Id.* at 468 n.183.

⁵⁷ *Id.* at 467 (recognizing that the change to a first inventor to file system sets a “bright line standard that is easier to determine priority right disputes amongst inventors”).

⁵⁸ Marin Cionca, *200 Years of American Patent Law Tradition—Gone! An Overview of the 2011 America Invents Act*, 54 ORANGE CNTY. LAW. 10, 11 (Feb. 2012) (noting the first to invent system creates either “pressure or incentive to file early”).

⁵⁹ See Bui *supra* note 14, at 468. Prior art includes the events and occurrences that can prevent a patent application from being approved. *Id.* Before the AIA, prior art could include “prior public knowledge, prior use by others, prior printed publication, prior patent, prior public use, prior sale or offer for sale, and prior invention.” *Id.*

art to show that the invention failed to meet the 35 U.S.C. § 103 requirement of non-obviousness as of the time the invention was created.⁶⁰ By comparing the invention to the permitted types of prior art in § 102, it could be determined if the invention was obvious to a person of reasonable skill in the art, and if so, a patent would not be granted.⁶¹ Therefore, the types of § 102 prior art allowed for comparison dictate whether certain information could be used to disqualify a patent application. Before the AIA, § 102(a) limited prior art to patents, publications, public uses, and offers for sale.⁶² Old § 102 used to state in part:

Conditions for patentability; novelty and loss of right to patent

A person shall be entitled to a patent unless—
 (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States, or (c) he has abandoned the invention, or (d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate . . . filed more than twelve months before the filing of the application in the United States⁶³

The AIA, however, tacked on to the end of that listing the phrase “otherwise available to the public,” so 35 U.S.C. § 102(a)(1) now reads: “(a) Novelty; prior art. A person shall be entitled to a patent unless—(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, *or otherwise available*

⁶⁰ *Id.* at 473 (explaining that the AIA simplified § 103 by requiring that the invention was not obvious at the time of the filing date versus at the time the invention was made as with the pre-AIA patent laws).

⁶¹ Brown, *supra* note 35, at 1248.

⁶² Case, *supra* note 11, at 58 (referencing the pre-AIA version of 35 U.S.C. § 102(a)) [The pre-AIA version of 35 U.S.C. § 102 will hereinafter be referred to as “Old § 102”].

⁶³ 35 U.S.C. § 102(a)–(d) (2006) (amended 2011).

to the public before the effective filing date of the claimed invention”⁶⁴

The impact of this difference again can be far ranging since § 102 affects not just novelty, but § 103 obviousness and the grace period⁶⁵ as applied to third parties, and the very limits of what is patentable.⁶⁶

Comparing the two statutes’ requirements for novelty, it is clear that patented, printed publications, public use, and on sale are not new concepts to patent law, and in fact much case law exists interpreting these terms.⁶⁷ The real question regarding New § 102 is whether the added phrase is a unique fifth category, which broadens the scope of prior art, or if it serves as a qualifier to prior categories.⁶⁸ The direction of this interpretation may have a significant impact on the strategy taken by small businesses.

One possible interpretation of the new phrase “otherwise available to the public” is that it further qualifies or defines the previous categories barring a patent, rather than creating a new fifth

⁶⁴ 35 U.S.C. § 102(a)(1) (2013) (emphasis added) [The AIA version of § 102 will hereinafter be referred to as “New § 102”].

⁶⁵ See Heath W. Hoglund et al., *A Different State of Grace: The New Grace Period Under the AIA*, 5 No. 6 LANDSLIDE 48, 48–49 (July/Aug. 2013). Prior to the AIA, publications within one year of a patent filing by another party would not prevent patent approval based on a lack of novelty. *Id.* at 48. However, the AIA now requires that the inventor be the first person to make such a public disclosure. *Id.* The public disclosure does not extend to undescribed, obvious variations invented by a third party, which then could no longer be patentable by either the patent applicant or the inventor. *Id.*

⁶⁶ Paul Morgan, *The Ambiguity in Section 102(a)(1) of the Leahy–Smith America Invents Act*, 2011 PATENTLY-O PATENT LAW REV. 29, 29 (2011) (“New §102 will become the new definer of bars of patentability, novelty and §103 prior art for all such patent applications, and patents granted therefrom.”)

⁶⁷ See *id.* (“These terms have all been taken directly from the present § 102.”). “Old § 102(b) identifies four classes of prior art: patents, printed publications, public use, and on sale.” Kelly, *supra* note 11, at 381. “Because all the other prior art categories have been listed in Old § 102(b) since 1952, extensive case law is at hand providing much guidance for what these traditional categories of prior art mean.” *Id.* at 382.

⁶⁸ Case, *supra* note 11, at 58 (qualifying “otherwise available to the public” as a “new category” and a fifth action “bar[ring] a patent”); Kelly, *supra* note 11, at 393 (arguing in favor of “otherwise available to the public” serving as “a condition precedent on what constitutes prior art” rather than its own unique category); Morgan, *supra* note 66, at 30 (illustrating the possibility of both options based on harmonization internationally and the legislative record leading up to the passage of the AIA).

category. This interpretation seems to be the most likely given the legislative record, prior interpretations of Old § 102, and potential policy implications of a broader definition.⁶⁹ But which categories? Does the phrase limit all four categories or is it narrower, limiting just the preceding categories of “public use” and “on sale”? The grammatical and sentence structure of the clause suggests the latter. Furthermore, a Senate floor statement by Senator Kyl just prior to passing the AIA also indicates the structure and intent of Congress was to apply “otherwise available to the public” only to “public use” and “on sale.”⁷⁰ Given that patents are published for the public to see within eighteen months and printed publications are by their very nature public, there is no reason to include them in the same grouping as “public use” and “on sale.” This distinction is also illustrated by the use of “or” between “patented, described in a printed publication” and “in public use, on sale, or otherwise available to the public.” The first “or” helps to establish three categories: (1) “patented”; (2) “described in a printed publication”; and (3) “in public use, on sale, or otherwise available to the public.” Breaking down the grammar this way demonstrates why only the third category is modified by the phrase “or otherwise available to the public.” Furthermore, while the wording and connotations of “in public use” and “on sale,” suggests that these terms would have otherwise been understood to be “available to the public,” the courts, in fact, have held that these

⁶⁹ Because § 102 of the AIA only took effect on March 16, 2013, there have not been any judicial decisions interpreting the new language. In the alternative, the USPTO could issue administrative regulations or publish an update to the Manual of Patent Examining Procedures (MPEP), however, neither of these events has occurred. The latest revision for the MPEP was published in August 2012. MANUAL OF PATENT EXAMINING PROCEDURES, MPEP (2014) (Aug. 2011), *available at* <http://mpep.uspto.gov/RDMS/detail/manual/MPEP/e8r9/d0e18.xml#/manual/MPEP/e8r9/d0e18.xml> (last visited Jan. 15, 2014).

⁷⁰ See 157 CONG. REC. S1360 (daily ed. Mar. 8, 2011) (statement of Senator Jon Kyl) (addressing the grammatical and sentence structure of § 102(a)(1), states that “the clause ‘or otherwise available to the public’ [being] set off from its preceding clauses by a comma confirms that it applies to both ‘public use’ and ‘on sale’”). Additionally, there are few Congressional Records defining or describing “otherwise available to the public.” Kelly, *supra* note 11, at 384. It has been suggested with so few “meaningful references,” all of which were found in the Senate Records, “that by the time the bill S. 23 (the Senate version of the AIA) made it to the House as H.R. 1249 (the House of Representatives version of the AIA), Congress in its entirety was in agreement as to the meaning of ‘or otherwise available to the public.’” *Id.*

activities, even performed in secrecy, could still bar patentability.⁷¹ It appears in fact that it was this very type of judicial precedent Congress was trying to overturn with the addition of “otherwise available to the public,” and thus the distinction of this third category was necessary.⁷²

Interestingly, it is the interplay between the “general public availability standard” Senator Kyl speaks of and the other § 102(a)(1) change of eliminating geographic restrictions on public use, sales, and knowledge that clarifies the importance of removing secret uses and sales as a bar.⁷³ The other § 102(a)(1) change now includes both

⁷¹ The courts have interpreted “public use” and “on sale” to bar patentability even when done in secret. *See Metallizing Eng’g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516 (2d Cir. 1946). The Second Circuit held that secret commercialization of an invention beyond the grace period will invalidate a patent or prevent the granting of a patent. *Id.* As Judge Learned Hand stated, an inventor “must content himself with either secrecy, or legal monopoly.” *Id.* at 520. The *Metallizing* doctrine “is based on strong public and patent policy arguments against allowing an inventor to first make commercial advantage of an invention through secret commercial use and then to later protect the invention with patent rights.” Morgan, *supra* note 66, at 31.

⁷² The seminal case that barred patentability of a secret use as being a public use was *Egbert v. Lippman*, 104 U.S. 333 (1881), where the Court held that a particular spring sewn into a corset that was worn under clothing was deemed a “public use.” *See* 157 CONG. REC. S1360 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl). Senator Kyl describes one of the purposes of New § 102(a)(1) to be to “abrogate[] the rule announced in *Egbert v. Lippman*.” *Id.* Senator Kyl continues by stating that § 102 creates a “general public availability standard” and eliminates secret prior art. *Id.* Further support is provided in Senate Report 110-259, which addressed S. 1145, the 110th Congress’s predecessor to the AIA. S. REP. NO. 110-259 (Jan. 24, 2008). That report clarified that “the phrase ‘otherwise available to the public’” was added to § 102 “to make clear that secret collaborative agreements, which are not available to the public, are not prior art.” *Id.*

⁷³ *See* 35 U.S.C. § 102(a)-(b) (2006). Old § 102 stated,

A person shall be entitled to a patent unless—(a) the invention was known or used by others in this county, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

domestic and *foreign* public uses and sales as a bar to patentability.⁷⁴ As a result, inventors who enter secret sales may find themselves in the unenviable position of trying to prove a secret deal that took place on foreign soil, when trying to attain domestic patents rights.⁷⁵

An alternative interpretation of the new phrase “otherwise available to the public” is that it was meant as a new fifth category to bar patentability, broadening the scope of areas where disclosures would no longer be permitted, for example oral presentations at professional conferences.⁷⁶ The creation of a fifth “catchall” category, while broadening the scope, would be consistent with long held U.S. patent policy that inventions in public should not be given monopoly advantages of a patent.⁷⁷ By applying the alternative argument above where secret use or sales would no longer constitute prior art to bar a patent, an inventor is provided with an opportunity to extend his monopoly beyond the allowed twenty-year patent term.⁷⁸ This, however, seems to run directly against the grain of the Constitution’s intent.⁷⁹

⁷⁴ See 35 U.S.C. § 102 (2011). New § 102 no longer has a geographic boundary for prior art.

⁷⁵ 157 CONG. REC. S1360 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl) (such a situation, according to Senator Kyl, leaves U.S. inventors at “risk of having their inventions stolen through fraud”). It also presents challenges for discovery of non-public information available only on foreign soil.

⁷⁶ Morgan, *supra* note 66, at 30 (speculating that the new phrase may be a “catch all” to cover other public disclosures such as oral public presentations at technical meetings, internet postings, etc.”). This type of expansion would go beyond the pre-AIA requirements of being a “printed publication” or “public use.” See also Case, *supra* note 11, at 58 (adding a fifth category to prior art under the AIA).

⁷⁷ One of the principles *Egbert v. Lippman* reinforced was that an inventor could not artificially extend his monopoly beyond the patent term by using or selling his invention in secret. 104 U.S. 333 (1881). The alternative argument presented above “vastly departs from patent common law with respect to public use and on sale.” See Kelly, *supra* note 11, at 387. Such a departure leads one to question if that was the true intent of this bipartisan piece of legislation.

⁷⁸ 157 CONG. REC. S1360 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl). Senator Kyl feels “there is no reason to fear ‘commercialization’ that merely consists of a secret sale or offer for sale but that does not operate to disclose the invention to the public” since inventors will be adequately motivated to file their patent first or risk losing the opportunity to a competitor. *Id.*

⁷⁹ As addressed above, Article I, Section 8, Clause 8 allows Congress to promote the “useful arts” by providing monopolies to inventors for “limited Times.” Permitting an inventor to essentially maintain a trade secret and then patent that trade secret and enjoy the additional twenty-year monopoly fails to

One additional concern raised with the first interpretation and therefore in support of the second “catchall” interpretation is the argument that the Supreme Court requires “that ‘in order to abrogate a common-law principle, the statute must ‘speak directly’ to the question addressed by the common law.’”⁸⁰ In this case, the question would be whether a secret use or sale constitutes prior art. It does not appear, based on the language of the statute, that the phrase “or otherwise available to the public” is specific enough to this question to “speak directly” to it. However, as noted, Senator Kyl’s statements prior to the Senate’s vote went uncontested both in the Senate and later in the House of Representatives, suggesting it was the intent of Congress to not permit a secret use or sale to qualify as prior art.⁸¹

One main concern with the confusion described above is that it will lead to unnecessary and expensive litigation in order to clearly understand the proper interpretation of § 102(a)(1) and its implications.⁸² Additionally, this confusion will lead to questions in determining a patent strategy for businesses. The first interpretation that narrows the scope of “public use” and “on sale” to only those activities performed in public has several advantages for the small business inventor, the most important being that it protects her from what she does not know.⁸³ It seems much easier to just have a rule that says any “public use” or “sales” available to the public could bar

honor the Constitutional purpose of promoting “the useful arts” and furthering society’s understanding of technology. *See* *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 9 (1966) (“The patent monopoly was . . . a reward, an inducement, to bring forth new knowledge Only inventions and discoveries which furthered human knowledge, and were new and useful, justified the special inducement of a limited private monopoly.”); *see also* Kelly, *supra* note 11, at 402 (arguing that “under New § 102(a), secret use not coupled with public use of the product would not constitute prior art at all, because New § 102(a)’s public accessibility requirement does not concern itself with secret use but only use that results in products which are then made available to the public”).

⁸⁰ Kelly, *supra* note 11, at 387 (citing *United States v. Texas*, 507 U.S. 529, 534 (1993)).

⁸¹ *Id.*

⁸² Joshua D. Sarnoff, *Derivation and Prior Art Problems with the New Patent Act*, 2011 PATENTLY-O PATENT L. REV. 12, 25 (2011).

⁸³ Kelly, *supra* note 11, at 387. The interpretation supported in Senator Kyl’s Senate Floor statement aids the small inventor in situations where she may be unaware that disclosing her invention to someone will forfeit her opportunity to patent later, such as in the case of *Egbert v. Lippman*. *Id.*

a patent than to expect inventors, especially small business inventors, without in-house counsel or patent lawyers on retainer, to know that some secret sales or secret uses could also bar a patent by qualifying as a public use or sale. Furthermore, requiring acts to be public helps to protect small businesses reaching out to investors and venture capitalists for necessary project funding.⁸⁴ The counter to this argument is that small inventors in particular, who disclose patentable information to others, such as potential financial supporters or venture capitalists, risk those parties taking the information and making it public, thus barring patentability for the inventor.⁸⁵ An example would be if inventor A privately shared information about her new light bulb invention with a venture capitalist she was approaching for funding, who was unaware until after A's pitch presentation that the company was already investing in an older light bulb competitor.⁸⁶ In an effort to reduce competition, the information could simply be leaked to the public and then bar the new patent.⁸⁷ Since it is generally against practice to sign a confidentiality agreement,⁸⁸ instead one way an inventor can protect herself from this type of unethical behavior is to simply file a provisional patent application prior to meeting with any investors.⁸⁹ Filing a provisional application will not only protect the inventor from such aggressive tactics, but will preserve the opportunity to file

⁸⁴ *Id.* at 411 (arguing that because prior art under the AIA has to be publicly available, "small inventors are encouraged to pursue venture capitalist financing and other collaborative partnerships without fear of creating damaging prior art"); Under the AIA, confidential pre-selling of inventions would not bar a patent, even when done beyond the one-year grace period. Kari Barnes, *America Invents Act—Now What?*, 55 ORANGE CNTY. LAW 30, 30 (2013). The key is that the actions must be confidential, including any marketing. *Id.* To avoid any risk that such actions may not be deemed confidential, a provisional application should be filed. *Id.*

⁸⁵ Case, *supra* note 11, at 59.

⁸⁶ *Id.* at 63–64 (providing the example of the venture capitalist who, originally unaware of the conflict, discloses the invention to the public in order to reduce the risk of competition with a pre-existing investment).

⁸⁷ *Id.* (noting it is in the competitor's interest to not cooperate with the inventor).

⁸⁸ *Id.* at 64.

⁸⁹ 35 U.S.C. § 102 (2013). Prior art publicly disclosed by the inventor, such as in a provisional application, permits a one-year grace period to file the non-provisional application. *Id.* A provisional patent application would start the clock and require a patent application to be filed within one year, but it reserves the original filing date for the inventor. *Id.*

many foreign patents, demonstrating to investors a sophisticated level of business organization and foresight.⁹⁰

Alternatively, if the information were instead filed in a patent application by, for example the venture capitalist group, the AIA's derivation hearing would allow the inventor to challenge the application based on it being derived from the inventor and therefore the applicant would not qualify as a true inventor of the information.⁹¹ One big concern with this approach is the cost of the derivation proceeding.⁹² And while this concern further draws out the point of why filing a provisional application is so important in order to try to avoid such a situation, the cost should not be prohibitive in most cases. Rather, a derivation proceeding, which ultimately is the replacement to the exceedingly expensive interference proceeding under the first to invent system, presents the small business inventor with a cost-efficient option for protecting her invention considering it is only \$400 to file a derivation proceeding with the Patent Trial and Appeal Board (PTAB) plus any attorneys'

⁹⁰ Kelly, *supra* note 11, at 411; *see also* Brown, *supra* note 35, at 1252 (recognizing that many foreign patents require "absolute novelty" and will not permit prior public disclosures).

⁹¹ *See infra* Part IV. A patent will only be granted to someone who qualifies as an inventor as defined by the AIA. Stealing an invention and presenting it as your own will not satisfy this requirement. *See* 35 U.S.C. § 102(b)(2) (2013).

An applicant for patent may file a petition with respect to an invention to institute a derivation proceeding in the Office. The petition shall set forth with particularity the basis for finding that an individual named in an earlier application as the inventor or a joint inventor derived such invention from an individual named in the petitioner's application as the inventor or joint inventor and, without authorization, the earlier application claiming such invention was filed.

35 U.S.C. § 135(a)(1) (2013). There has been much speculation as to whether these proceedings will be widely used or one of the least likely to be used provisions in the AIA. Ashworth, *supra* note 43, at 392; Janicke, *supra* note 37, at 86, 87 (noting that these proceedings will also be heard by the PTAB and if the assertions are successfully proven, the patent claims will be invalidated).

⁹² Case, *supra* note, 11 at 61 (arguing that the costs of a derivation proceeding will be prohibitive to small businesses, particularly given that much of the information needed to prove their case will be in the hands of a third party and difficult for the inventor to access).

fees.⁹³ These fees however should not be excessive so long as the true inventor has either the materials given to the venture capitalist firm, which were likely used to derive the invention, or her own records of creating the invention.⁹⁴ If so, these materials can simply be attached to the patent application filed by the venture capitalist in order to demonstrate the overwhelming similarity between the two inventions.⁹⁵

This interpretation has one more big advantage for small businesses, particularly now at the beginning of the AIA. Transitions in the law like the AIA will take time to implement and fully understand. Having a new, vague, and inadequately defined prior art term like “otherwise available to the public” would leave many patent applications open to denial and potentially many granted patents vulnerable to lawsuits by competitors who are able to dig up prior art that could fit into this potentially broad category of “or otherwise available to the public.” Ultimately, such a threat would likely be more harmful to small businesses that cannot afford to defend against a lengthy lawsuit seeking to define a new prior art term. Nor are such small companies likely to sue a competitor for infringement on the basis that discovery to uncover evidence for such a case and expert witnesses to frame the issue would likely be very expensive as well.⁹⁶ As a result, applying the more narrow definition of “or otherwise available to the public” would reduce the risk and costs associated with such a suit for small businesses.

⁹³ *Current Fee Schedule*, USPTO, <http://www.uspto.gov/web/offices/ac/qs/ope/fee010114.htm> (last revised Jan. 16, 2014); Braun, *supra* note 48, at 63 (recognizing that derivation proceedings should cost less than interference proceedings, due to their limited discovery as compared to district court).

⁹⁴ Conversation with Teresa Stanek Rea, Former Acting Director of the USPTO and former Acting Under Secretary of Commerce for Intellectual Property, in L.A., Cal. (Jan. 24, 2014).

⁹⁵ *Id.* Furthermore, the need for keeping records of an invention should not come as a surprise to inventors given that they used to be needed for such interference proceedings under the first to invent system. Even if such records are not available, the presentation materials given by the inventor to the other party should be available. *Id.*

⁹⁶ Braun, *supra* note 48, at 63 (recognizing that discovery is one of the most expensive parts of a lawsuit).

All in all, the best advice to small businesses seems to be to speak to a patent attorney early.⁹⁷ This is particularly sound advice as the patent community waits for judicial and administrative clarification on ambiguities in the AIA.⁹⁸ The counter argument that the AIA places too much of a burden on a small business inventor to speak to an attorney early in order to protect her investment is simply insufficient. Presumably an attorney should be contacted in order to help set up the business at which point inquiry into legal protections for the invention could also be raised. The easiest way to preserve the earliest possible filing date, especially if the inventor needs time to arrange for financing, structuring the business, etc., is to file a provisional patent application, providing the inventor one year to file a complete patent application and maintaining the ability of future foreign patents.⁹⁹ Given the incentive from the first inventor to file system to file early, it is possible that several provisional applications will need to be filed.¹⁰⁰

⁹⁷ Barnes, *supra* note 84, at 30 (arguing in favor of inventors speaking to an attorney “early and often”).

⁹⁸ Kelly, *supra* note 11, at 410–11 (promoting a conservative approach while the courts and USPTO work through interpreting the AIA, such as with “obvious published disclosures” like a provisional patent application).

⁹⁹ If filing costs are an issue for a provisional application, the main goal is to make sure the invention is publicly disclosed so as to constitute prior art against competitors while still preserving the inventor’s grace period. An alternative suggestion proposed by Eric Kelly is to publish “a bare bones website where the inventor puts the world on notice of their invention a year or less before they file their non-provisional patent application.” It should be noted, however, that this option could forfeit many foreign patents. *Id.* at 411. If obtaining a patent or maintaining a trade secret are not of interest, one strategy to prevent competitors from receiving a patent would be to make the invention available to the public and thus bar their patentability. Barnes, *supra* note 84, at 33. As mentioned above, this starts the clock on the one-year grace period if the inventor changes her mind and bars patentability in many foreign countries. “This strategy should be used with care.” *Id.* Additionally, the promotion of filing patents earlier than perhaps they would have been prior to the AIA promotes the interests expressed in the Constitution to “promote the useful arts.” Presumably, the earlier a patent is filed, the sooner society can begin to benefit from the shared knowledge and expand on it.

¹⁰⁰ This may particularly be the case if the invention is still undergoing development but there are some parts of the invention that are ready for patenting. See Quinn, *supra* note 37 (encouraging the inventors to file “serial provisional patent applications prior to filing a non-provisional patent application that wraps everything together”). While cost is likely to be a concern for the small business in this scenario, it is possible she can arrange for a reduced attorneys fee for the

VI. ADVANTAGES IN JOINDER CHANGES UNDER THE AIA

Prior to the AIA, some courts hearing patent cases applied a minority interpretation of joinder under Rules 19 and 20 of the Federal Rules of Civil Procedure.¹⁰¹ This interpretation allowed the plaintiff, in many cases a Patent Assertion Entity (PAE), to join into one suit an unlimited number of defendants who did not have to have any relationship to one another, but who all allegedly merely infringed the same patent.¹⁰² This aided the PAEs in maximizing their profits by only having to potentially file and defend one lawsuit, in one jurisdiction, as compared to hundreds all around the country.¹⁰³ This was also to the PAEs' advantage given the high cost of litigating a case to trial, estimated to be as high as \$4 million,¹⁰⁴ and the low likelihood of a PAE's success, which has been estimated around 24%.¹⁰⁵ In part for these reasons, and because small businesses do not generally have the financial resources to defend lengthy lawsuits, PAEs tend to sue more small businesses than large

provisional applications, permitting a little less than a year to acquire outside funding before the non-provisional patent application is due.

¹⁰¹ See Bui, *supra* note 14, at 453. Federal Rule of Civil Procedure 20(a)(2)(A)–(B) states that defendants may be joined when the claims “aris[e] out of the same transaction, occurrence, or series of transactions or occurrences” and “any question of law or fact common to all defendants will arise in the action.”

¹⁰² *Id.* at 453. It is a common strategy for PAEs, a subset of NPEs, to file suit against “dozens” of defendants. Liu, *supra* note 2, at 491. Despite this being a minority interpretation, plaintiffs' ability to forum shop meant the impact could be wide. *Id.* at 504. The districts applying such an interpretation included the District of Kansas, the Northern District of Texas, the Eastern District of Louisiana, and notably, the Eastern District of Texas. *Id.* at 491, 500, 502.

¹⁰³ Often PAEs are not interested in going through trial with hundreds of defendants but are trying to corner potential infringers into licensing the invention or settling the case. See Liu, *supra* note 2, at 493 (recognizing that the large majority of cases brought by NPEs will settle, possibly at a rate of more than 95%); 35 U.S.C. § 271 (2012). PAEs are able to potentially sue thousands of parties because they are able to sue end-users, or those parties who are using a product that contains infringing material, despite an unawareness of the infringement. Liu, *supra* note 2, at 498–99.

¹⁰⁴ Liu, *supra* note 2, at 493 (citing Michael Risch, *Patent Troll Myths*, 42 SETON HALL L. REV. 457, 481 (2012)).

¹⁰⁵ *Id.* (pointing to one Pricewaterhouse Cooper study that estimated PAE success at 24.3% and a Stanford IP Litigation Clearinghouse study estimating PAE success at 24.1%).

businesses, and small businesses are more likely to settle, making the chances of a payout more likely.¹⁰⁶

Chapter 29 of title 35 of the United States Code amends § 299(a)(1-2) to now require that parties be joined together only if:

- (1) any right to relief is asserted against the parties jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, or selling of the same accused product or process; and
- (2) questions of fact common to all defendants or counterclaim defendants will arise in the action.¹⁰⁷

§ 299(b) makes it explicit that “accused infringers may not be joined in one action as defendants . . . based solely on allegations that they each have infringed the patent or patents in suit.”¹⁰⁸ In addition, Congress closed the loophole that would have permitted cases to be consolidated for trial based on Rule 42 of the Federal Rules of Civil Procedure.¹⁰⁹ The AIA has made clear that the minority interpretation is not acceptable in patent cases and instead both prongs of the analysis must be completed. Furthermore, it is insufficient to join unrelated parties because they may have infringed the same invention. In many cases, this removes an important strategic decision from the plaintiff and reduces the likelihood of forum shopping.¹¹⁰ One possible explanation for this change is that

¹⁰⁶ *Id.* at 494–95. One study found the median defendant sued by an NPE brings in less than \$11 million in revenue each year and another study that found 55% of PAE defendants bring in less than \$10 million in revenue each year. *Id.* Additionally, it is estimated a small-medium sized business will pay about \$500,000 in litigation costs. *Id.*

¹⁰⁷ 35 U.S.C. § 299(a)(1)–(2).

¹⁰⁸ § 299(b).

¹⁰⁹ FED. R. CIV. P. 42; Matal, *supra* note 2, at 592 (quoting Senator Kyl’s acknowledgment that it would have been against the intention of Congress for a plaintiff to go around § 299 by applying Rule 42).

¹¹⁰ Tracie L. Bryant, *The America Invents Act: Slaying Trolls, Limiting Joinder*, 25 HARV. J.L. & TECH. 673, 703 (2012) (recognizing that small businesses with limited locations will likely be able to prevent PAEs from transferring venue to a more desired location, assuming defendants are unable to transfer the venue to their own preferred venue already).

Congress perceived the joinder of many small business inventors in patent suits to be “predatory behavior.”¹¹¹ One study, for example, found that 55% of defendants in NPE cases are businesses that have less than \$10 million.¹¹² This suggests that NPEs are disproportionately targeting smaller businesses, likely in hopes of a quick settlement rather than the expense of a long trial.¹¹³ This clarification in the law will also negatively impact plaintiffs who will be less likely to benefit from economies of scale by joining multiple defendants, which will ultimately lead to an increase in the cost of litigating the infringement.¹¹⁴ Now, plaintiffs will either have to defend multiple lawsuits against small businesses, in multiple venues or they will have to defend fewer suits against larger companies, likely more willing to go through trial rather than settle.¹¹⁵

VII. ADVANTAGES OF THE REVISED FEE STRUCTURE AT THE USPTO

Another important improvement the AIA made was to adjust the fee structure to better reflect the type of entity. To do this, the AIA further broke up the fees based on business size and exposure to the patent world, expanding now to three categories: one for general fees, another for small entities, and a third for micro entities.¹¹⁶ A

¹¹¹ See AIA § 30, 125 Stat. at 339 (“It is the sense of Congress that the patent system should . . . protect[] the rights of small businesses and inventors from predatory behavior that could result in the cutting of innovation.”); Liu, *supra* note 2, at 490–91 (citing H.R. REP. NO. 112-98 at 54 (2011)) (noting the legislative history suggests the “purpose of the provision was to address the scenario in which defendants tenuous connections to the underlying disputes are joined by the dozens, a common strategy of NPEs”).

¹¹² Liu, *supra* note 2, at 490 (citing Colleen V. Chien, Startups and Patent Trolls, (Sept. 28, 2012) (unpublished Santa Clara Univ. Legal Studies Research Paper No. 09-12), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2146251 (last visited Apr. 6, 2014)).

¹¹³ *From Exposing NPE Myths to Explaining NPE Math*, RPX CORPORATION, <http://www.rpxcorp.com/index.cfm?pageID=14&itemID=25> (last visited Jan. 17, 2014) (recognizing that of 971 NPE litigations studied, 95% of them settled).

¹¹⁴ Bui, *supra* note 14, at 453 (warning that the new § 299 could also lead to “inconsistent claim construction[.]”).

¹¹⁵ See Brown, *supra* note 35, at 1261; see also *supra* note 2 (discussing the increased number of patent litigation suits which was in part due to the new joinder rules under the AIA).

¹¹⁶ See generally AIA § 10, 125 Stat. at 316–17.

small entity includes businesses with less than 500 employees and “which ha[ve] not assigned, granted, conveyed, or licensed . . . any rights to the invention to any person who could not be classified as an independent inventor or to any concern which would not qualify as a non-profit organization or small business concern.”¹¹⁷ A small entity can also include an “independent inventor or nonprofit organization” so long as the above limitation of transferring invention rights has not been violated.¹¹⁸ A micro entity is defined as a party that qualifies as a small entity and (1) is the named inventor on no more than four non-provisional patent applications (excluding foreign filed applications); (2) had a gross income of no more than “3 times the median household income for that preceding calendar year”; and (3) “has not assigned, granted, or conveyed, and is not under an obligation by contract or law to assign, grant, or convey, a license or other ownership interest in the application” to another party that would not independently meet the demands of (2).¹¹⁹ If a party meets either of these qualifications, then the general fees for “filing, searching, examining, issuing, appealing, and maintaining patent applications and patents” will be reduced by “50 percent” for small entities and “75 percent” for micro entities.¹²⁰ Further cost savings of \$200 for small and micro entities can be realized by filing patent applications electronically.¹²¹

The table below provides a few key examples of cost savings in real numbers for each of the three fee categories.¹²²

Fee Description	General Fee	Small Entity	Micro Entity
Basic Utility Patent Filing	\$280.00	\$140.00	\$70.00
Provisional Patent Filing	\$260.00	\$130.00	\$65.00
Utility Patent Search	\$600.00	\$300.00	\$150.00
Utility Patent Examination	\$720.00	\$360.00	\$180.00

¹¹⁷ Bui, *supra* note 14, at 447–48 n.52 (citing the Small Business Act, 15 U.S.C. §§ 631–657).

¹¹⁸ *Id.* (citing 37 C.F.R. § 1.27(a)(1)–(3)).

¹¹⁹ AIA § 10(g)(1)(a)(1)–(4), 125 Stat. at 318.

¹²⁰ AIA § 10(b), 125 Stat. at 318.

¹²¹ AIA § 10(h), 125 Stat. at 319.

¹²² See *Current Fee Schedule*, *supra* note 93.

3.5 Years Patent Maintenance Fee	\$1,600.00	\$800.00	\$400.00
7.5 Years Patent Maintenance Fee	\$3,600.00	\$1,800.00	\$900.00
11.5 Years Patent Maintenance Fee	\$7,400.00	\$3,700.00	\$1,850.00
Priority Examination Request	\$4,000.00	\$2,000.00	\$1,000.00

As the table illustrates, the fees to apply for and maintain a patent can be weighty. However, over the life of a patent, the savings to a small entity or micro entity can also be significant, possibly saving thousands just in the application stage. These are important cost savings for such entities given that many will also have start-up business costs, among other costs to take into consideration.

The main concerns with the costs to the small business inventor however, are not generally with the fees from the USPTO. Rather, large portions of the costs attributed to patenting an invention are associated with attorneys' fees and litigation.¹²³ While this is true, the AIA took steps at curbing these costs through administrative review processes, such as post grant review¹²⁴ and inter partes review, the latter of which will be addressed in the next Part. Furthermore, while the costs of attorneys' fees and litigation for small businesses can be a legitimate concern, given the already dramatic changes the AIA encompassed, it seems unreasonable to

¹²³ Braun, *supra* note 48, at 58–59 (estimating that attorneys' fees for filing a simple patent can run thousands of dollars, with more complicated patent applications costing about \$15,000). This should be compared with the estimated cost of litigating a patent case as discussed *supra* notes 100, 104, and 106.

¹²⁴ See Karen A. Lorang, *The Unintended Consequences of Post-Grant Review of Patents*, 17 UCLA J.L. & TECH., 1, 22–23 (2013). While this Note will not include an analysis of post grant review, it also has the potential to save the client both time and money as compared to litigation in district court. See also *id.* at 2–3, 6–7, 19, 22–23. New post-grant review procedures can be raised by a petitioner or by the Director of the USPTO when “a novel or unsettled legal question that is important to other patents or patent applications” is raised and as such must be filed in the first nine months of the patent being granted. *Id.* at 2. Importantly, petitioners in post-grant review can include any non-owner of the patent, such as third party interest groups, who are not subject to standing requirements as in federal court. *Id.* at 2–3. The petitions are restricted to issues that can be raised under section 282(b), paragraphs (2) and (3), including grounds related to patentability such as “patent eligible subject matter, non-obviousness, and novelty.” *Id.* at 6–7.

have tried to take on such a polarizing issue in the same piece of legislation, likely jeopardizing the very passage of the AIA. The measures taken to curb fees for small entities and micro entities were appropriate given the scope of the AIA.

VIII. ADVANTAGES OF INTER PARTES REVIEW

Prior to the AIA, third parties had available to them an uncontested inter partes reexamination procedure that has since been replaced with a contested inter partes review proceeding,¹²⁵ held before the PTAB.¹²⁶ The inter partes review serves as an alternative to bringing a claim in district court; however, as will be examined, there are some timing restrictions for such filings.¹²⁷ The prior inter partes reexamination proceeding standard that required a “substantial new question of patentability” has been changed under the AIA’s inter partes review to a higher standard requiring “a showing that there is a reasonable likelihood that the requester would prevail with respect to at least 1 of the claims challenged.”¹²⁸ Additionally, the burden of proof is lower in an inter partes review proceeding,

¹²⁵ See Bui, *supra* note 14, at 459 (inter partes review is a way for non-patent owners to challenge granted patents. The process is conducted by the USPTO’s PTAB rather than a court.).

¹²⁶ Miller & Archibald, *supra* note 13, at 151; UNITED STATES PATENT AND TRADEMARK Office, INTER PARTE REEXAMINATION FILING DATA–SEPTEMBER [sic] 30, 2013, (Sept. 30, 2013), http://www.uspto.gov/patents/stats/inter_parte_historical_stats_roll_up_EOY2013.pdf. The prior inter partes reexamination proceedings were granted 93% of the time, took an average of 36 months, and contained 76%, or 1449 filings, that were “known to be in litigation.” Yasser El-Gamal & Ehab M. Samuel, Address at the Orange County Patent Law Association Monthly Meeting: The New Battlefield: Patent Review Proceedings Under the America Invents Act (Oct. 17, 2013). Preliminary IPR numbers suggest a similarly high number of proceedings are granted. *Id.* Of the 483 petitions filed as of September 15, 2013, 156 had been granted and 24 had been denied. *Id.* Thus far, the inter partes review proceedings have already totaled more in the first year of availability than all of the inter parte reexamination proceedings from the prior nine years. *Id.*

¹²⁷ Sarah Tran, *Patent Powers*, 25 HARV. J.L. & TECH. 595, 618 (2012).

¹²⁸ AIA § 6, 125 Stat. at 305 (to be codified at 35 U.S.C. § 319(c)(3)(i)(I)(aa)–(bb)); see also Douglas Duff, *The Reexamination Power of Patent Infringers and the Forgotten Inventor*, 41 CAP. U.L. REV. 693, 718 (2013) (recognizing that many patent practitioners believe this to be a higher standard for inter partes review, even though the author anticipates petitions to be granted at or near the inter partes reexamination rate of 95%).

requiring only a “preponderance of the evidence”¹²⁹ as compared to the district court standard of “clear and convincing” evidence.¹³⁰

Section 6 of the AIA permits a non patent owner¹³¹ to file a request for an inter partes review and limits it to questions that can be raised under §§ 102 and 103 grounds “and only on the basis of prior art consisting of patents or printed publications.”¹³² Such requests may be filed either after the termination of a post-grant review or nine months after a patent has been granted.¹³³ The Director of the USPTO will either grant or deny the request within three months of either receiving a preliminary response from the patent owner or by the deadline and such decisions are not appealable.¹³⁴ Additionally, a prior civil action filed by the petitioner will bar an inter partes review and any civil action filed on or after filing an inter partes review will be stayed.¹³⁵ Furthermore, an inter partes review is barred if it is filed more than one year after an infringement complaint has been filed against the petitioner.¹³⁶ The AIA also provides the patent

¹²⁹ AIA § 6(a), 125 Stat. at 303 (to be codified at 35 U.S.C. § 316 (e)).

¹³⁰ See Bui, *supra* note 14, at 459, note 135 (citing *Microsoft v. i4i*, 131 S. Ct. 2238 (2011)).

¹³¹ See AIA § 6, 125 Stat. at 300 (to be codified at 35 U.S.C. § 312(a)(2)) (clarifying that any petitioner, however, must identify “all real parties in interest”); see also Duff, *supra* note 128, at 698 (pointing out that the requirement to identify all parties under the new inter partes review is a change over the ex parte reexamination requirements where unidentified third parties can file multiple examinations against a patent owner since that party is able to remain completely anonymous).

¹³² AIA § 6(a), 125 Stat. at 299 (to be codified at 35 U.S.C. § 311(a)–(b)).

¹³³ AIA § 6, 125 Stat. at 299 (codified at 35 U.S.C. § 311(c)). This applies to first to file patents only. See Leahy–Smith America Invents Technical Corrections, Pub. L. No. 112-274, § 1(d), 126 Stat. 2456, 2456 (2013) (codified at 35 U.S.C. § 311(c)). In early 2013, Congress revised the AIA to permit first to invent patents (filed prior to the March 16, 2013, first to file start date) to file for inter partes review without waiting the nine months. *Id.*

¹³⁴ AIA § 6, 125 Stat. at 300 (to be codified at 35 U.S.C. § 314(a), (b), (d)). At this point, if the Director approves the inter partes review, the Director also has the discretion to join the inter partes review with other petitions that have reached this point. *Id.*; see AIA § 6, 125 Stat. at 301 (to be codified at 35 U.S.C. § 315(c)); AIA § 6, 125 Stat. at 301 (to be codified at 35 U.S.C. § 315(d)). Additionally, if there are multiple proceedings in front of the Office, the Director has the discretion to adjust the “manner in which the inter partes review or other proceeding or matter may proceed, including providing for stay, transfer, consolidation, or termination.” AIA § 6, 125 Stat. at 301 (to be codified at 35 U.S.C. § 315(d)).

¹³⁵ AIA § 6, 125 Stat. at 300–01 (to be codified at 35 U.S.C. § 315(a)(1)–(2)).

¹³⁶ AIA § 6, 125 Stat. at 301 (to be codified at 35 U.S.C. § 315(b)).

owner with an opportunity “to move to amend the patent,” by either canceling specific claims or by “propos[ing] a reasonable number of substitute claims.”¹³⁷ Once a final decision has been made regarding the inter partes review, the petitioner is estopped from raising “any ground . . . raised or reasonably could have [been] raised during that inter partes review.”¹³⁸ Final decisions on inter partes reviews must be made generally within one year; however, the Director may extend for up to an additional six months with good cause or may make other adjustments if parties are joined.¹³⁹ All decisions shall be made by the PTAB and those decisions may be appealed.¹⁴⁰

Arguments against the new inter partes review include that it is too costly, thus burdening patent owners,¹⁴¹ that the estoppel procedures unfairly prevent future actions,¹⁴² that real parties in interest must be named,¹⁴³ and that the higher standard discourages participation.¹⁴⁴ The cost for filing an inter partes review request is \$9000 and the institution fee if the request is granted is \$14,000, plus the attorneys’ fees.¹⁴⁵ In addition, the parties may conduct discovery related to the patent invalidity claims, which will increase the overall cost and burden the patent owner’s time.¹⁴⁶ Given that the time and expense for discovery can be great, this would burden small businesses more than large companies. Additionally, the ability of one party to raise an inter partes review while a third party has raised a different proceeding against the same inventor—say for example a post grant review—could provide an unfair loophole for those third

¹³⁷ AIA § 6(a), 125 Stat. at 302 (to be codified at 35 U.S.C. §316(a)(9), (d)).

¹³⁸ AIA § 6, 125 Stat. at 301–02 (to be codified at 35 U.S.C. § 315(e)(2)). This includes matters raised in civil actions and matters raised before the International Trade Commission.

¹³⁹ AIA § 6, 125 Stat. at 302 (to be codified at 35 U.S.C. § 316(a)(11)).

¹⁴⁰ AIA § 6, 125 Stat. at 303–05 (to be codified at 35 U.S.C. §§ 316(c), 319).

¹⁴¹ Duff, *supra* note 128, at 721 (arguing that the time and expense for discovery place a great burden on patent owners).

¹⁴² Bui, *supra* note 14, at 462.

¹⁴³ *Id.*

¹⁴⁴ Trilling, *supra* note 5, at 250.

¹⁴⁵ Current Fee Schedule, *supra* note 93. Both fees have a claim limit. Any claims beyond twenty for the inter partes review request will be charged \$200 per claim and any claim beyond the 15 limit for the institution fee will be charged \$400 per claim. *Id.*

¹⁴⁶ Duff, *supra* note 128, at 719 (citing 35 U.S.C.A. § 316(a)(5)).

parties that require the patent owner to defend multiple proceedings at once or back to back.¹⁴⁷

The higher standard for inter partes review, requiring a reasonable likelihood of “prevail[ing] with respect to at least 1 of the claims” may also serve to discourage use of the inter partes review.¹⁴⁸ If it is perceived to be easier to meet the standard in district court, companies may be more willing to pay the added cost and wait longer in order to have a better opportunity at winning the case. This may be particularly true if the petitioner is a larger company and the patent owner is a smaller company that does not have a comparable legal budget. This would provide the larger company with a strategic advantage to going to district court rather than the less expensive and faster inter partes review.

While it is true that the inter partes review allows discovery, the AIA took steps to restrict the discovery in time and scope, and therefore cost. As Senator Kyl noted, one of the motivations for limiting discovery was to reduce the burden placed on patent owners, particularly when the proceeding is raised years past when the patent was granted.¹⁴⁹ Firstly, the PTAB has at most eighteen months, and generally, only twelve months, from the time the petition for review is granted to issue a decision.¹⁵⁰ This means that the time for discovery must be limited in order to permit enough time for the rest of the review to proceed and be completed. The discovery is also limited in scope in that only patentability claims based on §§ 102 and 103 can be raised, and even then, it is narrowed to patents and printed publications.¹⁵¹ Furthermore, discovery, as dictated under § 316(a)(5)(A-B), is limited to witness depositions providing

¹⁴⁷ *Id.* at 721 (suggesting such a scenario provides an unfair loophole in the estoppel provisions of the AIA).

¹⁴⁸ STEPHEN M. HANKINS & D. CHRISTOPHER OHLY, PATENT REFORM 2011: THE MOST SIGNIFICANT CHANGE IN PATENT LAW IN 50 YEARS, SCHIFF HARDIN LLP (Sept. 29, 2011), [http://www.schiffhardin.com/File%20Library/Publications%20\(File%20Based\)/PDF/ip_092911.pdf](http://www.schiffhardin.com/File%20Library/Publications%20(File%20Based)/PDF/ip_092911.pdf).

¹⁴⁹ Matal, *supra* note 2, at 621.

¹⁵⁰ AIA § 6, 125 Stat. at 302 (to be codified at 35 U.S.C. § 316(a)(11)).

¹⁵¹ Stephan Blum, *Ex Parte Reexamination: A Wolf in Sheep's Clothing*, 73 OHIO ST. L.J. 395, 431 (2012). Inter partes review's restriction of claims are only to be based on those under §§ 102-103, and even then only for patents and printed publications. *Id.* This is appropriate given that the patent has been granted by an examiner and because the nine month time frame to raise a broader claim under post-grant review has expired. *Id.*

“affidavits or declarations” and “what is otherwise necessary in the interest of justice.”¹⁵² While this latter category seems broad at first glance,¹⁵³ when combined with the fact that the scope is limited to patents and printed publications, it is likely narrow enough to prevent any significant abuse of time or financial resources.

Additionally, while it may be possible that multiple third parties could raise unrelated post grant review and inter partes review proceedings close in time with one another, it does not mean the AIA is without protection for patent owners. Rather, the AIA permits the Director, when there are multiple proceedings before the Office related to the one patent, to “provid[e] for stay, transfer, consolidation, or termination of any such matter or proceeding.”¹⁵⁴ This discretion would allow the Director to only require a patent owner to defend one proceeding at a time or possibly consolidate the matters, particularly if the issues are related to one another. This would be of great importance to a small business in helping to manage the expense of defending such actions and helping to prevent larger competitors from ganging up on the small business with multiple proceedings.

The new inter partes review procedures also protect patent owners—primarily small businesses—through the estoppel rules.¹⁵⁵

¹⁵² AIA § 6, 125 Stat. at 302 (to be codified at 35 U.S.C. § 316(a)(5)(A)–(B)); see also *Garmin Int’l, Inc. v. Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 26, 1, 5 (Mar. 5, 2013) (acknowledging that discovery in inter partes review proceedings is more limited than in district court and has the benefit of “lower[ing] the cost, minimiz[ing] the complexity, and shorten[ing] the period required for dispute resolution”).

¹⁵³ See also *Garmin Int’l*, IPR2012-00001, Paper 26, at 5–7, available at http://www.uspto.gov/ip/boards/bpai/ipr2012-00001_comprehensive_discussion_of_discovery_standards.pdf (last visited Apr. 12, 2014). The legislative intent as expressed by Senator Kyl was for the Patent and Trademark Office to “be conservative in its grants of discovery.” *Id.* at 5. As the PTAB Administrative Judge further noted, when evaluating the standard of “necessary in the interest of justice,” factors such as whether there is “More Than A Possibility And Mere Allegation” of finding useful information is present, whether the party has the “Ability To Generate Equivalent Information By Other Means,” whether the questions given had “Easily Understandable Instructions,” and whether the request made was “overly burdensome to answer, given the expedited nature of *Inter Partes* Review.” *Id.* at 6–7.

¹⁵⁴ See *supra* note 134.

¹⁵⁵ *Kesan*, *supra* note 54, at 237–38 (recognizing the estoppel rules will help restrict the chances that inter partes review is “used to simply delay and harass

By preventing any future inter partes reviews related to that claim that either were raised in the prior proceeding or “reasonably could have [been] raised,” the AIA is limiting the number of proceedings that a patent owner must defend against or that a petitioner may raise.¹⁵⁶ This will disproportionately benefit small businesses because as the patent owner they will not have to defend against as many proceedings, since all related claims must be raised together. It also disproportionately benefits the small business petitioner because it is less likely that a small business will want to spare the expense of raising multiple proceedings. This is more likely the tactic of a well-funded larger business. Lastly, the estoppel rules also prevent any future civil actions or International Trade Commission actions based on the claims that were raised or could have been raised in an inter partes review.¹⁵⁷ Similarly, if a civil action is filed prior to an inter partes review, the inter partes review may not be granted. In this way, the AIA is again protecting against multiple actions related to the same claims. Due to the expense of addressing multiple proceedings, this will also disproportionately benefit smaller businesses with smaller legal budgets.

Furthermore, the requirement that all parties in interest must be listed helps ensure that a party that has already raised a specific claim or claim that should have been raised does not raise any future claims. This has been the case with anonymous ex parte reexamination proceedings. Again, because this is not likely to have been a tactic of a small business given the expense of raising multiple actions, this rule largely disfavors larger businesses and PAEs trying to prevent association between multiple actions.

Overall, the cost savings, as compared to raising or defending the same issues in district court, benefit the small business owner regardless of whether she is the patent owner or the petitioner. The limited timeline, restricted discovery, and future estoppel protections prevent the costs from rising for both parties, but proportionally will benefit smaller businesses more, given their limited legal budgets,

patentees, and to impose unnecessary costs on patentees who are small companies”).

¹⁵⁶ See AIA § 6, 125 Stat. at 301–02 (to be codified at 35 U.S.C. § 315(e)). This would mean that with every successful defense of an inter partes review, the patent’s legitimacy and value should increase. This would be the case because a patent that has been successfully defended in inter partes review now has fewer future challenges that can be brought against it.

¹⁵⁷ Miller & Archibald, *supra* note 13, at 155.

and therefore make inter partes review a feasible alternative to district court.¹⁵⁸

IX. POSSIBLE FUTURE IMPROVEMENTS

While the AIA is not without advantages for small businesses, it is also true that at times it benefits larger companies more. To help maintain a balance, there are several possible improvements Congress should consider making in order to help ensure larger companies are not favored to the detriment of smaller companies.

It seems the greatest impact on small businesses and deterrent for protecting their patent rights is cost; cost of USPTO fees and attorneys' fees for patent prosecution and litigation. To help address this concern, the fee schedule should be further revised, specifically, adjusting the total cost downward 50% for small entities and 75% for micro entities seeking derivation proceedings, post grant review, and inter partes review, and the corresponding institution fees.¹⁵⁹ The fees for each of these categories, as based on the current fee schedule, after applying the corresponding reductions are indicated below¹⁶⁰:

Fee Description	General Fee	Small Entity	Micro Entity
Derivation Proceeding	\$400.00	\$200.00	\$100.00
Post Grant Review	\$12,000.00	\$6000.00	\$3000.00
Post Grant Review Institution Fee	\$18,000.00	\$9000.00	\$4500.00
Inter Partes Review	\$9000.00	\$4500.00	\$1125.00
Inter Partes Review Institution Fee	\$14,000.00	\$7000.00	\$3500.00

Of course, the fees are only one small part of the costs to small businesses protecting their patent rights. The larger share of that burden stems from attorneys' fees. To help support small businesses,

¹⁵⁸ Bui, *supra* note 14, at 461 (finding that the new inter partes review will be "cheaper, easier, and significantly expedited" as compared to district court).

¹⁵⁹ *Current Fee Schedule*, *supra* note 93.

¹⁶⁰ *See id.*

the AIA required the Director of the USPTO to assist in creating pro bono programs in conjunction with intellectual property law associations throughout the country.¹⁶¹ Still, it may be possible for future legislation to include attorney fee shifting to the losing party, similar to federal courts, for frivolous inter partes review or post grant review proceedings.¹⁶² While it is generally accepted that both proceedings will already cost less in time and money than similar proceedings in district court, such fee shifting would help deter predatory suits against small businesses by larger companies or PAEs trying to encourage a settlement from a company that cannot afford the time or legal costs. In this way, the fee shifting for frivolous suits will encourage small businesses to defend the action on the merits, rather than settle due to a lack of resources. It is also possible that legislation could be written to encourage more contingency fee arrangements for certain actions or third-party financing for those seeking injunctions.¹⁶³

Regarding § 102 prior art, Congress should clarify the language used in order to make clear the meaning of whether private uses and sales are public disclosures and if so under what circumstances. The courts, of course, could also make this clarification; however, it would be more useful if Congress clarified the point to prevent expensive litigation on the matter. In order to maintain a balance between the benefits of the AIA to small and large companies, this interpretation should be made to reflect a modification of public use and on sale only, and not as a fifth category to prior art. The AIA has already made a number of significant changes to the U.S. patent system without small businesses trying to decipher what “or otherwise available to the public” means as its own category. The vagueness in such a category could tie up small business patent holders in litigation for years.

¹⁶¹ AIA § 32, 125 Stat. at 340; see *Pro Se and Pro Bono*, USPTO, <http://www.uspto.gov/inventors/proseprobono/> (last modified Nov. 6, 2013). The link provides resources for small businesses, available in forty-seven of the fifty states. Such resources include listing of attorneys and agents, Intellectual Property Law Clinics in the community, resource centers, and organizations to assist inventors.

¹⁶² Duff, *supra* note 128, at 724–25 (citing Mark D. Janis, *Rethinking Reexamination: Toward a Viable Administrative Revocation System for U.S. Patent Law*, 11 HARV. J.L. & TECH. 1, 51 (1997)).

¹⁶³ Kesan, *supra* note 54, at 235.

Regarding inter partes review, Congress should require that both the PTAB in inter partes review proceedings as well as the Federal Courts reviewing the same issue of invalidity use the same standard. The distinct standards, with the one used by the PTAB being seen as a higher standard, could dissuade parties from using the inter partes review proceedings, which were intended to be used as an alternative to the courts for similar matters. Just as important, the perceived lower standard further incentivizes large companies and PAEs to use the courts, which will be more costly to a small business adversary, again encouraging the likelihood of the company settling prematurely. While the lure of a shorter and less costly proceeding is enticing for any company, inter partes review would be more attractive with a more similar standard to the courts.

X. CONCLUSION

The changes made by the AIA are substantial and will undoubtedly take time to understand fully. In addition, there are still areas where the legislation can be improved upon. Overall, the AIA takes necessary steps in moving the U.S. patent system forward by harmonizing it with the rest of the world and in turn protecting domestic patent applicants from losing foreign patent rights.

But the AIA does something else too. It helps promote the constitutional values on which the patent system was founded. As mentioned in the introduction, the pre-AIA system resulted in too many inappropriately granted patents, leaving a cost to society, patent owners defending an action, and competitors challenging a granted patent. Now, due to the motivation to file patents quickly, patent attorneys will need to ensure the submitted patent does not overextend itself by including claims that are overbroad.¹⁶⁴ This is because, with the more moderate costs associated with proceedings such as inter partes review, it is possible more patents will be challenged for validity.¹⁶⁵ As a result, patent applications should be written to prevent invalidation if challenged and to dissuade such challenges in the first place, ultimately making the patent more valuable, particularly for venture capitalists interested in investing in

¹⁶⁴ Jay P. Kesan, *Closing Statement: Not Yet Time for a Verdict*, 160 U. PA. L. REV. PENNumbra 248, 249 (2012).

¹⁶⁵ Cionca, *supra* note 58, at 14; *id.* at 249.

small businesses with strong patents.¹⁶⁶ Ultimately, these patents will also ensure that society is not granting limited monopolies undeservingly.

After comparing specific areas of the pre-AIA legislation and the AIA, it is clear that there are significant advantages in the law for small businesses. Most significantly, the AIA, by better aligning the U.S. with the rest of the world, helps prevent small businesses from inadvertently losing their foreign patent rights. This alone helps protect the value of the small businesses invention in a way that the pre-AIA laws did not. Additionally, a narrow interpretation of § 102 prior art would also protect the unsuspecting small business from accidentally disclosing an invention in a private environment, clearing up years of judicial interpretation that seem counterintuitive. Another important change the AIA makes is in the more stringent joinder rules. These rules largely favor small businesses that are attacked by PAEs unsuspectingly, or larger companies. By preventing unfair joinder of small businesses, they are better able to defend themselves in a local jurisdiction, reducing the cost of litigation. Also, there is the very real possibility that the joinder rules will disincentivize PAE's from targeting small businesses in the numbers they used to. As a result, it is possible we will see a shift in PAE strategy towards larger businesses, ultimately hoping for fewer but larger payouts from judgments versus the prior multiple but smaller payouts from settlements.

In regard to fees, the AIA makes fair and appropriate strides in lessening the burden on the very small businesses, particularly those that qualify as a micro entity. This helps promote the individual inventor in her garage who does not regularly file patents, but who has a good invention and deserves a patent. Many were disappointed that the AIA did not better address the larger issue impacting the small business, attorneys' fees. However, the regulation of attorneys' fees in only one area of law seems unlikely. That does not mean it is not possible to help make access to legal representation more feasible for the small inventor, but that it will likely not come by way of legislation. Rather it will likely be by way of private businesses, non-profits, and associations, offering pro-bono or low cost representation. Lastly, the advantages provided to small businesses through proceedings such as the inter partes review better

¹⁶⁶ Kesan, *Closing Statement*, *supra* note 164, at 249–50.

help protect their right by providing a lower cost and reduced time alternative to litigation. To help further ensure the process is fulfilling its objectives, the AIA leaves significant discretion to the USPTO Director to help protect against abuses of the system towards small businesses, such as through staying or terminating a duplicative proceeding.

Ultimately, the AIA strikes a strong balance between promoting the U.S. patent system, constitutional objectives, and the needs of the small business patent applicant. Hopefully, future legislation will continue this progress to add further clarifications and protections, but for now, the AIA has given small businesses a good start.