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PUTTING THE "PUBLIC" BACK IN "PUBLIC USE" INTERPRETING THE 2011 LEAHY-SMITH AMERICA INVENTS ACT

Joseph A. Lingenfelter*

INTRODUCTION

Eolas¹ Technologies (Eolas) approaches you, a potential investor, and explains that Michael Doyle and his University of California San Francisco team invented the first web browser that supports plug-ins.² After the investment pitch, you realize the importance of the invention. You perform due diligence on the claimed invention and the patent looks legitimate. After some back and forth with the United States Patent and Trademark Office (USPTO) and some amended claim language, Eolas secures a patent on this monumental innovation to website development.³ You decide, "I'm in."

Several years later, after a jury awards Eolas \$520 million in damages against corporate giant Microsoft Corporation, three judges decide that a conversation Pei-Yuan Wei had with two engineers at Sun Microsystems can invalidate the patent.⁴ "Who is Wei?" you might wonder. Wei invented a similar software design that supported

* J.D., Boston University School of Law, 2014; B.S. Aerospace Engineering, Boston University College of Engineering, 2011. Special thanks to the Boston University School of Law, to Professor Michael Meurer for his wise counsel in the research and preparation of this article, and to the Georgia State University Law Review for preparing this article for publication. I would also like to thank my wife, Theresa, for her continuous support.

1. Irish for "knowledge." *Products*, EOLAS, <http://eolas.com/technologies.html> (last visited Oct. 14, 2014). The acronym stands for "Embedded Objects Linked Across Systems." *Id.*

2. *Eolas Techs., Inc. v. Microsoft Corp.*, 399 F.3d 1325, 1330 (Fed. Cir. 2005). A plug-in is a software component that embeds a particular feature within an existing software application. *See Check Your Plugins*, MOZILLA, <https://www.mozilla.org/en-US/plugincheck/> (last visited Oct. 14, 2014). Plug-ins allow users to customize a software application. *Id.* Some well-known plug-ins are Adobe Flash, QuickTime, and Java. *Id.*

3. *See* Eric Bangerman, *Microsoft, Eolas May Close the Books on Browser Plug-in Patent Fight*, ARS TECHNICA (Aug. 2, 2007 11:32 AM), <http://arstechnica.com/tech-policy/2007/08/microsoft-eolas-may-close-the-books-on-browser-plug-in-patent-fight/>.

4. *Eolas Techs., Inc.*, 399 F.3d at 1332–33.

plug-ins.⁵ No, Wei did not file for a patent.⁶ No, Wei did not share his invention with the world.⁷ All Wei did was show two engineers that he developed a browser that supported plug-ins.⁸ And there goes your investment.⁹ The patent is invalid, and Eolas cannot exclude others from using its revolutionary web-browsing tool.¹⁰

The goal of the patent system, as defined by America's founding fathers, is "To 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."¹¹ The right to exclude others from making, using, and selling the patented technology in the United States, granted by 35 U.S.C. § 154, creates a limited monopoly, which in turn provides a financial incentive to the inventor or assignee of the patent rights.¹² The promise of this

5. See John Ribeiro, *Patent Firm Eolas Loses Appeal in Web Patents Lawsuit*, COMPUTERWORLD (July 23, 2013, 3:12 AM), <http://www.computerworld.com/article/2484193/technology-law-regulation/patent-firm-eolas-loses-appeal-in-web-patents-lawsuit.html> (noting Wei created a program called "Viola").

6. *Cf. Eolas Techs., Inc.*, 399 F.3d at 1329 (noting that Wei invented the Viola web browser, demonstrated it to two engineers at Sun Microsystems, and later made a new version of Viola).

7. See *id.* at 1329–30. Wei did publish a paper on the Internet describing his invention, at least by Aug. 1994. *Id.* at 1330. However, this publication was well within the one-year grace period provided by the Patent Act prior to 2013. See 35 U.S.C. § 102(b) (2012). Diligent inventors and investors know that such a publication cannot erect a bar to patentability. See *id.* (denying patent protection to claimed inventions in a printed publication or in public use more than one year prior to the effective application date of the patent).

8. See Joe Mullin, *The Web's Longest Nightmare Ends: Eolas' Patents are Dead on Appeal*, ARS TECHNICA (July 22, 2013 10:41 PM), <http://arstechnica.com/tech-policy/2013/07/the-webs-longest-nightmare-ends-eolas-patents-are-dead-on-appeal/> (explaining that Wei demonstrated his software programs to engineers at Sun Microsystems).

9. After the Federal Circuit overturned the \$565 million judgment in the District Court for the Northern District of Illinois, Eolas settled with Microsoft for \$100 million dollars. *Id.* Had Microsoft refused the settlement, it is likely that that Eolas would have walked away with an invalid patent and millions of dollars in litigation costs. Indeed, when Eolas sued Adobe Systems Inc., Amazon.com Inc., CDW Corp., Citigroup Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Corp., Inc., Staples, Inc., Yahoo! Inc., and Youtube, LLC, in the Eastern District of Texas, the Federal Circuit upheld a jury verdict that Eolas's patent lacked novelty due to Wei's public use and was invalid. *Eolas Techs. Inc. v. Amazon.com, Inc.*, 521 F. App'x 928 (Fed. Cir. 2013) (per curiam) (unpublished).

10. See Ribeiro, *supra* note 5.

11. U.S. CONST. art. I, § 8, cl. 8; Edward C. Walterscheid, *Priority of Invention: How the United States Came to Have a "First-to-Invent" Patent System*, 23 AIPLA Q.J. 263, 280–81 (1995).

12. 35 U.S.C. § 154 (2012); *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (citing *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989)).

[T]he patent system represents a carefully crafted bargain that encourages both the creation and the public disclosure of new and useful advances in technology, in return for

reward is often essential to the development of technology in the first place.¹³ Accordingly, without confidence in the patent system's promise to reward, many inventors would not invent and many investors would not finance developments in "Science and useful Arts."¹⁴ In the Eolas example,¹⁵ the one hundred investors would not have purchased stock in the company if they did not believe there was a substantial likelihood that they would be financially rewarded. In the last twenty years, at least twenty-four other cases before the Federal Circuit involved alleged third party "public use."¹⁶ At least eight of these patents were invalidated by hidden, inaccessible, third party use.¹⁷ Many more cases involving alleged third party public use occurred in the federal district courts throughout the United States.¹⁸ Examples like Eolas stifle innovation because they make it difficult to predict whether a patent satisfies the novelty requirement and make investing in technology too risky.¹⁹

The Leahy-Smith America Invents Act of 2011 (AIA), which took effect on March 16, 2013, poses a serious threat to the efficacy of the U.S. patent system.²⁰ The AIA converted the patent system from a first-to-invent into a first-inventor-to-file system,²¹ harmonizing the American system with the rest of the world. Accompanying this major transition, the AIA removed the automatic, one-year grace

an exclusive monopoly The balance between the interest in motivating innovation and enlightenment by rewarding invention with patent protection on the one hand, and the interest in avoiding monopolies that unnecessarily stifle competition on the other, has been a feature of the federal patent laws since their inception.

Id.

13. See, e.g., Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 266 (1977) (arguing that no one will invest the time and money into an invention without the possibility of future returns).

14. U.S. CONST. art. I, § 8, cl. 8.

15. See *supra* text accompanying notes 1–9.

16. See *infra* note 178.

17. See *infra* note 179.

18. E.g., *MRC Innovations, Inc. v. Hunter MFG, LLP*, 921 F. Supp. 2d 800, 805 (N.D. Ohio 2013); *Seed Research Equip. Solutions v. Gary W. Clem, Inc.*, No. 09-0282-EFM-KGG, 2012 U.S. Dist. LEXIS 181381, at *12–13 (D. Kan. 2012); *Kimberly-Clark Worldwide, Inc. v. First Quality Baby Prods., L.L.C.*, No. 09-C-0916, 2012 U.S. Dist. LEXIS 167945, at *20 (E.D. Wis. 2012).

19. See *supra* text accompanying notes 4–14.

20. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(n)(1), 125 Stat. 284, 293 (2011).

21. *Id.*

period for third party public use events and removed the “in this country” limitation on the public use statutory bar.²² These changes dramatically increase the scope of activity that may erect the public use statutory bar.²³ For example, to invalidate the Eolas patent, Wei’s conversation with his colleagues must have occurred in the United States and more than one year before Doyle filed the patent application.²⁴ After the enactment of the AIA, that conversation could have taken place *anywhere* in the world and just *moments* before Doyle filed the patent application. Although the problem of hidden, inaccessible, private third party public use has not noticeably suppressed innovation in the past,²⁵ the new breadth of the AIA public use category threatens to do so in the future because nearly secret uses of technology, occurring anywhere in the world, will invalidate dramatically more patents. Thus, retaining the old definition of public use may be “fairly disastrous for the U.S. patent system.”²⁶

Part I of this paper discusses the development of the § 102(b) public use statutory bar and reveals that the pre-AIA interpretation of “public use . . . includes any public use of the claimed invention by a person other than the inventor who is under no limitation, restriction, or obligation of secrecy to the inventor.”²⁷ Under that definition, hidden, inaccessible, private third party uses of the patented technology constitute patent-invalidating prior art under the public use statutory bar. Part II argues that the plain language and the legislative history of the AIA support a narrower interpretation of the term public use. Moreover, Part II advocates that employing the pre-AIA definition of public use will make it impossible to predict whether a patent issued by the USPTO satisfies the novelty requirement because a third party may have nearly secretly used the

22. Compare 35 U.S.C. § 102 (2012), with 35 U.S.C. § 102 (2006).

23. See *infra* Part II.

24. See *supra* notes 7–8 and accompanying text; 35 U.S.C. § 102 (2006).

25. See *supra* text accompanying notes 16–18.

26. 157 CONG. REC. S34, 1371 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl).

27. *Star Scientific, Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1377 (Fed. Cir. 2011) (internal quotation omitted).

patented-technology anywhere in the world.²⁸ To increase notice and predictability in the patent system, public use under the AIA should exclude these hidden, inaccessible, private actions by third-parties. Part III discusses issues raised by such an interpretation: should the same definition of public use apply when dealing with first party nearly secret uses?²⁹ Should an inventor's own secret commercial exploitation of his invention forfeit his or her right to patent the invention? Should the "on sale" bar under the AIA exclude hidden, inaccessible, private sales of an invention by a third party? If the term public use excludes these nearly secret uses, how should courts define public use under the AIA?

I. THE PUBLIC USE STATUTORY BAR

A. Novelty, Statutory Bars, and Nonobviousness

To receive patent protection—the right to exclude others from making, using, selling, and offering to sell the patented technology—the invention must satisfy the five basic conditions of patentability: the invention must be (1) patentable subject matter,³⁰ (2) useful,³¹ (3) new,³² (4) nonobvious,³³ and (5) the patent application must

28. See discussion *infra* Part II.

29. See discussion *infra* Part III.

30. 35 U.S.C. § 101 (2012) (requiring that an invention be a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof"). Although the category of patentable subject matter is very broad, the three specific unpatentable subject matters are laws of nature, physical phenomena, and abstract ideas. *Bilski v. Kappos*, 561 U.S. 593, 601 (2010).

31. 35 U.S.C. § 101 (2012); see also U.S. CONST. art. I, § 8, cl. 8 (granting Congress the power "[t]o promote the [p]rogress of [s]cience and *useful* [a]rts") (emphasis added). Patents are unavailable for abstract discoveries or inventions which *may* be useful. *Brenner v. Manson*, 383 U.S. 519, 528–29, 536 (1966) ("[A] patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.").

32. 35 U.S.C. § 102 (2012); see *infra* text accompanying notes 35–41.

33. 35 U.S.C. § 103 (2012):

A patent for a claimed invention may not be obtained . . . if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.

Id. In making the § 103 nonobviousness determination, courts determine the following, as of the date of the invention: (1) the scope and content of the prior art at the time of the invention; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the pertinent art.

adequately disclose the invention.³⁴ To satisfy the third requirement (the novelty requirement), the claimed invention must be new relative to the activity of others prior to the critical date.³⁵ Before Congress enacted the AIA, the Patent Act provided that a person is *not* entitled to a patent if:

- (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 . . .*³⁶

The pre-AIA § 102(b) requirements are referred to as statutory bars and the pre-AIA § 102(a) requirements embody the priority right—the first person to invent something new has the exclusive right to patent his invention.³⁷

When an invention is in public use in the United States or described in a printed publication anywhere in the world more than a

Graham v. John Deere Co. of Kan. City, 383 U.S. 1, 17 (1966). Secondary considerations such as “commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Id.* at 17–18.

34. 35 U.S.C. § 112(a) (2012) (“The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same . . .”). This is referred to as the “enablement requirement”:

The term “undue experimentation” does not appear in the statute, but it is well established that enablement requires that the specification teach those in the art to make and use the invention without undue experimentation . . . Factors to be considered in determining whether a disclosure would require undue experimentation . . . [i]nclude (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988) (citations omitted). In addition, “[e]very patent must describe an invention.” *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1345 (Fed. Cir. 2010) (holding this is “a separate requirement”).

35. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008).

36. 35 U.S.C. § 102(a)-(b) (2006) (emphasis added).

37. *Id.* However, if the first person to invent abandons, suppresses, or conceals his invention, a subsequent inventor can patent the invention. *Id.* § 102(g).

year before the inventor files his patent application, the claimed invention is anticipated.³⁸ The public use event or printed publication description is referred to as a prior art reference.³⁹ For a prior art reference to anticipate an invention, it must satisfy the all elements rule.⁴⁰ The all elements rule requires that a single prior art reference includes each element of the claimed invention⁴¹ and courts strictly apply this rule.

If a prior art reference does not satisfy the all elements rule (i.e. it is missing one or more of the limitations in the claimed invention) the patentee may still not be entitled to a patent because, in addition to being novel, the invention must be nonobvious. The nonobviousness requirement provides that a claimed invention is not patentable if the differences between the new invention and the prior art reference would have been obvious to a person having ordinary skill in the art.⁴² In some circumstances, a patent examiner or a court can combine different prior art references to render the claimed invention obvious.⁴³

B. Patent Policies Underlying the Public Use Statutory Bar

Four patent law policies justify application of the public use statutory bar: quid pro quo, channeling, prompt disclosure, and detrimental public reliance.⁴⁴ The quid pro quo rationale advocates

38. *Id.* § 102(a)-(b) (2006).

39. 35 U.S.C. § 102(a)(1) (2012). Prior art is not limited to public use events or descriptions in printed publications. 35 U.S.C. § 102(b) (2012). The term of art includes any event or reference specified in § 102(b) that may bar an application or invalidate a patent granted by the USPTO. *Id.* In addition to public use and printed publications, prior art includes "on sale" activity in the United States more than one year before the application for the patent. *Id.*

40. *E.g.*, *Advanced Display Sys. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000).

41. *Id.*

42. *See* 35 U.S.C. § 103 (2012) ("A patent for a claimed invention may not be obtained . . . if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.").

43. *See, e.g.*, *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 425 (2007) (combining a prior art reference teaching the usefulness of placing a sensor on a car's pedal device with another reference teaching how to solve a wire-chaffing problem related to placing the sensor in that location).

44. *Tone Bros., Inc. v. Sysco Corp.*, 28 F.3d 1192, 1198 (Fed. Cir. 1994) ("We have enumerated the policies underlying section 102(b) . . . as follows: (1) discouraging the removal, from the public domain,

on behalf of the general public, demanding that society receive a benefit in exchange for the benefits granted to the inventor.⁴⁵ The patentee reaps the exclusive right to make, use, sell and offer to sell the claimed invention.⁴⁶ In return for this limited monopoly right, society profits from the use of the new invention (made and sold by the patent holder) and from future improvements made to the invention.⁴⁷ Society also receives the benefit of unrestricted manufacture and use of the patented technology after the patent term expires.⁴⁸ The public use statutory bar ensures that the patented innovation was not already publicly used.⁴⁹ This rationale presumes that if an invention is in public use, society already has these benefits.⁵⁰

of inventions that the public reasonably has come to believe are freely available; (2) favoring the prompt and widespread disclosure of inventions . . . and (4) prohibiting the inventor from commercially exploiting the invention for a period greater than the statutorily prescribed time.”). The one-year, built-in grace period balances these policies with the policy of allowing an inventor time to perfect his invention and prepare a patent application. *See id.* (“[One of] the policies underlying section 102(b) [is] . . . allowing the inventor a reasonable amount of time following sales activity to determine the potential economic value of a patent.”). These important policies underlie not only the public use statutory bar but also the “on sale” statutory bar and other aspects of the novelty and nonobviousness requirements. *See, e.g., Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64–66 (1998) (discussing patent policies of § 102 as a whole and applying the § 102(b) “on sale” bar to further those policies).

45. *Pennock v. Dialogue*, 27 U.S. 1, 23 (1829) (“If the public were already in possession and common use of an invention . . . there might be sound reason for presuming, that the legislature did not intend to grant an exclusive right to any one [sic],” given the absence of a “quid pro quo.”); *J.E.M. Ag Supply v. Pioneer Hi-Bred Int’l*, 534 U.S. 124, 142 (2001) (quoting *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 484 (1974)) (“The disclosure [of a new invention] required by the patent act is ‘the quid pro quo of the right to exclude.’”); *supra* note 12.

46. 35 U.S.C. § 154(a)(1) (2012). “[T]he Patent Act also declares that ‘patents shall have the attributes of personal property,’ § 261, including ‘the right to exclude others from making, using, offering for sale, or selling the invention,’ § 154(a)(1).” *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 392 (2006).

47. *Cf. J.E.M.*, 534 U.S. at 142 (quoting *Kewanee*, 416 U.S. at 484) (“The disclosure [of a new invention] required by the Patent Act is ‘the *quid pro quo* of the right to exclude.’”). Although the inventor has the exclusive right to “use” the invention, the purchase of a patented device includes an implied right to “use” the invention embodied in the device. *United States v. Univis Lens Co.*, 316 U.S. 241, 249 (1942).

48. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989) (quoting *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186–87 (1933)) (“[U]pon expiration of that period, the knowledge of the invention inures to the people, who are thus enabled without restriction to practice it and profit by its use.”).

49. Benjamin N. Roin, *Unpatentable Drugs and the Standards of Patentability*, 87 TEX. L. REV. 503, 518 (2009).

50. *See id.* This assumption is not always true. *Kewanee*, 416 U.S. at 484 n.13 (“An invention may

Second, the channeling rationale forces inventors to choose either secrecy (i.e. trade secret protection) or disclosure (i.e. patent protection).⁵¹ This prevents inventors from effectively extending the duration of the statutorily granted monopoly right and increases the rate at which technology develops.⁵² Without the public use bar, an inventor or others could use the invention in public for many years and then, as soon as competition arrives, apply for patent protection. This practice extends the *effective* length of the patent term because the patent term ends years later than it would have ended had the inventor applied for the patent as soon as the invention was completed.

The third rationale underlying the public use statutory bar is to encourage prompt disclosure of new technology.⁵³ Through early disclosure of new technology, persons skilled in the same field access and learn the new technology sooner, which allows researchers and inventors in that field of art to improve their work and innovate faster.⁵⁴ The rate of innovation increases notwithstanding the inventor's exclusive right to make and use the invention because

be placed 'in public use or on sale' within the meaning of 35 U.S.C. § 102 (b) without losing its secret character." (citing *Painton & Co. v. Bourns, Inc.*, 442 F.2d 216, 224 n.6 (2d Cir. 1971)); *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520 (2d Cir. 1946)); *see also* Roin, *supra* note 49, at 517.

51. *Metallizing*, 153 F.2d at 520 ("[The inventor] must content himself with either secrecy, or [a patent].").

52. *Pennock v. Dialogue*, 27 U.S. 1, 19 (1829) ("If an inventor should be permitted to hold back from the knowledge of the public the secrets of his invention; if he should, for a long period of years, retain the monopoly, and make and sell his invention publicly; and thus gather the whole profits of it, relying upon his superior skill and knowledge of the structure; and then, and then only, when the danger of competition should force him to procure the exclusive right, . . . it would materially retard the progress of science and the useful arts; and give a premium to those who should be least prompt to communicate their discoveries."). *See also* *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64 (1998) ("[Section] 102 . . . serves as a limiting provision, . . . confining the duration of the monopoly to the statutory term." (citing *Frantz Mfg. Co. v. Phenix Mfg. Co.*, 457 F.2d 314, 320 (7th Cir. 1972))); *Metallizing*, 153 F.2d at 520.

53. *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998) ("Section 102(b) . . . is primarily concerned with the policy that encourages an inventor to enter the patent system promptly, while recognizing a one year period of public knowledge or use or commercial exploitation before the patent application must be filed."). The written description component of the patent application discloses the invention and new information underlying the claimed invention to society. *See supra* note 34.

54. *See Kewanee*, 416 U.S. at 496–97 (Douglas, J., dissenting).

other inventors can utilize the information contained in the patent application to improve the invention or develop related products or processes.⁵⁵ The rate of innovation also increases because other inventors can practice the patented invention with the patent holder's permission.⁵⁶ In addition, prompt disclosure of the claimed invention allows general society to use the invention sooner because the patent term expires sooner.⁵⁷

Lastly, the public use statutory bar reflects a concern about detrimental public reliance on a claimed invention.⁵⁸ Section 102(b) prevents an inventor from inducing the public to rely on a new technology and then later obtain a patent on the new technology.⁵⁹ Once the patent issues, the invention's widespread use gives the limited monopoly on the new technology greater market strength and allows the inventor to charge higher prices for the patented goods or services.⁶⁰ Thus, the public use bar protects society and businesses from a business-savvy inventor.

The germinal public use case *Pennock v. Dialogue* exemplifies several policies underlying the statutory bar.⁶¹ In 1811, Pennock and Sellers completed an invention consisting of an "improvement in the art of making leather tubes or hose, for conveying air, water, and

55. *See id.*

56. *See* Daniel Taskalos, Note, *Metallizing Engineering's Forfeiture Doctrine After the America Invents Act*, 16 STAN. TECH. L. REV. 657, 669 (2013).

57. *See Pennock*, 27 U.S. at 19 ("[T]he main object was 'to promote the progress of science and useful arts;' and this could be done best, by giving the public at large a right to make, construct, use, and vend the thing invented, at as early a period as possible.").

58. *See* 35 U.S.C. § 102(a)-(b) (2012).

59. *Nat'l Research Dev. Corp. v. Varian Assocs.*, No. 93-1421, 1994 U.S. App. LEXIS 1493 at *12 (Fed. Cir. Jan. 26, 1994) ("This result furthers the important public policy of discouraging the removal of inventions from the public domain which members of the public justifiably have come to believe are freely available."); *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64 (1998) (citing *Frantz Mfg. Co. v. Phenix Mfg. Co.*, 457 F.2d 314, 320 (7th Cir. 1972)) ("[Section] 102... serves as a limiting provision, ... excluding ideas that are in the public domain from patent protection...") ("A... reluctance to allow an inventor to remove existing knowledge from public use undergirds the [public use] bar." (citing *Pennock*, 27 U.S. at 24)); *cf. Bruckelmyer v. Ground Heaters, Inc.*, 445 F.3d 1374, 1378 (Fed. Cir. 2006) ("The 'printed publication' provision of § 102(b) 'was designed to prevent withdrawal by an inventor... of that which was already in the possession of the public.'" (quoting *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981))).

60. *See* Roin, *supra* note 49, at 508.

61. *See generally Pennock*, 27 U.S. 1.

other fluids.”⁶² Not until 1818 did they apply for and obtain a patent on the invention.⁶³ Between 1811 and 1818, Pennock and Sellers gave a third party permission to make and sell upwards of 13,000 feet of hose constructed according to the claimed invention.⁶⁴ The Supreme Court found the patent invalid because the invention was in the public’s possession and in common use when Pennock and Sellers applied for the patent.⁶⁵

The Court noted that, by waiting approximately seven years before filing for their patent, Pennock and Sellers had delayed the time in which members of society could freely make, use, and sell the invention.⁶⁶ According to the Court, filing immediately for a patent (prompt disclosure) was the best way “to promote the progress of science and useful arts.”⁶⁷ In addition, the Court adopted the channeling rationale when it explained that “it would materially retard the progress of science and the useful arts” if courts permitted an inventor to keep his invention a secret for many years and only apply for a patent once competition appeared.⁶⁸ Finally, the Court explained that once an inventor puts an invention into public use, he cannot later remove that knowledge from the public.⁶⁹ Thus, the Court protected members of the public who had come to rely on unrestricted use of that knowledge.⁷⁰

62. *Id.* at 14.

63. *Id.*

64. *Id.* at 3.

65. *Id.* at 14–15, 23. The Court relied on Section 1 of the Patent Act of 1793, which granted “letters patent” “when any person or persons . . . invented any new or useful art, machine, manufacture, or composition of matter, or any new or useful improvement [thereon], not known or used before the application.” Act of Feb. 21, 1793, ch. 11, § 1, 1 Stat. 318. The Court interpreted this statute to mean that the claimed invention must be “not known or used by the public, before the [patent] application.” *Pennock*, 27 U.S. at 19.

66. *Pennock*, 27 U.S. at 19.

67. *Id.* at 16 (quoting U.S. CONST. art. I, § 8).

68. *Id.* at 19.

69. *Id.* at 24 (“His voluntary act or acquiescence in the public sale and use is an abandonment of his right . . .”); see *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 64 (1998) (explaining that *Pennock* prohibits an inventor from “remov[ing] existing knowledge from public use.”).

70. See *Pfaff*, 525 U.S. at 65 (“The patent laws . . . [seek] to protect the public’s right to retain knowledge already in the public domain . . .”).

C. Defining Public Use Before the AIA

Congress explicitly incorporated the public use restriction into the patent statutes in 1836.⁷¹ Over time, courts have interpreted the term “public use” extremely broadly, straining the term’s plain meaning. The Court of Appeals for the Federal Circuit explained that “public use includes any use of the claimed invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.”⁷² Similarly, patent law scholar Donald Chisum defines the term to include “use of the product or process ‘in its natural and intended way’—even if the invention may in fact be hidden from public view with such use.”⁷³

First addressing the “known or used” statutory bar in *Pennock*, the Supreme Court ruled that the knowledge or use must be by persons

71. Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117; 2-6 DONALD S. CHISUM, CHISUM ON PATENTS § 6.02(1)(b) (2014). Section 1 of the Patent Act of 1793 required that an invention for which a patent was sought be “not known or used before the application.” Act of Feb. 21, 1793, ch. 11, § 1, 1 Stat. 318. See generally *Metallizing Eng’g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 518 (2d Cir. 1946) (describing the development of the public use statutory bar); Michael F. Martin, *The End of the First-to-Invent Rule: A Concise History of its Origin*, 49 IDEA 435 (2009) (describing the enactment of the 1790 patent act and the development of the first-to-invent rule of priority). Interpreting this statute in *Pennock*, the Supreme Court ruled that “known or used” must mean known or used by persons other than the inventor and his employees, including such knowledge or use as would result from commercial exploitation. *Pennock*, 27 U.S. at 19; see 2-6 CHISUM, *supra* at § 6.02(1)(a). In 1897, Congress enacted the long-standing pre-AIA form of the statutory bar. Act of Mar. 3, 1897, ch. 391, § 1, 29 Stat. 692 (granting a patent to any person who invented a new and useful product or process “not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country for more than two years prior to his application”); 2-6 CHISUM, *supra* note 71, at § 6.02(1). In 1939, Congress amended the statutory bar provision by shortening the period from two years to one year. Act of Aug. 5, 1939 ch. 450, § 1, 53 Stat. 1212; 2-6 CHISUM, *supra* note 71, at § 6.02(1)(d). As of March 15, 2013, before the final provisions of the AIA took effect, the patent laws required that an invention not be “known or used by others” before the date of invention, and not be “in public use” more than one year before the application date. 35 U.S.C. § 102(b) (2006); see *supra* note 36 and accompanying text.

72. *Dey, L.P. v. Sunovion Pharms., Inc.*, 715 F.3d 1351, 1358 (Fed. Cir. 2013) (quoting *Netscape Comm’ns Corp. v. Konrad*, 295 F.3d 1315, 1320 (Fed. Cir. 2002) (alterations and internal quotation marks omitted) (emphasis in original)). This definition applies regardless of whether the patent-defeating use is with or without the first inventor’s consent. See, e.g., *Elec. Storage Battery Co. v. Shimadzu*, 307 U.S. 5, 17–20 (1939) (applying § 102(b) public use bar when a third party company independently invented and practiced the patented technology in its factory without placing its employees under a confidentiality agreement).

73. 2-6 CHISUM, *supra* note 71, at § 6.02(5)(a) & n.146.

other than the inventor and his employees.⁷⁴ A half-century later in *Consolidated Fruit Jar Co. v. Wright*,⁷⁵ addressing what sort of conduct may forge the bar to patentability, the Court stated, "a single instance . . . of use by the patentee may, under the circumstances, be fatal to the patent."⁷⁶ Exactly what those "circumstances" were, however, was unclear until the seminal case of *Egbert v. Lippmann*.⁷⁷

The facts in *Egbert* are as follows: sometime between January and May of 1855, Ms. Egbert and a friend complained of the breaking of their corset steels.⁷⁸ Mr. Barnes, "an intimate friend" of Ms. Egbert, offered to make a pair that would not break and presented his new design at their next rendezvous.⁷⁹ Ms. Egbert used the redesigned steels for many years, placing them in new corsets as the old wore out.⁸⁰ In 1863, now married to one another, Mr. Barnes had his wife cut open a corset and display the steels to another person, Mr. Sturgis.⁸¹ Three years later Mr. Barnes obtained a patent on his design.⁸² Even though the corset steels were concealed within the corset, a very private device itself, over the dissent of Justice Miller,⁸³ the Court held that Ms. Egbert's use was a public use within

74. See *supra* note 71.

75. *Consol. Fruit Jar Co. v. Wright*, 94 U.S. 92, 94 (1876).

76. *Id.* at 94. Mason completed the invention, an improved fruit jar and cover, in 1859 and applied for a patent in 1868. *Id.* at 93. In June 1859, Mason had a glassmaker make at least two-dozen jars for him. *Id.* He sold some of these in order "to get the money which they yielded, and to test their salability in the market." *Id.* at 94. The Court held the statutory bar applicable; two years of continuous use or sale was not required. *Id.* The Court also noted that inventors are "a meritorious class" but must "comply with the conditions prescribed by law." *Id.* at 96.

77. *Egbert v. Lippmann*, 104 U.S. 333 (1881).

78. *Id.* at 335.

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.* at 337.

83. *Egbert*, 104 U.S. at 338–39 (Miller, J., dissenting). Justice Miller argued in dissent:

A private use with consent, which could lead to no copy or reproduction of the machine, which taught the nature of the invention to no one but the party to whom such consent was given, which left the public at large as ignorant of this as it was before the author's discovery, was no abandonment to the public, and did not defeat his claim for a patent. If the little steep [sic] spring inserted in a single pair of corsets, and used by only one woman, covered by her outer-clothing, and in a position always withheld from public observation, is a public use of that piece of steel, I am at a loss to know the line between a private and a public use.

the meaning of the statute.⁸⁴ The Court reasoned that Barnes gave the steels to Ms. Egbert without any obligation of secrecy or for any purpose of experiment and she might have exhibited them to any person she pleased, or might have made other steels of the same kind, and used or sold them without violation of any condition or restriction imposed on her by the inventor.⁸⁵ The invention was complete at the time Mr. Barnes gave Ms. Egbert the steels and he “slept on his rights for eleven years.”⁸⁶ The Supreme Court reinforced this holding two times in as many years following *Egbert*.⁸⁷

Id. at 339 (Miller, J., dissenting).

84. *Id.* at 337. The Court reasoned:

[T]o constitute the public use of [a patent] it is not necessary that more than one of the patented articles should be publicly used. The use of a great number may tend to strengthen the proof, but one well-defined case of such use is just as effectual to annul the patent as many. . . . We remark, secondly, that, whether the use of an invention is public or private does not necessarily depend upon the number of persons to whom its use is known. If an inventor, having made his device, gives or sells it to another, to be used by the donee or vendee, without limitation or restriction, or injunction of secrecy, and it is so used, such use is public, even though the use and knowledge of the use may be confined to one person. We say, thirdly, that some inventions are by their very character only capable of being used where they cannot be seen or observed by the public eye. An invention may consist of a lever or spring, hidden in the running gear of a watch Nevertheless, if its inventor sells a machine of which his invention forms a part, and allows it to be used without restriction of any kind, the use is a public one. So, on the other hand, a use necessarily open to public view, if made in good faith solely to test the qualities of the invention, and for the purpose of experiment, is not a public use within the meaning of the statute.

Id. at 336.

85. *Id.* at 337.

86. *Id.*

87. See *Manning v. Cape Ann Isinglass & Glue Co.*, 108 U.S. 462 (1883) (holding patent on a method of converting fish bladders made of gelatin, isinglass, into thin hard sheets was invalid). The Court found that a succession of partnerships used substantially the same process more than four years before the application date. *Id.* at 464. The public use bar applied because the patent owner’s partners “were allowed by the inventor the unrestricted use of the [patented method] during the period mentioned, without injunction of secrecy or other condition.” *Id.* at 465 (citing *Egbert*, 104 U.S. at 333). In the second case, the Court held a patent on an improvement to the doors and casing of safes was invalid. *Hall v. Macneale*, 107 U.S. 90 (1883). More than two years prior to filing his patent application, the inventor sold three of the “burglar-proof” safes. *Id.* at 96. Even though completely concealed within the safe, the Court found the invention was in public use. *Id.* at 96.

The construction and arrangement and purpose and mode of operation and use of the bolts in the safes were necessarily known to the workmen who put them in. They were, it is true, hidden from view, after the safes were completed, and it required a destruction of the safe to bring them into view. But this was no concealment of them or use of them in

Though *Egbert* is widely followed in the federal courts,⁸⁸ the Federal Circuit has occasionally distinguished similar fact patterns by implying confidentiality in the absence of an express agreement of confidentiality.⁸⁹ In one such case, *Moleculon Research Corp. v. CBS, Inc.*, the owner of a patent on a cube puzzle composed of eight smaller cubelets that could be rotated in groups, sued CBS for infringement via its Rubik's Cube puzzle.⁹⁰ More than a year before he applied for the patent, the inventor, Larry Nichols, constructed several paper models of his puzzle, which confirmed the feasibility of his conception.⁹¹ Nichols showed these puzzles to several friends, including two roommates and a colleague in the chemistry department, and explained the puzzle to at least one of them.⁹² In addition, Nichols brought a working wood block prototype of his puzzle into his office and demonstrated how it worked to Moleculon's president, who expressed immediate interest and suggested that Nichols commercialize the cubed puzzle.⁹³ The court declined to follow *Egbert*, instead finding that "Nichols at all times retained control over the puzzle's use and the distribution of information concerning it," despite the fact that neither Nichols's

secret. They had no more concealment than was inseparable from any legitimate use of them.

Id. at 97 (citing *Egbert*, 104 U.S. at 333). Because the safes seemed clearly to have been "on sale" and in fact sold, it is not clear why the Court decided to discuss the problems in terms of public use. 2-6 CHISUM, *supra* note 71, at § 6.02(2)(f).

88. *E.g.*, *Manning*, 108 U.S. 462; *Lough v. Brunswick Corp.*, 103 F.3d 1517, 1537 (Fed. Cir. 1997).

89. *See, e.g.*, *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261 (Fed. Cir. 1986); *cf.* *TP Labs., Inc. v. Prof'l Positioners, Inc.*, 724 F.2d 965 (Fed. Cir. 1984). In *TP Laboratories*, the inventor, more than a year before filing his patent application for an orthodontic device, used the device on three different patients without obligation of confidentiality or secrecy. *TP Labs., Inc.*, 724 F.2d at 967-68. In addition, several of the inventor's associates saw the device before the critical date. *Id.* at 969. The court held this pre-filing activity did not constitute a § 102(b) public use because, contrary to the district court's findings of fact, the pre-filing uses were experimental. *Id.* at 972. Moreover, that other orthodontists saw the device in the patients' mouths "does not indicate the inventor's lack of control or abandonment to the public." *Id.* The court reasoned that the public use bar was inapplicable because "none of the policies which underlie the public use bar and which, in effect, define it have been shown to be violated." *Id.* at 973.

90. *Moleculon*, 793 F.2d at 1263.

91. *Id.*

92. *Id.*

93. *Id.*

friends nor Moleculon's president had not entered into any express confidentiality agreement.⁹⁴ Thus, the court held the public use bar did not apply to the invention.⁹⁵

D. The Public Use Statutory Bar and Secret Commercial Use

In addition to a single use by someone other than the inventor not obligated to secrecy or confidentiality, courts apply the public use bar when an inventor uses the invention for commercial purposes more than a year prior to filing for a patent, even if the use is absolutely secret.⁹⁶ This situation differs greatly from *Pennock* and *Egbert* because, unlike in those cases, only the inventor, or a small number of people restricted by confidentiality, use or know of the invention.⁹⁷ In other words, the prior patent-invalidating uses are secret, completely concealed from the public. Without a doubt, however, this doctrine furthers the channeling and prompt disclosure rationales by preventing inventors from secretly using their inventions and waiting to patent the invention until a subsequent inventor enters the market.

The secret-commercial-user doctrine took root in a 1946 decision by the oft-quoted Judge Learned Hand.⁹⁸ In *Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co.*, Judge Hand ruled that if an inventor uses his invention for commercial purposes for more than one year, he “forfeits his right [to a patent] regardless of how little the public may have learned about the invention.”⁹⁹ Relying on the channeling and prompt disclosure rationales expressed in *Pennock*, the court invalidated the patent due to the inventor's secret use of an

94. *Id.* at 1266.

95. *Id.*

96. *See, e.g.*, *Hall v. Macneale*, 107 U.S. 90, 96 (1883).

97. *Compare id.*, with *Pennock v. Dialogue*, 27 U.S. 1, 19 (1829), and *Egbert v. Lippmann*, 104 U.S. 333 (1881).

98. *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516 (2d Cir. 1946), *cert. denied*, 328 U.S. 840 (1946).

99. *Id.* at 519–20. This decision overruled *Peerless Roll Leaf Co. v. Griffin & Sons*, holding that the predominantly commercial character of the inventor's secret uses would not invalidate his patent, even though the uses were more than one year before the critical date. *Id.* at 518; *see also Peerless Roll Leaf Co. v. Griffin & Sons*, 29 F.2d 646, 649 (2d Cir. 1928).

improved process for conditioning metal for his clients.¹⁰⁰ The Supreme Court and Federal Circuit have since explicitly adopted the seminal decision by Judge Hand.¹⁰¹

Interestingly, Judge Hand's decision in *Metallizing* did not overrule *Gillman v. Stern* (also written by Judge Hand), where the Court of Appeals for the Second Circuit held that a third party's prior secret commercial use of a new machine more than a year before the critical date did not prevent the inventor of the machine from patenting the device later.¹⁰² The court ruled that a prior use, commercial or otherwise, which did not disclose the invention to the art was not within the statutory bar.¹⁰³ As with Judge Hand's first party secret commercial use cases, the Supreme Court and Federal Circuit have explicitly adopted this aspect of his decisions as well.¹⁰⁴ In doing so, the Federal Circuit noted that "[t]here is no reason or statutory basis" on which a secret commercial use by an independent non-applicant more than a year before the critical date could bar a patent.¹⁰⁵

100. *See Metallizing*, 153 F.2d at 520.

101. *E.g.*, *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 149 (1989) ("As Judge Learned Hand once put it: '[I]t is a condition upon the inventor's right to a patent that he shall not exploit his discovery competitively after it is ready for patenting; he must content himself with either secrecy or legal monopoly'" (quoting *Metallizing*, 153 F.2d at 520)); *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147 (Fed. Cir. 1983). The Federal Circuit states that "an inventor's own prior commercial use, albeit kept secret, may constitute a public use or sale under § 102(b), barring him from obtaining a patent." *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998).

102. *Gillman v. Stern*, 114 F.2d 28, 31 (2d Cir. 1940). I want to reiterate the distinction between secret use and hidden public use. In *Egbert*, Ms. Egbert's use of the corset steels was a public use notwithstanding the hidden nature of the use because she was not under an obligation of secrecy to Barnes (the inventor). *Egbert*, 104 U.S. at 337. In contrast, a secret use is one in which only the inventor (or those under obligation of secrecy or confidentiality) uses or has access to the invention. If Barnes asked Ms. Egbert to sign a confidentiality agreement before seeing or using the new corset steels, then it would be a secret use. Whether such a use would be considered "commercial" within the meaning of the *Metallizing* forfeiture doctrine is a different question.

103. *Gillman*, 114 F.2d at 31.

104. *E.g.*, *Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 390 (Fed. Cir. 1984) (citing *Metallizing*, 153 F.2d at 516; *D.L. Auld Co.*, 714 F.2d at 1144; *W.L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983)); *D.L. Auld*, 714 F.2d at 1147.

105. *W.L. Gore*, 721 F.2d at 1550.

E. *Introducing the Leahy-Smith America Invents Act*

In 2011, following years of scholarly and congressional debate, Congress enacted the AIA and comprehensively reformed the American patent system.¹⁰⁶ The major change was from a first-to-invent (FTI) system to a first-inventor-to-file (FITF) system, “harmoniz[ing] the United States patent system with the patent systems commonly used in nearly all other countries throughout the world with whom the United States conducts trade.”¹⁰⁷ The switch to a FITF system means that the first person to invent a new technology or improve upon an existing technology no longer holds the exclusive right to patent his or her invention. Instead, it is a race to file the patent application.¹⁰⁸ Unlike under the former statutory regime, an earlier inventor who does not abandon his invention or sleep on his right to patent will not get a patent on the invention if a subsequent inventor applies for a patent first.¹⁰⁹ In fact, under the AIA, the later-inventor/earlier-filer has the right to exclude the first inventor from making, using, and selling the technology.¹¹⁰ Many patent law scholars criticize this approach because they think it benefits big companies and hurts small companies and independent inventors.¹¹¹

106. See Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(b)(1), 125 Stat. 284 (2011); Taskalos, *supra* note 56 (examining several patent reform proposals leading up to the AIA).

107. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(p), 125 Stat. 284 (2011). The AIA essentially established a first-inventor-to-publish system rather than a first-inventor-to-file system because of the one-year grace period. See discussion *infra* note 117 (explaining the effect of the grace period under the AIA).

108. See *id.* (establishing a race to publish the subject matter of the invention).

109. See Taskalos, *supra* note 56 at 679–700.

110. See 35 U.S.C. § 154 (2012) (granting a patent-holder the right to exclude others from making, using, and selling the patented technology in the United States). But see 35 U.S.C. § 273 (2012) (creating a limited defense for inventors who commercially used the patented technology at least one year before the effective filing date or date on which the claimed invention was disclosed publicly); Martin Gomez, Note, *Manufacturing, Please Come Home: How AIA's Prior User Right Could Be The American Economy's Savior*, 13 U.C. DAVIS BUS. L.J. 61, 74–78 (2012).

111. See, e.g., Margo A. Bagley, *The Need for Speed (and Grace): Issues in a First-Inventor-to-File World*, 23 BERKELEY TECH. L.J. 1035, 1041 (2008) (arguing that a move by the United States to a first to file system will likely have negative ramifications for small entity inventors); Ned L. Conley, *First-to-Invent: A Superior System for the United States*, 22 ST. MARY'S L.J. 779, 782 (1991). But see Mark A. Lemley & Colleen V. Chien, *Are the U.S. Patent Priority Rules Really Necessary?*, 54 HASTINGS L.J. 1299, 1320–21 (2003) (arguing that the U.S. first to invent system is not helping small entity inventors). See generally Dennis D. Crouch, *Is Novelty Obsolete? Chronicling the Irrelevance of the Invention Date*

The AIA also introduced three important changes to the scope and content of the prior art in U.S. patent law.¹¹² First, the AIA amended the statutory language that defines the events that qualify as prior art. The text of the new patent statute provides:

Conditions for patentability [and] novelty

(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 to the public before the effective filing date of the claimed invention*.¹¹³

The new statute removes the old § 102(a) “previously known or used by others” category of prior art and adds a new catch-all provision with the “or otherwise available to the public” language.¹¹⁴ Second, the AIA removes the old, one-year, automatic grace period.¹¹⁵ The AIA’s new grace period only covers disclosures by the inventor made within a year of the effective application date¹¹⁶ or disclosures by anyone else occurring after the inventor publicly disclosed the invention but within a year of the effective application date.¹¹⁷ Last, the AIA removed the geographic restrictions previously

in U.S. Patent Law, 16 MICH. TELECOMM. & TECH. L. REV. 53, 59 n.20 (collecting sources on the advantages and disadvantages of adopting a first-to-file system).

112. Gomez, *supra* note 110. The AIA also made several other changes not described in this article. For example, the AIA added a post-grant review option to quickly weed out mistake patents. 35 U.S.C. § 321 (2012). The post-grant review allows anyone to challenge the validity of a patent based on §§ 101, 102, 103, and 112. *Id.* at § 321(b). A challenger must file within nine months of the issuance of the patent. *Id.* at § 321(c).

113. 35 U.S.C. § 102 (2012) (emphasis added).

114. Compare 35 U.S.C. § 102 (2012), with 35 U.S.C. § 102 (2006).

115. 35 U.S.C. § 102(a)(1) (2012).

116. *Id.* The effective application date or effective filing date found in § 102(a) is the earliest date of the following: (1) the actual filing date of the patent per § 100(i)(1); (2) the filing date of the first foreign application to which a later U.S. application establishes priority under 35 U.S.C. § 119; (3) the filing date of the first U.S. application to which a later U.S. continuation application establishes priority under 35 U.S.C. § 120; or (4) the filing date of the first U.S. application to which a later U.S. continuation application establishes priority under 35 U.S.C. § 121. *Id.* A single patent application may have multiple claims with different effective filing dates based on when a sufficient disclosure was made. *Id.*

117. *Id.* § 102(b)(1). Under the AIA, it is ambiguous whether a third party patent application filed, which claims the same invention in a previous public disclosure by the later patent applicant, qualifies as prior art. *Id.* The majority believes that the AIA’s grace period means that the AIA really is a first-

placed on the public use and “on sale” statutory bars.¹¹⁸ Under the AIA, if the invention is “in public use, on sale, or otherwise available to the public” *anywhere in the world*, the invention is not patentable.¹¹⁹

How courts will interpret this new prior art definition “in public use, on sale, or otherwise available to the public” is unclear.¹²⁰ Many scholars argue that retention of the terms “public use” and “on sale” indicate a congressional desire to adopt the previous judicial interpretation of those terms.¹²¹ However, the textual amendments to § 102(b) prior art inject a “publicness” requirement into patent-invalidating prior art events under the AIA.¹²² Retaining the judicial interpretation of public use would render the phrase “otherwise available to the public” superfluous and maintain the internationally disharmonious patentability standard, which is contrary to the spirit of the patent reform. Further, and more importantly, with the removal of geographic restrictions and removal of the automatic grace period, it is critical that hidden third party activity not create bars to U.S. patentability. Such a burden would create a wildly unpredictable patent system, and inventors and investors may lose faith in American patent protection.

inventor-to-disclose system and a subsequently filed patent application does not bar the person who first disclosed the invention from claiming it in his own later-filed patent application.

118. See 35 U.S.C. § 102(d) (2012).

119. *Id.*

120. See *infra* note 143 and accompanying text.

121. See *infra* note 143 and accompanying text.

122. See *infra* notes 139–138 and accompanying text.

II. DEFINING PUBLIC USE IN A POST-AIA WORLD

A. Statutory Interpretation Reveals that Public Use No Longer Includes Hidden, Inaccessible, Private Use

1. The Text of AIA § 102(a)(1)

When interpreting a statute, the natural starting point is the text.¹²³ If the meaning is plain and unambiguous, courts apply the statute according to its terms.¹²⁴ For primarily two reasons, the text of AIA § 102(a)(1) plainly indicates that prior art no longer includes hidden, inaccessible, private uses of technology,¹²⁵ even if the use takes place before a disclosure by the inventor or more than a year before the effective application date. First, this category of prior art is called *public* use. Public means “exposed to general view” or “accessible to or shared by all members of the community.”¹²⁶ One cannot seriously contend that the pre-AIA definition for public use—a single use by anyone under no limitation, restriction or obligation of secrecy—fits within the plain meaning of the term “public use.”¹²⁷ For example, a drill bit is not “exposed to general view” or “accessible to or shared

123. *Carcieri v. Salazar*, 555 U.S. 379, 387 (2009) (“[Under the] settled principles of statutory construction . . . we must first determine whether the statutory text is plain and unambiguous.”) (citing *United States v. Gonzales*, 520 U.S. 1, 4 (1997)); *Caminetti v. United States*, 242 U.S. 470, 485 (1917) (“It is elementary that the meaning of a statute must, in the first instance, be sought in the language in which the act is framed, and if that is plain . . . the sole function of the courts is to enforce it according to its terms.”).

124. *Carcieri*, 555 U.S. at 387.

125. See *infra* Part I.D. The meaning of the terms “hidden” and “inaccessible” are developed in Part 0I.D. The terms essentially mean that a person of ordinary skill in the field of art could not locate the reference with reasonable diligence. *Infra* Part I.D.; MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 925 (11th ed. 2003), <http://www.merriam-webster.com/dictionary/private>. The term “private” means non-public, in the sense that the action or event did not take place at a public forum (e.g. the event occurred in a laboratory or an apartment). *Id.*

126. MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 1005 (11th ed. 2003), <http://www.merriam-webster.com/dictionary/public>.

127. *Egbert v. Lippmann*, 104 U.S. 333, 339 (1881) (Miller, J., dissenting) (“I cannot on such reasoning as this eliminate from the statute the word public, and disregard its obvious importance in connection with the remainder of the act, for the purpose of defeating a patent otherwise meritorious.”); Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 54–55 (arguing that it would be “truly absurd” to interpret § 102(a)(1) public use to include non-public uses).

by all members of the community” when it is used by one construction worker underground next to a highway.¹²⁸ But that is the result under the pre-AIA definition of public use.¹²⁹ Thirteen months before David Cox applied for his patent on that drill bit—merely one month before the critical date—one person other than Cox knew about the drill bit and tested it for Cox at a commercial site, hundreds of feet beneath the earth’s surface.¹³⁰ The fact that others *could have* known about or discovered that use of the drill bit does not mean that others *did* have access to it.¹³¹ The statutory term is not “use that could have become public” but rather actually was “in public use.”¹³²

Second, the terms “public use,” “on sale,” and “otherwise available to the public” are linked together with “or.”¹³³ When the term “or otherwise” appears at the end of a string of clauses, the term restricts the meaning of the preceding terms.¹³⁴ Thus, the catchall phrase “or otherwise available to the public” gives meaning to the term “public use.”¹³⁵ In effect, the AIA provides that if an invention is not publicly used it may still qualify as prior art—and destroy novelty—if it is available to the public in a different way. The key is that, to qualify as prior art, the AIA requires that an event or action is *available to the public*, through use or otherwise.¹³⁶ A single use of technology in private by someone other than the patentee cannot qualify as being “available to the public” and, accordingly, the plain meaning of

128. *Cf.* *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1300 (Fed. Cir. 2002) (Dyk, J., dissenting).

129. *Id.* at 1299.

130. *Id.* at 1293.

131. *Id.* at 1300.

132. 35 U.S.C. § 102(a)(1) (2012).

133. *Id.*

134. *See* *Strom v. Goldman, Sachs & Co.*, 202 F.3d 138, 146–47 (2d Cir. 1999). In construing the term “may include . . . back pay, . . . or any other equitable relief,” (quoting 42 U.S.C. § 2000e-5(g)(1) (emphasis in original)) the court concluded that “the use of the words ‘other’ immediately after the reference to back pay and before ‘equitable relief’ demonstrated Congress’ understanding that the back pay remedy is equitable in nature.” *Id.*

135. 157 CONG. REC. S1370 (daily ed. Mar. 8, 2011). In open session before the Senate, Senator Jon Kyl explained that this was the proper construction of AIA § 102(a)(1). 157 CONG. REC. S1370 (daily ed. Mar. 8, 2011) (citing *Strom*, 202 F.3d at 146–47). *Id.* (citing *Strom*, 202 F.3d at 146–47).

136. 157 CONG. REC. S1366 (daily ed. Mar. 8, 2011).

public use in the AIA cannot include such a remote, hidden, inaccessible use.¹³⁷

Many patent attorneys and patent law associations agree with this interpretation of the AIA.¹³⁸ For example, the Intellectual Property Law section of the American Bar Association writes:

[T]he passage "otherwise available to the public" reflects the touchstone of what constitutes prior art under the AIA under section 102(a)(1). This section requires availability to the public or public accessibility is an overarching requirement. Such accessibility is critical to provide a simpler, more predictable and fully transparent patent system. As such, for a "public use" . . . the statutory requirements under the AIA require a public disclosure. Thus . . . [non-public uses] would not qualify as prior art under the AIA.¹³⁹

The American Intellectual Property Law Association (AIPLA) also agrees.¹⁴⁰ The AIPLA describes the AIA's addition of the "otherwise available to the public" clause as "a major policy change achieved by the new legislation, which . . . further[s] the goal of increasing objectivity in the identification of prior art."¹⁴¹

Although it is clear that the AIA's definition of public use does not include hidden, inaccessible, private uses, many argue that the text of

137. See Armitage, *supra* note 127, at 53–55.

138. See, e.g., *id.* (arguing that the AIA § 102(a)(1) has an "overarching requirement for public availability in order . . . to constitute prior art" and that it would be "truly absurd" to interpret § 102(a)(1) public use to include non-public uses); Dennis Crouch, *Did the AIA Eliminate Secret Prior Art?*, PATENTLYO (Oct. 10, 2012), <http://www.patentlyo.com/patent/2012/10/did-the-aia-eliminate-secret-prior-art.html> (describing views of patent attorneys and patent scholars on the meaning of § 102(a)(1), including the Intellectual Property Owners Association and the American Bar Association's IP Law Section). *But see* Mark Lemley, *Comments on PTO 1st to File Guidelines*, USPTO (July 26, 2012), available at http://www.uspto.gov/patents/law/comments/m-lemley_20121005.pdf (rejecting the USPTO's interpretation of the AIA).

139. Joseph M. Potenza, *ABA-IP Law Comments on First Inventor to File Provisions* (Oct. 11, 2012), available at http://www.uspto.gov/patents/law/comments/aba-ipl_20121001.pdf.

140. See, e.g., William G. Barber, *First Inventor to File Proposed Rules and Examination Guidelines* (Oct. 5, 2012), available at http://www.uspto.gov/patents/law/comments/aipla_20121005.pdf.

141. *Id.* at 8.

§ 102(a)(1) is ambiguous and advance their argument with various canons of statutory construction. Such an exercise is fruitless because, as Judge Richard Posner pointed out years ago, “for every canon one might bring to bear on a point there is an equal and opposite canon.”¹⁴² Indeed, in this instance, there are several canons favoring a new definition of public use in the AIA and several canons supporting retention of the old definition of public use.

Scholars in favor of retaining the previous, overly broad definition of public use argue that the retention of the same pre-AIA language suggests that Congress intended the previous interpretation of those terms to be continued.¹⁴³ This canon, however, rests on the false premise that a majority of legislators who voted on the reenactment actually knew of the courts’ interpretation of public use.¹⁴⁴ It is more likely that only a small number of patent law specialists knew the courts’ broad definition,¹⁴⁵ and thus this canon is unpersuasive.

Others argue that Congress did not intend to change the definition of public use because Congress does not “hide elephants in mouseholes.”¹⁴⁶ They argue that changing the definition of public use would be a dramatic shift in U.S. patent law and that adding one clause to the list of prior art categories cannot have been designed to make such a dramatic change.¹⁴⁷ This argument is also unpersuasive for two reasons. First, a new definition of public use is not a dramatic shift in patent law, so there is no “elephant” hiding in the

142. RICHARD A. POSNER, *THE FEDERAL COURTS: CRISIS AND REFORM* 276 (1985).

143. *See, e.g.*, HAROLD C. WEGNER, *THE 2011 PATENT LAW* 110–12 (2d ed. 2011) (citing Professors Robert P. Merges and John F. Duffy in a September 16, 2011, PowerPoint).

144. *See* Richard A. Posner, *Statutory Interpretation—in the Classroom and in the Courtroom*, 50 U. CHI. L. REV. 800, 813–14 (1983).

145. *See id.* (arguing that only a small number of specialists in Congress know about judicial interpretations and desire to freeze the existing judicial construction into statutory form).

146. WEGNER, *supra* note 143 at 111–12 (citing Professors Robert P. Merges and John F. Duffy in a September 16, 2011, PowerPoint) (explaining that the court felt confident that the AIA did *not* “overrule[] *Metallizing Engineering* so that the inventor’s own secret commercial exploitation . . . will not bar that inventor from later seeking a patent [because] . . . Congress does not ‘hide elephants in mouseholes.’ Overturning two centuries of consistent law would be a big elephant to hide in a colloquy.”) (quoting *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 468 (2001) (“Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes.”)).

147. *Cf.* WEGNER, *supra* note 143.

“mousehole.”¹⁴⁸ Second, Congress could have unambiguously created a third catchall category and retained the old definition of public use, but it did not. For example, Congress could have simply not included the term “otherwise” in the last clause or the last clause could have been “or available to the public in any form.”¹⁴⁹

Lastly, critics of a newer, more common-sense meaning of public use argue that using a catchall phrase appearing at the end of a list to narrow the definition of the preceding terms violates the *ejusdem generis* canon of construction.¹⁵⁰ According to the canon, the term “otherwise available to the public” is not intended to narrow the meaning of public use but is a catchall phrase whose breadth is narrowed by the preceding terms “public use” and “on sale.”¹⁵¹ This argument lacks merit because the *ejusdem generis* canon does not apply to § 102(a)(1): the list is too short, and the “otherwise available to the public” term is not vague.¹⁵² Moreover, applying that principle in this setting violates the canon to avoid surplusage, which states that a statute should not be interpreted in a way that renders a term superfluous.¹⁵³ If “otherwise available to the public” is constrained to

148. WEGNER, *supra* note 143 (citing Professors Merges and Duffy). The “elephant” change in U.S. patent law to which these critics refer is the abrogation of the *Metallizing* doctrine. *Id.* However, that conclusion does not follow from the fact that the AIA adopted a new definition; that the AIA ushered in a new public availability requirement to public use does not mean that Congress overruled *Metallizing*. See *infra* Part II.A. (arguing that, despite a change in the scope of public use, the AIA did not overrule *Metallizing*); Taskalos, *supra* note 56 at 657 (arguing that the AIA did not overrule *Metallizing*).

149. However, it would be disingenuous to imply that Congress could not also have unambiguously removed hidden, inaccessible, private use from the prior art. That the AIA is ambiguous on this point may also suggest that Congress did not intend to do so. For example, Congress could have written “or otherwise available to the public” as “provided that the invention is made available to the public” or “unless the invention is not publicly disclosed.” In addition, Congress could have “inserted ‘non-secret’ before ‘ . . . public use, on sale’” Paul Morgan, *The Ambiguity in Section 102(a)(1) of the Leahy-Smith America Invents Act*, 2011 PATENTLY-O PAT. L.J. 29, 33 (2011).

150. See Joshua D. Sarnoff, *Derivation and Prior Art Problems with the New Patent Act*, 2011 PATENTLY-O PAT. L.J. 12, 25–26 (2011). This canon of construction states that where “general words follow the enumeration of particular classes or persons or things, the general words shall be construed as applicable only to persons or things of the same general nature or kind as there enumerated.” *Walling v. Peavy-Wilson Lumber Co.*, 49 F. Supp. 846, 859 (W.D. La. 1943).

151. See Sarnoff, *supra* note 150.

152. See 35 U.S.C. § 102 (2012).

153. See *Bilski v. Kappos*, 561 U.S. 593, 607–08 (2010) (citing *Corley v. United States*, 556 U.S. 303 (2009)) (interpreting § 273 such that business methods are never patentable “would violate the canon against interpreting any statutory provision in a manner that would render another provision

a category including public use and “on sale” events, there are no actions or events that would qualify as prior art under the “otherwise available to the public” category that would not also fall under the pre-AIA public use or “on sale” categories.

2. *The Spirit of the AIA*

Even if the text of AIA § 102(a)(1) is ambiguous, the spirit of the 2011 comprehensive patent reform reveals that public use no longer includes hidden, secret uses of an invention. When courts find the text of a statute is ambiguous or vague, they look to the purpose or “spirit” of the legislation.¹⁵⁴ The spirit of the AIA reinforces the interpretation that public use does not include hidden, inaccessible uses of an invention because adopting the old definition would contradict two of its primary goals: international harmonization and increased efficiency.¹⁵⁵ The flagship reform of the AIA was the switch from a FTI system to a FITF system.¹⁵⁶ The switch was made in an effort to increase efficiency and harmonize the US patent laws with the patent laws in the rest of the world.¹⁵⁷ Employing a new public use definition under the AIA would further this policy because Europe and other major foreign countries—such as Japan—limit prior art to events that make an invention *available to the public*.¹⁵⁸

superfluous.”).

154. *See, e.g.*, *Church of the Holy Trinity v. United States*, 143 U.S. 457, 458–59 (1892) (straining the meaning of “labor or service of any kind” for “any person under contract” to exclude pastors and religious employees in favor of the “spirit” of the legislation). In fact, even if a court finds that the plain meaning of § 102(a)(1) adopted the old definition of public use, the court should ignore that plain meaning and follow the spirit of the AIA.

155. *See* discussion *supra* Part I.E.

156. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 3(p), 125 Stat. 284 (2011).

157. *See* discussion *supra* Part I.E.

158. European Patent Convention art. 54(2), Oct. 5, 1973, <http://www.epo.org/law-practice/legal-texts/html/epc/2013/e/index.html> (defining prior art as “compris[ing] everything made available to the public by means of a written or oral description, by use, or in any other way” without geographic restriction); Japanese Patent Act art. 29(1)(i) (creating a bar to patentability where the invention was “publicly known in Japan or a foreign country”); Morgan, *supra* note 149, at 30 (arguing that excluding secret prior art would further the AIA’s purpose of international harmonization). *See also* WEGNER, *supra* note 143, at 106.

In addition, the AIA eliminated several categories of secret prior art, such as the § 102(g) secret invention by another inventor and the § 102(f) prior knowledge transferred from another to the patent applicant categories. The removal of secret prior art leads to clearer notice for anyone interested in researching the state of the art¹⁵⁹ and, in turn, increases overall efficiency by decreasing the volume of patent litigation.¹⁶⁰ Likewise, courts should interpret § 102(a)(1) in a manner that eliminates secret prior art in an effort increase notice and efficiency.

3. *The Legislative History of the AIA*

If the text is unconvincing and the spirit of the AIA does not persuade courts to eliminate hidden, inaccessible, private use from the public use prior art category, the legislative history behind the AIA forcefully supports the argument.¹⁶¹ Prior to the Senate vote, Senator Jon Kyl explained that the “[n]ew section 102(a)(1) . . . limits *all* non-patent prior art to that which is *available to the public*.”¹⁶² Senator Kyl explains that Congress’s Judiciary Committee added the words “otherwise available to the public” to

159. See generally Crouch, *supra* note 138.

160. Most patent infringement suits do not involve willful infringement.

161. See Taskalos, *supra* note 5656, at 686–87.

162. 157 CONG. REC. S1370 (daily ed. Mar. 8, 2011) (emphasis added). The Senator stated that: Another aspect of the bill’s changes to current section 102 also merits special mention. New section 102(a)(1) makes two important changes to the definition of non-patent prior art. First, it lifts current law’s geographic limits on what uses, knowledge, or sales constitute prior art. And second, it limits all non-patent prior art to that which is available to the public. This latter change is clearly identified in Senate Report 110–259, the report for S. 1145, the predecessor to this bill in the 110th Congress. The words “otherwise available to the public” were added to section 102(a)(1) during that Congress’s Judiciary Committee mark up of the bill. The word “otherwise” makes clear that the preceding clauses describe things that are of the same quality or nature as the final clause—that is, although different categories of prior art are listed, all of them are limited to that which makes the invention “available to the public.” As the committee report notes at page 9, “the phrase ‘available to the public’ is added to clarify the broad scope of relevant prior art, as well as to emphasize the fact that it [i.e., the relevant prior art] must be publicly available.” In other words, as the report notes, “[p]rior art will be measured from the filing date of the application and will include all art that publicly exists prior to the filing date, other than disclosures by the inventor within one year of filing.”

Id.

make clear that all of the relevant prior art “must be available to the public.”¹⁶³ Calling the current statutory bar doctrines “traps for unwary inventors [that] impose extreme results to no real purpose,”¹⁶⁴ the Senator explains that the present definition “abrogates the rule announced in *Egbert v. Lippmann*,” which held that the public use bar does not depend on the number of persons with knowledge of the use and that a single use may erect it.¹⁶⁵

In addition, during another Senate colloquy, Senator Leahy—the primary sponsor and author of the Senate bill—responded to questions about the meaning of § 102(a). He stated that:

[S]ubsection 102(a) was drafted in part to do away with

163. *Id.* (citing S. REP. NO. 110–259 (2008)). Professor Sarnoff argues that the term “otherwise available to the public” only modifies the first two categories in § 102(a)(1) (patented and described in a printed publication), not “on-sale” and “public use.” Sarnoff, *supra* note 150 at 26. To support this conclusion, he argues that:

The “otherwise available to the public” language derives from House bills in earlier Congresses. In those bills, the “on sale” and “in public use” categories had been eliminated in favor of a broad catchall category “otherwise publicly known,” which again suggested that [only] the first two categories (patented or described in a printed publication) also had to be publicly known. . . . This legislative language (including the definition) would have precluded most “secret prior art,” as pre-filing prior art was restricted to third-party sales or uses of the invention and as the earlier bills provided a one-year grace period for the inventor’s own acts. After significant off-the-record legislative negotiations, the existing “on-sale” and “public use” statutory categories were restored, and the “otherwise publicly known” language was converted to the “otherwise available to the public” language.

Id. at 26 (citing H.R. 2795, 109th Cong., § 3(b) (2005) (proposed §§ 102(a)(1) and 102(b)(3)(A) & (B))).

Harold C. Wegner also views the AIA’s revision history differently than Senator Kyl. Arguing in favor of retaining the pre-AIA definition of public use, he writes that:

Perhaps [the] best argument [is] that the 2005 and succeeding versions of patent reform legislation until 2011 had included language that would have overruled *Metallizing Engineering* and that this language was consciously put into the earlier legislation for this purpose. . . . [A]lso . . . these changes were *removed* and replaced in the new law with the old “public use” language and without language disqualifying a secret commercialization.

WEGNER, *supra* note 143, at 111 (emphasis in original).

164. 157 CONG. REC. S1371 (daily ed. Mar. 8, 2011) (citing as an example of such a result *Beachcombers Int’l, Inc. v. Wildewood Creative Prods., Inc.*, 31 F.3d 1154, 1159–60 (Fed. Cir. 1994)). See *infra* text accompanying notes 194–198.

165. 157 CONG. REC. S1371 (daily ed. Mar. 8, 2011) (citing *Egbert v. Lippman*, 104 U.S. 333, 336 (1881)). Senator Kyl explains that in the AIA’s “revisions to section 102, vindication has finally come to Justice Miller, albeit 130 years late” and cites to Justice Miller’s dissent in *Egbert*. *Id.* (citing *Egbert*, 104 U.S. at 339 (Miller, J., dissenting)). See also *supra* note 83.

precedent under current law that . . . private uses or secret processes practiced in the United States that result in a product or service that is then made public may be deemed patent-defeating prior art. . . . In effect, the new paragraph 102(a)(1) imposes an overarching requirement for availability to the public, that is a public disclosure, which will limit paragraph 102(a)(1) prior art to subject matter meeting the public accessibility standard that is well-settled in current law”¹⁶⁶

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166. 157 CONG. REC. S1496–97 (daily ed. Mar. 9, 2011). The senate colloquy is the following:
 Mr. LEAHY: Mr. President, Congress has been working on the America Invents Act going back many years. It has gone through numerous iterations and changes have been made over time. Accordingly, I want to take a few minutes to discuss some important legislative history of a critical piece of this bill—section 2 of the legislation, which amends section 102 of title 35 of the United States Code. There has been a great deal of attention paid to subsections 102(a) and (b) and how those two subsections will work together. Senator BENNET and others have asked about this issue in particular.
 Mr. HATCH: I thank the Senator. I agree with the chairman that it is important that we set down a definitive legislative history of those subsections, which will be important for each and every patent application.
 Mr. LEAHY: One key issue on which people have asked for clarification is the interplay between patent-defeating disclosures under subsection 102(a) and the situations where those disclosures are excepted and have no patent-defeating effect under the grace period provided in subsection 102(b).
 In particular, some in the small inventor community have been concerned that a disclosure by an inventor might qualify as patent-defeating prior art under subsection 102(a) because, for example, the inventor’s public disclosure and by a “public disclosure” I mean one that results in the claimed invention being “described in a printed publication, or in public use, on sale, or otherwise available to the public”—might in some situation not be excluded as prior art under section 102(b)’s grace period. There is absolutely no situation in which this could happen given the interplay between subsections 102(a) and 102(b) as these subsections are drafted.
We intend that if an inventor’s actions are such as to constitute prior art under subsection 102(a), then those actions necessarily trigger subsection 102(b)’s protections for the inventor and, what would otherwise have been section 102(a) prior art, would be excluded as prior art by the grace period provided by subsection 102(b). Indeed, as an example of this, *subsection 102(b)(1)(A), as written, was deliberately couched in broader terms than subsection 102(a)(1). This means that any disclosure by the inventor whatsoever, whether or not in a form that resulted in the disclosure being available to the public, is wholly disregarded as prior art.* A simple way of looking at new subsection 102(a) is that no aspect of the protections under current law for inventors who disclose their inventions before filing is in any way changed.
 Mr. HATCH: [Response omitted.]
 Mr. LEAHY: . . . One of the implications of the point we are making is that subsection 102(a) was drafted in part to do away with precedent under current law that private offers for sale or private uses or secret processes practiced in the United States that result in a

Thus, the legislative history evinces Congressional intent to remove hidden, inaccessible, non-public uses from the realm of patent-defeating prior art.

B. Hidden, Inaccessible, Private Use Creates a Different Kind of Problem

All other arguments aside, it is critical that courts interpret public use such that it does not include hidden, inaccessible, private use to avoid a potentially disastrous problem. The patent cases that receive most of the attention are the cases mentioned above in Part II.A. *Pennock*,¹⁶⁷ *Egbert*,¹⁶⁸ and *Metallizing*.¹⁶⁹ Those cases focus on the harmful conduct of the patentee, punishing or taking away the patentee's right to receive patent protection for his or her invention. But the judicial interpretation of the public use statutory bar created an important problem: scrupulous inventors are blindsided by public use prior art that they did not know about and could not have known about. Although this problem is currently small in magnitude, it will grow much bigger in the next five or ten years due to the changes¹⁷⁰ in the AIA.

If not prevented, the expansion of the problem of hidden, inaccessible, private prior art will cripple the US patent system. That conclusion may seem dramatic and exaggerated, but if patent practitioners and technology investors lose faith in the U.S. patent

product or service that is then made public may be deemed patent-defeating prior art. That will no longer be the case. In effect, the new paragraph 102(a)(1) imposes an overarching requirement for availability to the public, that is a public disclosure, which will limit paragraph 102(a)(1) prior art to subject matter meeting the public accessibility standard

Id. (emphasis added).

Harold C. Wegner describes this colloquy as “*faux*” “post-vote” legislative history and argues that the discussion took place the day after the AIA vote. *See* WEGNER, *supra* note 143, at 125–28. While a post-vote explanation of the bill's terms is certainly less persuasive than pre-vote Congressional debate, it clarifies the writer's intentions and views of the clause's meaning. In fact, Senator Leahy prefaces his comments by noting that other senators asked for clarification of subsection 102(a).

167. 27 U.S. 1 (1829).

168. 104 U.S. 333 (1881).

169. 153 F.2d 516 (2d Cir. 1946).

170. *See supra* text accompanying notes 112–122 (describing the changes made by the AIA).

system's ability to reward, they will discontinue seeking patent protection. In other words, hidden, inaccessible, private prior art may invalidate so many valuable patents that inventors and investors no longer seek patent protection because the risk of invalidity is so high.¹⁷¹ An infringement suit will be like digging one's own grave because the defendant will seek out one person, anywhere in the world, who used the invention at least once outside of an obligation of secrecy. If the patent system is unpredictable due to high findings of invalidity, society will stop seeking patent protection. Instead, some inventors will keep their work secret and rely on trade secret protection. Other inventors will simply not invent because investors will not finance their innovations. Any combination of these two results will stifle innovation. A large percentage of inventions will never be made because they are ineligible for trade secret protection due to the problem of reverse engineering and independent creation.¹⁷² Even in the fields of art for which trade secret protection is effective, innovation will be stifled because the underlying

171. The important metric here deals only with *valuable* patents. If the patent is not valuable, its validity is usually irrelevant because the patent-holder or exclusive licensee cannot profit from the patent. Litigation is a good barometer of a patent's value. Without empirical evidence, it is impossible to know what percentage of USPTO-issued, valuable patents found invalid by courts would cause inventors and investors to lose faith in the U.S. patent system's ability to reward inventors. It is fair to assume that if courts found ninety-five percent of valuable patents invalid it would stifle innovation. Likewise, it is fair to assume that if courts only found five percent of valuable patents invalid it would *not* stifle innovation. The decision to invent or not will also include many other factors, such as the field of art, the crowdedness of the type of invention, and the amount of the investment needed to develop a commercial product or implement a new process. Some fields of art, such as pharmaceuticals, are more predictable because they offer better notice and define boundaries better than other fields of art. BESSEN & MEURER, *infra* note 214. However, the breadth of the public use prior art category will affect the predictability of patent validity of pharmaceutical patents, at least to some extent. *See, e.g.,* Dey, L.P. v. Sunovion Pharms., Inc., 715 F.3d 1351, 1360 (Fed. Cir. 2013) (holding that a clinical trial of a drug may have constituted public use under § 102(b) and remanding for factual findings).

172. *See* Kewanee v. Bicon, 416 U.S. 470, 489–90 (1974). As the Court explained:

Trade secret law provides far weaker protection in many respects than the patent law. While trade secret law does not forbid the discovery of the trade secret by fair and honest means, *e.g., independent creation or reverse engineering*, patent law operates "against the world," forbidding any use of the invention for whatever purpose for a significant length of time. The holder of a trade secret also takes a substantial risk that the secret will be passed on to his competitors, by theft or by breach of a confidential relationship, in a manner not easily susceptible of discovery or proof.

Id. (citations omitted) (emphasis added).

technological advancement will remain undisclosed. Society loses the benefits of immediately understanding the technology through patent disclosure and of studying and improving upon the technology while the patent is enforceable.¹⁷³ The secrecy of the invention may remain undisclosed for decades longer than a patent term.¹⁷⁴

The use of third party, independent public use prior art is different than the situation in *Pennock*. Although the uses that constituted public use in *Pennock* may have been uses by persons other than the patentee, the uses were not independent because they resulted from sales of hoses made via Pennock and Sellers's patented process.¹⁷⁵ In contrast, about sixty years later, the Supreme Court confirmed that third party, independent use can establish the public use statutory bar.¹⁷⁶ In that case, however, the patent holder conceded that others had publicly used the claimed invention before the critical date. Although the argument would be frivolous today, the patent holder was arguing that public use by others, without the consent of the inventor, could not invalidate a patent.¹⁷⁷ The argument presented in this paper is not that the AIA overruled that long-standing doctrine. Rather, this paper argues that, to further important patent law policies, AIA § 102(a)(1) public use prior art should not include independent, third party use that is *hidden and inaccessible to the public*.

From 1993 to 2013, when determining the validity of USPTO-issued patents, the Federal Circuit has considered third party, independent uses of a claimed invention under the § 102(b) public use prior art category at least twenty-four times.¹⁷⁸ In at least eight of

173. Although the patent holder contains the exclusive right to make, use, or sell the invention, others can use the information contained in the written description section to improve on the claimed invention or invent something different (non-infringing). Trade secret protection lacks the immediate benefit that patent disclosure provides to society.

174. For example, the Coca-Cola recipe has been a trade secret for over one hundred years. *Coca-Cola Moves 'Secret Formula' to New Vault in Atlanta*, NY DAILY NEWS (Dec. 9, 2011 12:04 PM), <http://www.nydailynews.com/life-style/eats/coca-cola-moves-secret-formula-new-vault-atlanta-article-1.989170>.

175. See *supra* text accompanying notes 62–70.

176. *Andrews v. Hovey*, 123 U.S. 267, 273 (1887).

177. Interestingly, under the Patent Act of 1836, public use by others, without the consent of the inventor, could not invalidate a patent! *Andrews*, 123 U.S. at 271.

178. *Dey, L.P. v. Sunovion Pharms., Inc.*, 715 F.3d 1351, 1353 (Fed. Cir. 2013); *MySpace, Inc. v.*

these cases, the third party use would not have qualified as patent-defeating prior art if the definition of public use did not include hidden, inaccessible, private use.¹⁷⁹ For eight of the twenty-four cases, the outcome under a new public use definition was unclear, either because the factual record was insufficient to determine the outcome or because the alleged use was very close to what might be considered public, depending on the breadth of the new definition.¹⁸⁰ These cases primarily break down into three categories of third party public use: (1) patentee versus a corporate third party user;¹⁸¹ (2)

GraphOn Corp., 672 F.3d 1250, 1257 (Fed. Cir. 2012); Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 655 F.3d 1364, 1377 (Fed. Cir. 2011); Orion IP, L.L.C. v. Hyundai Motor Am., 605 F.3d 967, 974 (Fed. Cir. 2010); ResQNet.com, Inc. v. Lansa, Inc., 594 F.3d 860, 866 (Fed. Cir. 2010); Clock Spring, L.P. v. Wrapmaster, Inc., 560 F.3d 1317, 1322 (Fed. Cir. 2009); Kinetic Concepts, Inc. v. Blue Sky Med. Grp., Inc., 554 F.3d 1010, 1016–17 (Fed. Cir. 2009); Zenith Elecs. Corp. v. PDI Commc'n Sys., Inc., 522 F.3d 1348, 1356 (Fed. Cir. 2008); Adenta GmbH v. OrthoArm, Inc., 501 F.3d 1364, 1366 (Fed. Cir. 2007); Ormco Corp. v. Align Tech., Inc., 463 F.3d 1299, 1305 (Fed. Cir. 2006); Eolas Techs., Inc. v. Microsoft Corp., 399 F.3d 1325, 1334 (Fed. Cir. 2005); Emergency Fuel, LLC v. Penzoil-Quaker State Co., 71 F. App'x. 826, 833–34 (Fed. Cir. 2003); Lacks Indus., Inc. v. McKechnie Vehicle Components USA, Inc., 322 F.3d 1335, 1348–49 (Fed. Cir. 2003); Minn. Mining & Mfg. Co. v. Chemque, Inc., 303 F.3d 1294, 1302 (Fed. Cir. 2002); Juicy Whip, Inc. v. Orange Bang, Inc., 292 F.3d 728, 737 (Fed. Cir. 2002); Ultra-Tex Surfaces, Inc. v. Hill Bros. Chem. Co., 204 F.3d 1360, 1366 (Fed. Cir. 2000); Comfort Silkie Co. v. Seifert, No. 98-1476, 1999 WL 507166, at *1 (Fed. Cir. July 16, 1999); Finnigan Corp. v. Int'l Trade Comm'n., 180 F.3d 1354, 1370 (Fed. Cir. 1999); Baxter Int'l, Inc. v. COBE Labs., Inc., 88 F.3d 1054, 1057 (Fed. Cir. 1996); *In re Epstein*, 32 F.3d 1559, 1561–62 (Fed. Cir. 1994); Beachcombers v. Wildewood Creative Prods., Inc., 31 F.3d 1154, 1159–60 (Fed. Cir. 1994); Nat'l Research Dev. Corp. v. Varian Assocs., No. 93-1421, 1994 U.S. App. LEXIS 1493, at *5–*6 (Fed. Cir. Jan. 6, 1994); Mendenhall v. Cedarapids, Inc., 5 F.3d 1557, 1562 (Fed. Cir. 1993).

179. *Dey*, 715 F.3d at 1353; *Eolas*, 399 F.3d at 1334; *Emergency Fuel*, 71 F. App'x. at 833–34; *Juicy Whip*, 292 F.3d at 737; *Comfort Silkie*, 1999 WL 507166, at *1; *Baxter*, 88 F.3d at 1057; *Beachcombers*, 31 F.3d 1159–60; *Nat'l Research*, 1994 U.S. App. LEXIS 1493.

180. See *ResQNet.com*, 594 F.3d at 866; *McKechnie*, 322 F.3d at 1349; *Minn. Mining & Mfg. Co.*, 303 F.3d at 1306. See generally *Star Scientific*, 655 F.3d 1364; *Clock Spring*, 560 F.3d 1317; *Adenta*, 501 F.3d 1364; *Ormco*, 463 F.3d 1299; *Ultra-Tex*, 204 F.3d 1360.

181. See, e.g., *infra* notes 184–192 (explaining the facts of *Juicy Whip*, 292 F.3d 728); *Dey*, 715 F.3d at 1356 (reversing district court's grant of summary judgment finding the patent claims invalid due to a lack of novelty because whether the failure of some of the individuals in a clinical trial to return the patented drug samples constitutes public use was a genuine issue of material fact); *Ransomes v. Great Dane Power Equip., Inc.*, 2000 U.S. App. LEXIS 6172, at *13–14 (Fed. Cir. Apr. 4, 2000) (considering a third party lawn mower control system to be prior art—presumably as public use before the critical date—and reversing district court's grant of summary judgment finding the patent claim invalid because obviousness was a genuine issue of fact for the jury); *Finnigan*, 180 F.3d at 1357, 1367 (reversing commission's finding of invalidity on the patent's claimed “quadrupole ion trap” method because uncorroborated witness testimony of a hidden, inaccessible, private use occurred, which would have constituted public use, was insufficient as a matter of law to meet the clear and convincing evidence standard required to prove invalidity); *Mendenhall*, 5 F.3d at 1559, 1564.

patentee versus individual third party user;¹⁸² and (3) laboratory sharing between colleagues.¹⁸³

1. Patentee Versus Corporate Third Party User

A good example of this type of third party public use is in *Juicy Whip v. Orange Bang*.¹⁸⁴ In *Juicy Whip*, the patentee claimed a post-mix beverage dispenser that is designed to look like a pre-mix dispenser; essentially, the patent was for a vending machine that “stores beverage syrup concentrate and water in separate locations until the beverage is ready to be dispensed” with a “transparent bowl that is filled with a fluid that simulates the appearance of the dispensed beverage.”¹⁸⁵ The court considered two separate beverage dispensers as prior art under § 102(b) public use.¹⁸⁶ The first was a “makeshift” dispenser “converted [from] a pre-mix dispenser into a post-mix dispenser by removing the pre-mix nozzle, plugging the remaining hole, and installing a post-mix valve arrangement in the base of the pre-mix dispenser.”¹⁸⁷ One customer used a makeshift dispenser for one month.¹⁸⁸ The facts do not indicate how long the only other customer used this type of dispenser. The second was a “post-mix dispenser with a clear bowl placed on top of it.”¹⁸⁹ The second design was used by one customer, for a total of about six weeks.¹⁹⁰ Because of the broad definition of § 102(b) public use, the patent holder did not even argue on appeal that these did not qualify as prior art.¹⁹¹ Therefore, out of millions of vending machines in the

182. *Comfort Silkie*, 1999 WL 507166, at *2 (affirming summary judgment finding patent claiming a special baby blanket invalid due to a lack of novelty because a single third party took similar blankets into public places); *Beachcombers*, 31 F.3d at 1156; see also *Finnigan*, 180 F.3d at 1357, 1359–60 (explanation at *supra* note 181).

183. *Eolas*, 399 F.3d at 1334-35; *Baxter*, 88 F.3d at 1059; *Nat’l Research*, 1994 U.S. App. LEXIS 1493, at *2–4.

184. See generally 292 F.3d 728 (Fed. Cir. 2002).

185. *Id.* at 731–32.

186. *Id.* at 734, 736–37.

187. *Id.* at 734–35.

188. *Id.* at 735.

189. *Id.*

190. See *Juicy Whip*, 292 F.3d at 743.

191. *Id.* at 737.

United States,¹⁹² three of them—*designed to appear as pre-mix beverage dispensers to the public*—practiced the same technology as claimed in the patent for a very short period of time and constituted a patent-defeating public use of the invention.¹⁹³

2. Patentee Versus Individual Third Party User

Illustrative of the second type of third party public use is *Beachcombers v. Wildewood Creative Products*.¹⁹⁴ In *Beachcombers*, the Federal Circuit upheld a jury verdict finding that a § 102(b) public use anticipated the patented liquid-filled kaleidoscope.¹⁹⁵ The public use consisted of a display of a similar liquid-filled kaleidoscope device to about twenty-five guests at a house party, merely one month before the critical date.¹⁹⁶ The court distinguished *Moleculon*,¹⁹⁷ reasoning that the guests were under no obligation of secrecy and thus the social demonstration constituted a public use.¹⁹⁸

192. Olga Kharif, *Technology: Vending Machines Get Smart to Accommodate the Cashless*, BLOOMBERG BUSINESS (Aug. 29, 2013), <http://www.businessweek.com/articles/2013-08-29/vending-machines-get-smart-to-accommodate-the-cashless> (noting that there are currently five million vending machines in the U.S.).

193. See *Juicy Whip*, 292 F.3d at 735–36, 743. The Federal Circuit, however, reversed the district court and found the patent was valid because the oral testimony was insufficient to prove by clear and convincing evidence that the patent was invalid. *Id.* at 743. For purposes of this discussion, what matters most is that the Federal Circuit did not state that the alleged use did not qualify as public use; had Orange Bang documented the use better, Juicy Whip's patent would be invalid. *Id.*

194. See generally 31 F.3d 1154 (Fed. Cir. 1994).

195. *Id.* at 1160. Before reaching the public use issue, the court overturned the jury's finding that the patent was invalid for indefiniteness. *Id.* at 1158–59. In finding the party display of a similar kaleidoscope constituted a public use, the court upheld the jury's finding that claims 1, 6, and 11 were anticipated (and invalid) but upheld claims 8, 9, and 13 because the limitations in those dependent claims were not present in the kaleidoscope displayed at the party. *Id.* at 1160–63. This finding was to no avail, however, because defendant Wildewood's kaleidoscope, which tracked the kaleidoscope displayed at the party, did not include those limitations and thus upheld the jury's finding of no infringement. *Id.* at 1163.

196. *Id.* at 1159–60.

197. See *supra* notes 89–94 and accompanying text (the "Rubik's Cube" case) (finding that despite the lack of express confidentiality, the inventor maintained control over the cubical puzzle at all times when he showed the invention to several friends and his supervisor at work).

198. *Beachcombers*, 31 F.3d at 1160. Senate Minority Whip Jon Kyl cited *Beachcombers* as an example of how § 102(b) doctrines have become "traps for unwary inventors and impose extreme results to no real purpose." 157 CONG. REC. S1371 (daily ed. Mar. 8, 2011) (citing *Beachcombers*, 31 F.3d at 1159–60).

3. *Laboratory Sharing Between Colleagues*

In addition to the *Eolas* example, explained in the introduction,¹⁹⁹ another example of third party laboratory sharing between colleagues is *Baxter International, Inc. v. Cobe Laboratories, Inc.*²⁰⁰ In *Baxter*, the Federal Circuit held that a patent for a sealless centrifuge used to separate blood into its components lacked novelty because it was in public use.²⁰¹ The prior public use resulted from a sealless centrifuge built by two research scientists at the National Institutes of Health (NIH) prior to the critical date.²⁰² The court found that the use of the centrifuge in the NIH laboratory constituted a patent-invalidating public use because the third party inventor did not make any effort to keep his centrifuge a secret, “others at NIH came into his laboratory and observed the centrifuge in operation, including co-workers, who were under no duty to maintain it as confidential,” and NIH was a public building.²⁰³

C. Changes in the AIA Make This Problem Potentially Disastrous for US Patent Law

Three changes to U.S. patent law made by the AIA intensify the problem of hidden third party public use and threaten to undermine the goal of promoting innovations in science and the useful arts. Because of these substantive changes to prior art, Robert Armitage explains that to include third party hidden, inaccessible uses as public use would be “truly absurd.”²⁰⁴ First, due to the switch from FTI to FITF, the AIA eliminated the § 102(a) “known and used by others” category of prior art.²⁰⁵ Therefore, all of the former § 102(a) novelty cases will now be shoehorned into § 102(a)(1) public use prior art

199. *See supra* Introduction; *see supra* notes 1–9 and accompanying text.

200. 88 F.3d 1054 (Fed. Cir. 1996).

201. *Id.* at 1056.

202. *Id.*

203. *Id.* at 1058–61.

204. Armitage, *supra* note 127, at 55.

205. *Id.* at 46–47.

under the AIA.²⁰⁶ This structural amendment increases the scope of the § 102(a)(1) public use category and increases magnitude of the hidden, inaccessible, private use problem.²⁰⁷

The second, and most dramatic, change is that the AIA removed the geographic restrictions on § 102(b) public use and § 102(a) "known and used by others."²⁰⁸ Before the AIA was enacted, in contrast to "patented" or "printed publication" prior art, the public use or "used by others" prior art event must have taken place in the United States.²⁰⁹ Therefore, if an inventor implemented an improved process in a Russian factory, if an inventor let one friend try his invention in a Malaysian apartment, or if an inventor showed his invention to a single colleague in Japan, the activity could constitute § 102(a)(1) public use if the AIA adopts the same pre-AIA definition. These types of foreign uses differ significantly from patents and printed publications in other countries because, unlike in the three examples, patent applications and printed publications share the new technology with the world (or at least make it accessible to the world).

The last noteworthy change is that the AIA removed the 170-year-old automatic grace period.²¹⁰ Under the AIA, there is no grace period for inventions unless and until the inventor makes a public disclosure of his invention.²¹¹ Therefore, any prior art activity that

206. Compare 35 U.S.C. § 102(a) (2006), with 35 U.S.C. § 102(a) (2012).

207. See, e.g., *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1370 (Fed. Cir. 1998) (applying "known or used by others" category); *Rosaire v. Baroid Sales Div., Nat'l Lead Co.*, 218 F.2d 72, 73 (5th Cir. 1955) (applying "known or used by others" category). Now, they must qualify as prior art under the public use category instead of the "known or used by others" category. Compare 35 U.S.C. § 102(a) (2006), with 35 U.S.C. § 102(a) (2012).

208. Compare 35 U.S.C. § 102(a)–(b) (2006), with 35 U.S.C. § 102(a) (2012). See also Armitage, *supra* note 127, at 46–47, 51.

209. *In re Hall*, 781 F.2d 897, 897, 899 (Fed. Cir. 1986). This case is commonly thought of as obscure, but at least the thesis was catalogued and potentially accessible. *Id.* at 899. Imagine a case where the same information was orally conveyed to a colleague in a laboratory or displayed to a family member in a private residence.

210. See Armitage, *supra* note 127, at 67.

211. 35 U.S.C. § 102(b) (2012).

Exceptions [to First Inventor to File rule in section (a)]—

(1) Disclosures made 1 year or less before the effective filing date of the claimed invention.—A disclosure made 1 year or less before the effective filing date of a claimed

qualifies as a public use and takes place before the effective application date or the inventor's own public disclosure will invalidate the patent.²¹² Before the AIA, even if an inventor did not make any public disclosures or publish his invention, any public use activity occurring within the year preceding the effective application date could not serve as prior art to show a lack of novelty or nonobviousness.²¹³

These three changes radically increase the scope of the public use bar and thus dramatically more prior art events will fall under the new § 102(a)(1) public use patentability bar. The U.S. patent system is already in trouble because it provides poor notice.²¹⁴ Patents fail to function as property in many fields of art.²¹⁵ Notwithstanding the "patent failure" and the fact that one patent per year is invalidated by third party public use, inventors and investors have continued to rely on patent protection to reward them for their innovation.²¹⁶ However, these inventors and investors will likely stop believing in the

invention shall not be prior art to the claimed invention under subsection (a)(1) if—(A) the disclosure was made by the inventor or joint inventor or by another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; or (B) the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor. (2) Disclosures appearing in applications and patents.—A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if—(A) the subject matter disclosed was obtained directly or indirectly from the inventor or a joint inventor; (B) the subject matter disclosed had, before such subject matter was effectively filed under subsection (a)(2), been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor; or (C) the subject matter disclosed and the claimed invention, not later than the effective filing date of the claimed invention, were owned by the same person or subject to an obligation of assignment to the same person.

Id.

212. Armitage, *supra* note 127, at 67.

213. See 35 U.S.C. § 102(b) (2006).

214. JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 147–64 (2008) (concluding that patents fail to function "as property" due to the lack of notice provided by the American patent system). The AIA makes the notice problem in the United States worse because the new global public use prior art imposes additional search and litigation costs. In contrast to the former system, defendants will now search for public use events in foreign countries such as Russia and Malaysia. See 35 U.S.C. § 102(d) (2012).

215. BESSEN, *supra* note 214 at 51–52.

216. See *id.* at 70–72, 92–93.

profitability of U.S. patents if courts retain the broad pre-AIA definition of public use.²¹⁷ The expansion of the problem of hidden, inaccessible, private use will make patent validity highly unpredictable.²¹⁸ The changes in the AIA will likely invalidate so many valuable patents that inventors and investors no longer seek patent protection. To save the U.S. patent system and promote American innovation, AIA § 102(a)(1) public use should not include hidden, inaccessible, private use.

D. Excluding Hidden, Inaccessible, Private Use from the Prior Art Furthers Important Patent Policies

In addition, excluding hidden, inaccessible private use from the public use bar will further important patent policies. When determining whether to apply the public use bar, the Federal Circuit looks to whether application of the statutory bar will promote the underlying policies.²¹⁹ In fact, the Federal Circuit has repeatedly asserted that the policies underlying the public use bar, "in effect, define it."²²⁰ Turning to the four policies underlying the public use statutory bar, excluding hidden, inaccessible public use advances the quid pro quo and prompt disclosure rationales and leaves the detrimental public reliance and channeling rationales unharmed. There is no concern about detrimental public reliance on the new innovation because, by definition, the public cannot possibly think something is in the public domain if the only use is hidden and inaccessible from members of society. In addition, independent, third party prior art has no effect on the channeling rationale because that

217. *Id.* at 88.

218. *Id.* at 10.

219. *See, e.g.,* *Tone Bros. v. Sysco Corp.*, 28 F.3d 1192, 1198 (Fed. Cir. 1994).

220. *See, e.g.,* *TP Labs., Inc., v. Prof'l Positioners, Inc.*, 724 F.2d 965, 973 (Fed. Cir. 1984) (The public use bar was inapplicable because "none of the policies which underlie the public use bar and which, in effect, define it have been shown to be violated."); *cf. Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 549 (Fed. Cir. 1990) (quoting *Envirotech Corp. v. Westech Eng'g Inc.*, 904 F.2d 1571, 1574 (Fed. Cir. 1990)) ("[T]he policies or purposes underlying the on sale bar [of section 102(b)], in effect, define it.").

rationale only applies to first party inventors who commercialize their invention.²²¹

Excluding inaccessible uses from the public use prior art category will advance the quid pro quo rationale because many inventions in public use, as defined in pre-AIA jurisprudence, are not commercially developed. The public use bar rests on the assumption that if an invention was in public use, then society receives the benefit of that invention through commercial development or otherwise.²²² However, this assumption is often incorrect under the old definition of public use because if the public use is hidden or too obscure, then society is unaware of its existence.²²³ For example, in *Egbert*, had Mr. Barnes not told his friends about the new corset steels and not applied for a patent on them, the world would be unaware of the invention and women all over America would have continued to suffer from constantly breaking corset steels.²²⁴ The patent-defeating public use—letting Ms. Egbert use the corset steels—shared no knowledge with the world.²²⁵ In addition, once an invention is in public use, the incentive of patent protection is removed from the equation, and there is often no economic incentive to develop or commercialize the technology.²²⁶ Raising the public use bar to exclude hidden, inaccessible uses increases the likelihood that a public use actually places the invention in the public domain and decreases the chance of a trivial use erecting the patentability bar.

Rejecting the pre-AIA definition of public use furthers the prompt disclosure policy for two reasons. First, without good notice and predictability, persons with skill in the relevant fields of art may lose confidence in the patent system's ability to financially reward the innovations. This concern will motivate inventors and businesses to keep their inventions secret and rely on trade secret protections rather

221. See *infra* Part III.A (discussing the continued vitality of *Metallizing*).

222. See *TP Labs.*, 724 F.2d at 970–72.

223. *Egbert v. Lippmann*, 104 U.S. 333, 335 (1881).

224. *Id.*

225. *Id.* at 337.

226. See *Kitch*, *supra* note 13, at 266; *Roin*, *supra* note 50, at 503 (arguing that pharmaceutical drugs are not commercialized without the economic incentive of patent protection).

than risk disclosing their invention through a patent application. Excluding hidden, inaccessible prior art will increase predictability in the U.S. patent system and will foster trust and reliance in patent protection. Second, the first-inventor-to-file priority system and the removal of the automatic grace period already provide sufficient incentive to promptly disclose new technology.²²⁷ Therefore, requiring public accessibility in § 102(a)(1) public use will promote the prompt public disclosure policy.

E. The Difference Between Hidden, Inaccessible, Private Use and Secret Use Is Insignificant

The final reason why courts should discontinue the old pre-AIA definition of public use is because there is an insignificant difference between hidden, inaccessible public use and secret use. It is well-established law that “when an asserted prior use is not that of the applicant, § 102(b) is not a bar when that prior use or knowledge is not available to the public.”²²⁸ The Federal Circuit, however, draws a very fine line between available to the public and secret use.²²⁹ This distinction is senseless and rests on hypothetical possibilities rather than reality.²³⁰ There is no material difference between an invention known by one person, other than the inventor, bound by secrecy and an invention known by one person, not bound by secrecy, who tells no one of the invention. The fact that the non-inventor with knowledge *could have* shared the innovative knowledge with the

227. 157 CONG. REC. S1371 (daily ed. Mar. 8, 2011) (statement of Sen. Kyl).

228. *Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1371 (Fed. Cir. 1998) (citing *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983)) (reasoning that third party secret commercial activity, more than one year before the patent application of another, is not a § 102(b) bar); 1 IRVING KAYTON, *PATENT PRACTICE* § 4.41 (6th ed. 1995) (“Where the commercially advantageous, secret use is by a *third party* and even though that use is for a period more than one year before the applicant’s filing date, it cannot constitute a statutory time bar under § 102(b).”) (emphasis in original); *Baxter Int’l, Inc. v. COBE Labs., Inc.*, 88 F.3d 1054, 1058–59 (Fed. Cir. 1996) (third party prior use accessible to the public is a § 102(b) bar); *see also Nat’l Research Dev. Corp. v. Varian Assocs.*, No. 93-1421, 1994 U.S. App. LEXIS 1493, *10 (Fed. Cir. Jan. 26, 1994).

229. *See Egbert v. Lippmann*, 104 U.S. 333, 339 (1881) (Miller, J., dissenting) (“I am at a loss to know the line between a private and a public use.”).

230. *Id.*

whole world is logically unimportant; he or she did not tell the whole world, so the general public does *not know of the invention*. In reality, in neither case is the inventive knowledge available to the public.

In determining whether a claimed invention is available to the public, the important questions should be how many people know about the invention and who knows about the invention.²³¹ The answer is the same in either case: one person other than the inventor knows about the invention. The important part should be whether the user actually told someone.

III. ISSUES RAISED BY A NEW INTERPRETATION OF PUBLIC USE

Concluding that the AIA eliminates inaccessible, private, third party use from the public use prior art category does not end the judicial inquiry into the meaning of the AIA's § 102. Rather, this departure from the formerly established definition of public use brings to light several interesting questions. For example, does the AIA eliminate the *Metallizing* doctrine and allow first party secret commercial use prior to filing a patent application? If public use does not include inaccessible, hidden, third party uses, what is the standard for determining public use under the AIA? What about private inventors and small business entities who invent the subject matter of a patent and use the invention but do not file for a patent—can the patentee exclude them from using their invention? Does the new definition of public use also apply to the on sale bar? The discussion below addresses these issues in turn.

231. See *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1300 (Fed. Cir. 2002) (Dyk, J., dissenting) (arguing that the drill bits were not in public use because they were used underground at the worksite and only one-person not under an explicit duty of confidentiality *actually* knew of the drill bit).

A. *Metallizing and the Problem of First Party Secret Commercial Use*

Contrary to the widely held belief that a narrow interpretation of § 102(a)(1) public use will overrule *Metallizing*, the *Metallizing* doctrine should survive notwithstanding the addition of the public availability requirement of public use.²³² This surprising result occurs because *Metallizing* established a non-statutory forfeiture theory, separate from the public use statutory bar.²³³ Although the public use bar was well established at the time of the decision, Judge Hand did not invoke it but rather described it as a forfeiture.²³⁴ That the Federal Circuit has repeatedly noted that the secret commercial use bar only applies to the secret user, not anyone else, bolsters the argument that the restriction on patentability is not a public use statutory bar.²³⁵

In addition, public policy, which effectively defines the public use bar, militates against allowing secret commercial users to patent their

232. See Taskalos, *supra* note 56, at 701 (arguing that even applying a public accessibility standard does not clearly eliminate the *Metallizing* doctrine).

233. *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520 (2d Cir. 1946).

234. *Id.* (“[I]n [a prior decision] we confused *two separate doctrines*: (1) The effect upon his right to a patent of the inventor’s competitive exploitation of his machine or of his process; (2) the contribution which a prior use by another person makes to the art. Both do indeed come within the phrase, ‘prior use’; but the first is a defence [sic] for quite different reasons from the second . . . [I]t is a condition upon an inventor’s right to a patent that he shall not exploit his discovery competitively after it is ready for patenting; he must content himself with either secrecy, or legal monopoly.” (emphasis added) (citing *Pennock v. Dialogue*, 27 U.S. 1, 7 (1829))). Judge Hand continues:

It is true that for the limited period of two years he was allowed to do so, possibly in order to give him time to prepare an application But if he goes beyond that period of probation, he *forfeits his right* regardless of how little the public may have learned about the invention. . . .

Id. (emphasis added). The Federal Circuit calls the *Metallizing* ruling a “forfeiture theory.” *D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1147–48 (Fed. Cir. 1983) (“The ‘forfeiture’ theory expressed in *Metallizing* parallels the statutory scheme of 35 U.S.C. § 102(b), the intent of which is to preclude attempts by the inventor or his assignee to profit from commercial use of an invention for more than a year before an application for patent is filed.”).

235. *D.L. Auld*, 714 F.2d at 1147–48 (“If Auld produced an emblem by the method of the invention and offered that emblem for sale before the critical date, the right to a patent on the method must be declared forfeited.” (citing *Metallizing*, 153 F.2d at 520)); see also *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1550 (Fed. Cir. 1983) (citing *D.L. Auld* and *Metallizing*) (referring to the one year commercial trade secret activities as a “forfeiture,” not as a public use bar, applicable only to the secret commercial users’ activities and holding that “[t]here is no reason or statutory basis” on which the “secret commercialization” by the other, non-applicant, party “could be held a bar.”); *Kinzenbaw v. Deere & Co.*, 741 F.2d 383, 390 (Fed. Cir. 1984) (citing *Metallizing*, 153 F.2d at 520).

inventions.²³⁶ In *Pfaff v. Wells Electronics, Inc.*, the Supreme Court reaffirmed Judge Hand's challenging rationale, stating that "[i]t is a condition upon an inventor's right to a patent that he shall not exploit his discovery competitively after it is ready for patenting; he must content himself with either secrecy, or legal monopoly."²³⁷ Allowing secret commercial use would undermine the channeling rationale by allowing inventors to choose secrecy first and later rely on patent protection.²³⁸ In addition, overruling the *Metallizing* decision would violate the prompt disclosure policy.²³⁹ Before the AIA took effect, the nomenclature of this case law doctrine was irrelevant to its continued existence.²⁴⁰ With its continued existence at stake, courts should uphold the *Metallizing* doctrine as an equitable forfeiture of the right to patent an invention.

B. *Prohibiting Small-Entity Inventors from Using Their Inventions*

One potential side effect of the proposed interpretation is that small entities would be prohibited from using inventions that they invented before the patent holder invented the claimed invention. In one sense, this result is unavoidable; what else would happen through a switch from a FTI system to a FITF system? However, this consequence will occur more frequently because the removal of hidden, inaccessible uses from the public use prior art category results in more valid patents. Arguably, this result is a good thing for all of the reasons articulated in Part II of this paper.

However, many critics characterize this result as a harmful side effect of the AIA's adoption of the first-inventor-to-file system.²⁴¹ These critics argue that small-business entities will suffer because

236. Taskalos, *supra* note 106, at 706–08; *see supra* Part I.B (describing the four policies underlying the public use statutory bar).

237. *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 68 (1998) (quoting *Metallizing Eng'g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520 (2d Cir. 1946)).

238. Morgan, *supra* note 149, at 31

239. *Id.*

240. *Id.* at 31–32.

241. *See, e.g.,* Bagley, *supra* note 111, at 1041; Ned L. Conley, *First-to-Invent: A Superior System for the United States*, 22 ST. MARY'S L.J. 779, 782 (1991).

they have fewer resources and will be slower to apply for a patent on new technologies.²⁴² Section 5 of the AIA already contains a provision guarding against this concern.²⁴³ Harmonizing with over a dozen industrialized nations,²⁴⁴ this protection for prior users creates a limited defense for inventors who commercially used the patented technology at least one year before the effective filing date or date on which the claimed invention was disclosed publicly.²⁴⁵ If this limited defense inadequately protects small entity inventors, there are a variety of alterations Congress can make to strengthen these rights.²⁴⁶

C. Interpreting the "On Sale" Statutory Bar Under the AIA

The argument presented in Part II—that hidden, inaccessible use should not be prior art—applies with equal force in favor of eliminating private, inaccessible third party sales and third party secret sales. The concerns with removing all private sales from the on sale prior art category are similar to those concerns with overruling *Metallizing*; it is axiomatic that an on sale event is commercial in nature. Thus, even if the new § 102(a)(1) on sale prior includes a public accessibility requirement, the *Metallizing* doctrine would still create an equitable forfeiture for first party secret sales.²⁴⁷

The "on sale" prior art category differs from the public use category in two respects. First, the on sale statutory bar does not contain the word "public"; § 102(a)(1) of the AIA does not bar inventions "on sale publicly" or "on public sale."²⁴⁸ Without the word "public" in the prior art category, one could argue that the

242. See Bagley, *supra* note 111, at 1041 (arguing that a move by the United States to a first to file system will likely have negative ramifications for small entity inventors).

243. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 5, 125 Stat. 285 (2011).

244. UNITED STATES PATENT AND TRADEMARK OFFICE, REPORT ON THE PRIOR USER RIGHTS DEFENSE 10–13, available at http://www.uspto.gov/aia_implementation/20120113-pur_report.pdf.

245. 35 U.S.C. § 273 (2012); see also Gomez, *supra* note 110, at 65, 76, 80.

246. See USPTO, *supra* note 244, at 13 (listing a variety of prior user rights elements that can be changed).

247. See discussion *supra* Part III.A (arguing in favor of retaining the *Metallizing* doctrine as an equitable forfeiture).

248. See 35 U.S.C. § 102(a)(1) (2012).

public availability is not required for sales.²⁴⁹ Second, the on sale bar differs from the public use bar because, unlike secret uses of the claimed innovation, secret sales prevent both the seller (first party) and an independent third party from obtaining a patent.²⁵⁰ Thus, the on sale bar on secret sales is a true statutory bar in that it applies equally to all inventors.²⁵¹ Whether the definition of on sale in § 102(a)(1) should retain its pre-AIA definition is a very close question and requires a more in-depth discussion.

D. If the AIA Excludes Hidden, Inaccessible, Private Use, What Constitutes Public Use?

Concluding that hidden, inaccessible, private use does not comport with the policies behind the public use statutory bar leaves open the issue of how to define § 102(a)(1) public use. The issue of where to draw the line between private use and public use is difficult. The Federal Circuit states that “[i]n general, ‘[a]ccessibility goes to the issue of whether interested members of the relevant public could obtain the information if they wanted to.’”²⁵² To honor the evident public availability requirement that the AIA adds to public use prior art category, courts should incorporate some sort of requirement that the general public could actually access knowledge of the use. Thus, courts should find that a use is public if “if it ‘has been disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it and recognize and comprehend therefrom the essentials of the claimed invention without need of further research or experimentation.’”²⁵³

249. This argument is contrary to the argument presented above that “otherwise available to the public” clause defines the terms that precede it. *See supra* text accompanying notes 134–135. It is curious however, why the term “public use” includes the word “public” and the “on sale” bar does not.

250. Morgan, *supra* note 149, at 32.

251. *Id.*

252. *Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1333 (Fed. Cir. 2009) (citing *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1569 (Fed. Cir. 1988)).

253. *Id.* (citing *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981)).

CONCLUSION

From 1993 to 2013, when determining the validity of USPTO-issued patents, the Federal Circuit considered third party, independent uses of a claimed invention under the § 102(b) public use prior art category.²⁵⁴ Three changes made by the AIA—the switch to a first-inventor-to-file system, the removal of geographic restrictions on public use, and the removal of the automatic one-year grace period—increase the scope of the public use prior art category. Thus, dramatically more prior art events will fall under the new § 102(a)(1) public use patentability bar. If not prevented, the problem of hidden, inaccessible, private “public use” will grow and potentially cripple the U.S. patent system. When patent practitioners and technology investors lose faith in U.S. patent system’s ability to reward, they will discontinue seeking patent protection. In other words, hidden, inaccessible, private prior art may invalidate so many valuable patents that inventors and investors no longer seek patent protection because the risk of invalidity is so high. To accomplish the constitutional goal of “promot[ing] the Progress of Science and useful Arts” § 102(a)(1) must include a public accessibility requirement.²⁵⁵

In addition, statutory interpretation of AIA § 102(a)(1) militates that public use prior art events be publicly accessible. The text plainly indicates that public availability is a requirement to qualify as public use prior art. Furthermore, the legislative history and spirit of the AIA favor excluding hidden, inaccessible, uses from the public use prior art category. To save the U.S. patent system and spur innovation in America, AIA § 102(a)(1) public use cannot include hidden, inaccessible, private use.

254. *See supra* note 178.

255. U.S. CONST. art. I, § 8, cl. 8.

