

The Riddle of Secret Public Use: A Response to Professor Lemley

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Novelty is a fundamental requirement of patent law. England's Statute of Monopolies, one the world's earliest patent laws, mandated that a patent could only be awarded to "the true and first Inventor."¹ This requirement served to prevent the English monarch from granting exclusive rights over existing trades to particular firms and, more generally, to ensure that subject matter in the public domain remained available to the public.² An important corollary of this rule is that an inventor cannot obtain a patent after allowing his or her invention to enter the public domain.³ Another key feature of patent law is the limited patent term,⁴ which caps the reward the inventor can obtain by virtue of the exclusive right.⁵ At the heart of Professor Lemley's insightful essay are the questions whether the novelty requirement can be used to enforce the limited term requirement, and whether it should.⁶ Professor Lemley answers yes to both, and I am pleased to have an opportunity to respond. I agree with him on the first question, but with the important qualification that the rule he supports is in tension with Supreme Court precedent. On the second question, although I agree that the novelty requirement should have some role to play in policing the patent term, I believe that Professor Lemley's logic supports an anti-extension rule that is overly expansive.

Professor Lemley addresses the effect of a recent amendment of the Patent Act's novelty requirement by the Leahy-Smith America Invents Act (AIA)⁷ on a rule that stems from a case called *Metallizing Engineering Co.*

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¹ Statute of Monopolies, 1624, 21 Jac. 1, c. 3, § 6 (Eng.).

² See Tyler T. Ochoa, *Origin and Meanings of the Public Domain*, 28 U. DAYTON L. REV. 215, 222-23 (2002); cf. *Graham v. John Deere of Kansas City*, 383 U.S. 1, 5-6 (1966) (suggesting that the nonobviousness requirement, which is closely related to novelty, stems from the desire to protect public domain and prohibit grants of exclusive rights to the sovereign's favorites).

³ See Ochoa, *supra* note 2, at 232-34 ("Once something had become public property, it was beyond the power of the government to privatize it by granting a new patent . . .").

⁴ Statute of Monopolies, c. 3, § 6 (allowing "grants of privilege for the term of fourteen years or under"); see also U.S. CONST. art I, § 8, cl. 8 (empowering Congress to allow "securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries"); 35 U.S.C. § 154(a)(2) (2012) (providing for a twenty-year patent term).

⁵ This rule also results in the enrichment of the public domain. See Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 96 IND. L.J. 779, 814 (2011) (discussing the "policy that the contents of an expired patent generally are free to be copied by the public").

⁶ Mark A. Lemley, *Does "Public Use" Mean the Same Thing It Did Last Year?*, 93 TEX. L. REV. _ (2015), available at <http://papers.ssrn.com/abstract=2394153>.

⁷ Pub. L. No. 112-29, § 3(b), 125 Stat. 284, 285-86 (2011), codified at 35 U.S.C. § 102 (2012).

*v. Kenyon Bearing & Auto Parts Co.*⁸ The *Metallizing* rule bars an inventor's right to a patent when that inventor practiced the invention in secret but exploited it commercially for more than one year before filing a patent application.⁹ Although nothing is withdrawn from the public domain when inventions are patented under these circumstances, the rule protects the public in the sense that it prevents the inventor from effectively extending the patent term by delaying filing.¹⁰ Professor Lemley argues that the AIA left the *Metallizing* rule intact. He contends that the AIA's "otherwise available to the public" language does not override *Metallizing*'s gloss on the term "public use,"¹¹ which sweeps into the ambit of that term secret commercial uses by the inventor. He also argues that the rule is correct for policy reasons.

Professor's Lemley's statutory interpretation argument has much to recommend it, and I largely agree with it. But I also conclude that *Metallizing* contravenes Supreme Court decisions that interpret "public use." Thus, although the language of the AIA may not provide grounds for abrogating the *Metallizing* rule, I believe that the Supreme Court should reject it based on its own precedent if it decides to take up this issue. I also believe that overruling *Metallizing* is the correct result as a matter of policy. Although *Metallizing* prohibits the undesirable "extension of the patent monopoly" in the sense articulated by its author, Judge Learned Hand, it also creates significant costs. I take up the doctrinal and policy issues in turn.

I.

I agree with Professor Lemley that the AIA's catchall phrase "otherwise available to the public" cannot bear the heavy weight of overruling the longstanding precedent that defined the terms "public use" and "on sale" to cover some types of secret activities.¹² If secret sales, in particular, no longer qualify as prior art, that would be a drastic change in well-established law. Further support for Professor Lemley's conclusion stems from the observation that, as in the pre-AIA version of the novelty provision, the adjective "public" modifies the word "use," but not the words "on sale." If the phrase "otherwise available to the public" infuses the rest of the prior art listed in section 102(a)(1) with a "public" character, then the adjective "public" before "use" would be unnecessary.¹³ Under this interpretation, the phrase "otherwise available to the public" perpetuates *Metallizing*'s legal fiction that a competitive exploitation of a secret

⁸ 153 F.2d 516 (2d Cir. 1946) (Learned Hand, J.).

⁹ *Id.* at 520. See generally Dmitry Karshtedt, *Did Learned Hand Get It Wrong?: The Questionable Forfeiture Rule of Metallizing Engineering*, 57 VILL. L. REV. 261, 263-64 (2012). One year is the length of the statutory "grace period" that gives the inventor time to prepare a patent application after the first instance of public use or sale. It appears that the AIA has retained this grace period. See 35 U.S.C. § 102(b)(1)(A) (2012).

¹⁰ *Metallizing*, 153 F.2d at 520 (by "mak[ing] use of his secret to gain a competitive advantage over others," the inventor would "thereby extend the period of his monopoly").

¹¹ See Appendix.

¹² Lemley, *supra* note 6, at __. I also agree with Professor Lemley that post-enactment comments of two senators fail to show that the AIA was intended to override this well-established interpretation.

¹³ See *Hobbs v. U.S. Atomic Energy Comm'n*, 451 F.2d 849, 860 (5th Cir. 1971) (Friendly, J.).

invention makes the invention “available to the public” with respect to that inventor’s later patent filings.¹⁴ More generally, I agree with Professor Lemley that courts should not use the AIA as a vehicle to overturn established novelty-related doctrines such as inherency and the experimental use exception.¹⁵

One other important question, however, is whether *Metallizing* correctly followed the Supreme Court’s precedent on public use. Here, I part company with Professor Lemley. Judge Hand’s intimation that the *Metallizing* rule follows from “the fiat of Congress that it is part of the consideration for a patent that the public shall as soon as possible begin to enjoy the disclosure”¹⁶ has no support in the statute’s language¹⁷ and cannot be squared with prior cases. Supreme Court decisions give little indication that the contours of “public use” included a “loophole” that the Courts of Appeal needed to close.¹⁸ As Professor Lemley recognizes, the Court’s jurisprudence on public use pushes the meaning of “public” to the limit¹⁹—but nonetheless makes clear that there is a limit. In *Electric Storage Battery Co. v. Shimadzu*, the Court explained that “a single use for profit, not purposely hidden” can be a public use.²⁰ In *Egbert v. Lippman*, which Professor Lemley calls “the most extreme example” of the Court’s expansive definition of public use, “the Supreme Court held that a woman engaged in a public use of a corset invented by her fiancé when she wore it under her clothing.”²¹ And in *Hall v. Macneale*, the Supreme Court found public use where there was “no concealment of [the products embodying the invention] or use of them in secret.”²² The Supreme Court’s focus on public accessibility, even if minimal, as the touchstone of public use is in serious tension with *Metallizing*’s conclusion that absolutely secret activities can also qualify as “public.”

¹⁴ Under this approach, the phrase “otherwise available to the public” creates a new, as-yet undefined category of prior art—perhaps, certain types of oral communications—instead of eliminating secret prior art. See, e.g., Nathan G. Ingham, Note, *Anticipating New References: Predicting the Contours of the New “Otherwise Available to the Public” Category of Prior Art*, 53 B.C. L. REV. 1533 (2012); Joshua Sarnoff, *Derivation and Prior Art Problems with the New Patent Act*, 2011 PATENTLY-O PAT. L.J. 11. But see Robert A. Armitage, *Understanding the America Invents Act and Its Implications for Patenting*, 40 AIPLA Q.J. 1, 54 (2012) (“The overarching requirement for a disclosure to be ‘available to the public’ has been placed into new § 102(a)(1) in a manner making it virtually impossible to read it other than as an express repudiation of the *Metallizing* Engineering doctrine.”).

¹⁵ I do believe that the *Metallizing* rule is in much greater tension with the language of the statute than these other judicial creations. I explain this tension *infra*.

¹⁶ *Metallizing Eng’g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 520 (2d Cir. 1946).

¹⁷ In addition to stretching dictionary meanings of “public” and “secret” to a breaking point, Judge Hand inferred a bar that is effective only against the inventor, but not against any third party, in the face of statutory language that does not even hint at such a distinction. See Karshedt, *supra* note 9, at 263-64.

¹⁸ Lemley, *supra* note 6.

¹⁹ *Id.* at _.

²⁰ 307 U.S. 5, 20 (1939).

²¹ Lemley, *supra* note 6, at _ (citing 104 U.S. 333 (1881)).

²² 107 U.S. 90, 97 (1883).

To justify the rule, Judge Hand relied heavily on *Pennock v. Dialogue*, an 1829 case interpreting the then-existing novelty provision that barred patents on inventions that were “known or used before the application.”²³ Sensibly, the Supreme Court concluded in that case that this phrase meant “known or used *by the public*, before the application” for a patent.²⁴ The Court additionally explained that “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” if an inventor were

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 then . . . allowed to take out a patent, and thus exclude the public from any farther use than what should be derived under it during his fourteen years.²⁵

Although the reference to holding back secrets superficially supports *Metallizing*, the rest of the Supreme Court’s opinion suggests that the patent-in-suit was invalidated because the public was aware of the workings of the patented invention—a water hose whose sections were held together using rivets.²⁶ For example, the Court reasoned that “[i]f 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 to monopolize that which was already common.”²⁷

Congress codified the holding of *Pennock* in 1836,²⁸ revising the novelty section to say that a person may patent an invention “not known or used by others before his or their discovery or invention thereof, *and not, at the time of his application for a patent, in public use or on sale.*”²⁹ Thus, while Congress made clear that the patent right can be lost when an invention is sold or relinquished to the public, it never adopted *Pennock*’s language—which was arguably dicta—to render patent-defeating secret commercial uses through which inventors attempted to effectively extend the length of the patent term.

²³ 27 U.S. (2 Pet.) 1, 17 (1829) (Story, J.).

²⁴ *Id.* at 18-19 (emphasis added).

²⁵ *Id.* at 19.

²⁶ *Id.* at 8.

²⁷ *Id.* at 23; *see id.* at 8 (“[The rivet hose] had been known and used as common public property, (and not as private property) which any one might use as publicly known.”) (statement of the facts); *see also id.* at 4 (“As long as an inventor keeps to himself the subject of his discovery, the public cannot be injured But if the public, with the knowledge and the tacit consent of the inventor, is permitted to use the invention without opposition, it is a fraud upon the public afterwards to take out a patent.”) (jury charge). The circuit court’s opinion, which the Supreme Court thought to be “perfectly correct,” *id.* at 25, supports the conclusion that the invention at issue had entered the public domain. *See Pennock v. Dialogue*, 19 F. Cas. 171, 174 (C.C.E.D.Pa. 1825) (No. 10,941). For further discussion of *Pennock*, *see* Karshtedt, *supra* note 9, at 285-87.

²⁸ Toshiko Takenaka, *The Novelty and Priority Provision Under the United States First To File Principle: A Comparative Law Perspective*, in *PATENT LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH* 383, 401 (Toshiko Takenaka ed. 2008).

²⁹ The Patent Act of 1836 § 6, ch. 357, 5 Stat. 117, 119 (July 4, 1836) (emphasis added).

To be sure, cases following *Pennock* have recognized that certain actions by the inventor can result in what might be termed “equitable forfeiture” of the patent—a loss of a right in the nature of unclean hands or laches. Because these decisions were decided based on equity, however, they entailed fact-specific inquiries into the patentee’s behavior and did not apply the forfeiture as a strict bar that attached a specific number of years after the occurrence of some critical event.³⁰ For example, the Supreme Court in *Woodbridge v. United States* relied on *Pennock* and other cases to hold that there may be “forfeiture by delay or laches” when the inventor expressed “deliberate and unlawful purpose to postpone the term of the patent the inventor always intended to secure.”³¹ *Woodbridge* cited with approval a Sixth Circuit opinion³² explaining that this result is the *exception* to the general rule, enunciated by the Supreme Court in multiple cases, that “[i]nventors may, if they can, keep their intention secret; and if they do for any length of time, they do not forfeit their right to apply for a patent, unless another in the meantime has made the invention.”³³ As far as Supreme Court precedent is concerned, *Metallizing* is not on solid ground. If, as seems likely,³⁴ Congress in its various reenactments of the Patent Act meant for “public use” to be a term whose meaning could continue to evolve through common-law development rather than become frozen in time, the Supreme Court may—and, I believe, should—reject *Metallizing* based on its own precedent even in the absence of abrogation in the AIA.³⁵

II.

And what of policy? Professor Lemley is surely correct that one of the goals of the patent system is to encourage prompt disclosure of inventions, and that the *Metallizing* rule tends to promote it. But the policy of encouraging early patenting is not without costs. First, as argued by Professor Christopher Cotropia, this approach overwhelms the PTO with patent applications, leads to too many patents of dubious quality, and creates a situation where many patented inventions are underdeveloped.³⁶ We live in an era when the public is concerned about non-practicing entities (NPEs)—companies that enforce patents but do not practice the patented inventions themselves—and early patenting likely contributes to this phenomenon. Second, there is a great deal of skepticism as to whether the patent document

³⁰ But cf. Paul Morgan, *The Ambiguity in Section 102(a)(1) of the Leahy-Smith America Invents Act*, 2011 PATENTLY-O L.J. 29, 31-32 (2011) (arguing that the one-year *Metallizing* bar should also be understood as a form of equitable forfeiture).

³¹ 263 U.S. 50, 56, 59-60 (1923).

³² *Id.* at 59-60 (citing *Macbeth-Evans Glass Co. v. Gen. Elec. Co.*, 246 F. 695 (6th Cir. 1917)).

³³ *Bates v. Coe*, 98 U.S. 31, 46 (1878) (cited in *Woodbridge*, 263 U.S. at 60); see also *Parks v. Booth*, 102 U.S. 96, 105 (1880) (“Unless inventors keep their inventions secret they are required to be vigilant in securing patents for their protection.”).

³⁴ Cf. Craig Allen Nard, *Legal Forms and the Common Law of Patents*, 90 B.U. L. REV. 51, 53 (2010) (“[T]he patent code, much like the Sherman Act, is a common law enabling statute . . .”).

³⁵ *Metallizing* could also be rejected by the en banc Federal Circuit—but not by a panel of that court, which, in the absence of legislative abrogation, is obligated to follow prior panels that adopted the *Metallizing* rule. I thank Mike Burstein for a discussion that helped me clarify this point.

³⁶ Christopher A. Cotropia, *The Folly of Early Filing in Patent Law*, 61 HASTINGS L.J. 65, 104-18 (2009); see also Karshedt, *supra* note 9, at 312-18.

actually achieves the purpose of communicating information that is useful to the relevant audiences,³⁷ and patent applications that are rushed and premature due to the pressure of the one-year bar are, it would appear, particularly likely to include uninformative disclosures. Third, maintaining *Metallizing* can, ironically, disserve the pro-disclosure policy. Under the current rule, an inventor cannot obtain a patent when a year from the date of the first commercial exploitation of the invention has passed. Thus, unless discovered by others, the invention might forever remain a trade secret.³⁸

More importantly, “the obligation to disclose is not the principal reason for a patent system The reason for the patent system is to encourage innovation and its fruits: new jobs and new industries, new consumer goods and trade benefits.”³⁹ As Alan Devlin has convincingly argued, patents can, at least in theory, serve their purpose of incentivizing innovation without any enabling disclosures at all.⁴⁰ A rule that forces disclosure at the cost of punishing commercializing inventors—including those who might lack resources to file for a patent in the first few years of the invention’s exploitation—might instead chill innovation.⁴¹ Given the public’s concern with NPEs and the widespread sentiment that the PTO allows too many patents, it seems particularly odd for the patent system to penalize inventors who explore their inventions’ commercial potential in good faith before filing a patent application.

I sympathize with Professor Lemley’s concern about “submarine” patents—patents whose delayed issuance is designed to take an existing industry by surprise.⁴² But I think this problem can be solved without the *Metallizing* rule for two reasons. First, *Metallizing* is far from the only driver for early patenting. Many legal and business considerations may push an inventor into patent rather than trade secret protection.⁴³ For example, an inventor who delays patenting risks that another will invent and publicly disclose the same subject matter—or, worse yet, patent it himself or herself.⁴⁴ That would eviscerate both patent and trade secret rights of the

³⁷ Lemley, *supra* note 6, at _ n.52 and references therein; *see also* Paul Goldstein, *Kewanee Oil Co. v. Bicron Corp.: Notes on a Closing Circle*, 1974 SUP. CT. REV. 81, 91 (“Artfully drafted specifications may defeat the disclosure objective. In any event to which the scientific and engineering communities rely on these documents for instruction is speculative at best.”).

³⁸ *See* Paulik v. Rizkalla, 760 F.2d 1270, 1276 (Fed. Cir. 1985) (en banc); Karshedt, *supra* note 9, at 311.

³⁹ Paulik, 760 F.2d at 1276.

⁴⁰ Alan Devlin, *The Misunderstood Function of Disclosure in Patent Law*, 23 HARV. J. L. & TECH. 401, 419-20 (2010). This view is open to debate. *See, e.g.*, Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621 (2010); Note, *The Disclosure Function of the Patent System (or Lack Thereof)*, 118 HARV. L. REV. 2007, 2011 (2005) (explaining that some decisions have “embrace[d] the disclosure rationale as a centerpiece of patent policy”).

⁴¹ *See* Karshedt, *supra* note 9, at 317-18; *see also id.* at 306-08 (explaining why a grace period beyond one year may be needed to optimally promote innovation).

⁴² *See id.* at 308-09, 327-28; Lemley, *supra* note 6, at _

⁴³ *See* Cotropia, *supra* note 36, at 97.

⁴⁴ *See* *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 490-91 (1974). As Professor Lemley argued in another article, near-simultaneous discovery of commercially significant inventions is common and the draw of a patent may induce inventors to “race” to file first. *See* Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 745, 749-60 (2012).

first inventor and, if the second inventor obtains a patent, may expose the first inventor to patent infringement liability.⁴⁵ Second, equitable doctrines remain for defeating patentees who strategically delay patent filing in order to ambush potential infringers. Courts have dealt with the earlier incarnation of the submarine patent problem by applying the doctrine of prosecution laches, and I believe that the doctrine should readily apply to the abusive behaviors envisioned by Professor Lemley.⁴⁶ Unlike the *Metallizing* rule, this approach is well-grounded in Supreme Court precedent.⁴⁷

III.

I now turn to “prohibiting an extension of the period for exploiting the invention.”⁴⁸ It appears that this policy is the reason why even secret sales trigger the on-sale bar.⁴⁹ I do not reject wholesale this rationale for the novelty requirement—and, indeed, agree with Professor Lemley that secret sales should continue to count as patent-barring “disclosures.” Nevertheless, I believe that the rationale of prohibiting extension of the patent monopoly by itself, when the policy consideration of protecting the public domain is not also implicated, would lead to an untenable rule. For this reason, I believe that the on-sale bar should extend only to sales of the actual invention, and should not include commercial exploitation of a firm’s secret internal activities.

There is a significant difference between a secret sale (or an offer for sale) of an invention and “competitive exploitation” of an invention kept within a firm. The rule that secret sales are patent-barring both prevents an effective extension of the patent term and, arguably, also protects the public domain. A sale, even if made in secret and accompanied by nondisclosure obligations, places the invention into the stream of commerce, potentially removing it from the inventor’s control and creating the possibility of public possession.⁵⁰ Even in the unusual case where the nature of the invention is not communicated to the buyer at the time the sale occurs, the buyer (or a third party, if the buyer sublicenses the invention or incorporates it into a downstream product) can in theory reverse-engineer the invention from the product sold. Although this sort of leakage is certainly possible without the sale of an invention—for example, when employees who know the details of a secret process leave the company—it should be significantly more likely when the invention itself is sold to a third party.⁵¹ In a similar context, one

⁴⁵ If, however, the first inventor shows by clear and convincing evidence that he or she engaged in commercial use of this invention at least a year prior to the second inventor’s filing, then there is no liability. See 35 U.S.C. § 273(a),(b) (2012).

⁴⁶ See Karshedt, *supra* note 9, at 327-31; see also Henry E. Smith, *Property as Platform: Coordinating Standards for Technological Innovation*, 9 J. COMPETITION L. & ECON. 1057, 1079 (2013) (“Equity as a safety valve is an important anti-opportunism device that applies throughout private law.”).

⁴⁷ See *supra* notes 31-33 and accompanying text.

⁴⁸ *Manville Sales Corp. v. Paramount Sys., Inc.*, 917 F.2d 544, 550 (Fed. Cir. 1990).

⁴⁹ See Patrick J. Barrett, Note, *New Guidelines for Applying the On Sale Bar to Patentability*, 24 STAN. L. REV. 730, 738 (1972).

⁵⁰ Cf. *Lorenz v. Colgate-Palmolive-Peet Co.*, 167 F.2d 423 (3d Cir. 1948) (illustrating a situation where public disclosure occurred after a breach of a nondisclosure obligation).

⁵¹ See Robert P. Merges, *Priority and Novelty Under the AIA*, 27 BERKELEY TECH. L.J. 1023 (2012) (“[A] confidential sale or non-informing public use can be a ‘disclosure’ in that it represents a move away from complete secrecy, or use only

court found it “fair to presume that [the invention’s] secret will be uncovered by potential competitors long before the time when a patent would have expired if the inventor had made a timely application and disclosure to the Patent Office.”⁵² If the invention nevertheless ends up being patented later, the unfairness to the public—or, at the very least, to the buyer or offeree⁵³—becomes apparent.⁵⁴

In contrast, the *Metallizing* rule functions only to police the patent term, and I have serious doubts about its administrability and coherency. The requirements to prove the “ready for patenting” and “offer for sale” prongs of the on-sale bar are difficult enough to apply,⁵⁵ and *Metallizing* introduces an additional, serious complication. How attenuated does an invention have to be from a “competitive exploitation” for a patent applicant to avoid the bar? The paradigmatic *Metallizing* scenario is the sale of a product made with a secret process, but does the bar stop there? It is instructive, for example, that no sales were involved at all in *Metallizing* itself—the inventor repaired car parts using a process he invented, but no title transfer occurred.⁵⁶ “Competitive exploitation” is a vague standard of potentially sweeping scope, and the courts have struggled mightily with it. For example, in *Invitrogen Corp. v. Biocrest Manufacturing, L.P.*, the Federal Circuit rejected the argument that a company’s internal use of a secret process “to further other projects” within the company’s “general business of widespread research”⁵⁷ creates a bar under *Metallizing*. The court distinguished *Metallizing* because there was no evidence that the company “received compensation for internally, and secretly, exploiting” the process.⁵⁸ The result is unsatisfying because the court never explained why the absence of direct compensation for the invention, which the inventor obviously exploited to obtain a competitive advantage, decisively took the patent out of the ambit of *Metallizing*.⁵⁹

Indeed, if the “extension of the patent term” rationale is taken at face value, it becomes difficult to explain the result in *Invitrogen* and the (alleged) product-of-a-secret-invention limit of the *Metallizing* rule. Because

inside a highly protected sphere such as within the strict boundaries of a single company. There is room, in other words, for the idea of a ‘secret disclosure’—a disclosure that goes beyond absolute nondisclosure but not nearly all the way to wide-open and free dissemination.”).

⁵² *Dunlop Holdings Ltd. v. Ram Golf Corp.*, 524 F.2d 33, 37 (7th Cir. 1975) (Stevens, J.). In contrast, an invention falling under the *Metallizing* bar cannot by hypothesis be reverse-engineered because third parties are not provided a product embodying the invention.

⁵³ See ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY: CASES AND MATERIALS* 565 (6th ed. 2012).

⁵⁴ *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 65 (1998) (citing *Penock v. Dialogue*, 27 U.S. (2 Pet.) 1 (1829)) (observing that “reluctance to allow an inventor to remove existing knowledge from public use undergirds” the on-sale bar).

⁵⁵ See generally Timothy R. Holbrook, *The Risks of Early Commercialization of an Invention: The On-Sale Bar to Patentability*, in 2 *INTELLECTUAL PROPERTY AND INFORMATION WEALTH: PATENTS AND TRADE SECRETS* 37 (Peter K. Yu ed., 2007).

⁵⁶ See *Karshtedt*, *supra* note 9, at 271-77. I thank Professor Paul Janicke for drawing my attention to this point.

⁵⁷ 424 F.3d 1374, 1380 (Fed. Cir. 2005).

⁵⁸ *Id.* at 1383.

⁵⁹ See *Karshtedt*, *supra* note 9, at 296-99, 326-27.

there is nothing talismanic about direct compensation,⁶⁰ Professor Lemley's policy arguments for maintaining the *Metallizing* bar apply equally to sales of a product made by a secret process and to the activities in *Invitrogen*. A trade secret by definition allows its owners to derive an "independent economic value" from its use,⁶¹ implying competitive exploitation. Thus, under Professor Lemley's rationale, an inventor should not be allowed to obtain a patent on any subject matter that he or she has used as a trade secret for more than a year prior to patent filing. This rule, which one might call a super-*Metallizing* rule, is much more coherent than the alternative.⁶²

I think, however, that the super-*Metallizing* rule is untenable because it might introduce an unbearable degree of uncertainty over the validity of U.S. patents.⁶³ In the course of inventing, a firm generates a vast number of interrelated trade secrets that could render a large proportion of that firm's later-filed patent claims anticipated or obvious.⁶⁴ The super-*Metallizing* rule would also generate expensive discovery disputes,⁶⁵ which is one of the problems that the AIA was intended to eliminate by replacing the first-to-invent system by first-to-file.⁶⁶ Finally, although the problem can be mitigated by sealing parts of the record,⁶⁷ the super-*Metallizing* rule might be prone to abuse by litigants who might wish to obtain their adversaries' trade secrets. To be sure, my proposal for using equity to render unenforceable certain patents due to strategic or abusive behavior by inventors also allows for inquiries regarding a firm's trade secrets, but allegations of deceit, fraud, and detrimental reliance must be pled with particularity. Equitable defenses would therefore be asserted more rarely than the defenses sounding in the "strict-liability" one-year bar.

IV.

My last point concerns harmonization and the role of trade secrets in promoting innovation. One of the driving forces behind the AIA was to harmonize the U.S. patent system with that of the rest of the world.⁶⁸

⁶⁰ Indeed, even universities and other non-profit organizations should not be immune from the rule because they are thought to obtain competitive advantages from their research. *Cf. Madey v. Duke Univ.*, 307 F.3d 1351, 1361-63 (Fed. Cir. 2002).

⁶¹ UNIFORM TRADE SECRETS ACT § 1(4) (1985).

⁶² *See Karshtedt, supra* note 9, at 328-29.

⁶³ *See id.*; *cf. Takenaka, supra* note 28, at 391 ("[I]nclusion of secret commercial use within the meaning of 'public use or on sale' introduces a significant uncertainty into US patent validity.").

⁶⁴ *Cf. Dippin' Dots, Inc. v. Mosey*, 476 F.3d 1337, 1344-45 (Fed. Cir. 2007) (affirming the judgment of obviousness based on *Metallizing* prior art).

⁶⁵ *See* AM. INTELLECTUAL PROP. LAW ASS'N, SPECIAL COMMITTEE ON PATENT LEGISLATIVE PRIORITIES REPORT ON "FORFEITURE" BASED UPON INVENTIONS "IN PUBLIC USE OR ON SALE" 9 [hereinafter AIPLA REPORT] (on file with author) ("Elimination of the forfeiture provision means elimination of the last of the onerous provision of patent law that requires extensive discovery of the patent owner in order to determine if the patent is valid.").

⁶⁶ *See, e.g.*, 157 CONG. REC. S5319 (2011) ("By adopting the first-to-file system . . . the bill creates a rule that is clear and easy to comply with and that avoids the need for expensive discovery and litigation over what a patent's priority date is.") (statement of Sen. Kyl).

⁶⁷ *See, e.g., Kawakama v. City & Cty. of Honolulu*, 447 F.3d 1172, 1179 (9th Cir. 2006).

⁶⁸ Leahy-Smith America Invents Act (AIA), § 3(p), Pub. L. No. 112-29, 125 Stat. 284, 293 (2011). To be sure, harmonization is not complete. For example, some

Accordingly, first-to-invent was replaced by first-to-file, a prior commercial user right was added to achieve further consistency with other countries' patent laws,⁶⁹ and another rule that was (with one exception) unique to the United States—the best mode requirement—was effectively eliminated from the Patent Act.⁷⁰ The *Metallizing* rule has also been unique to the United States,⁷¹ and, given the goal of harmonization, retaining it seems incoherent. Like the rest of the world, we should recognize the synergy that occurs “when trade secret law encourages the early adoption of new technology . . . and the patent law remains available as an incentive to encourage a full disclosure of that technology.”⁷²

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The *Metallizing* rule is in tension with the statutory language and Supreme Court decisions, and is, in any event, a highly questionable tool for policing the patent term. Although precedent supports equity as an approach to combating strategic delay of entry into the patent system, it must be acknowledged that it, too, has drawbacks. For example, the multifactor test that would be required to determine if the patentee behaved inequitably⁷³ would likely generate significant costs and uncertainty. So perhaps, the rule that would replace *Metallizing* should, like *Metallizing* itself, have a bright line. One idea, borrowed from trademark law, is the presumption of “patent abandonment” if the claimed subject matter had been used as a trade secret for a specific number of years.⁷⁴ Another idea, suggested to me by Professor Lemley himself, is to reduce the patent term by the number of years that the trade secret has been commercially exploited.⁷⁵ Professor Lemley is correct that the *Metallizing* rule addresses an important policy concern, but there must be a better tool out there to do the job.

countries follow the absolute novelty rule, whereby a disclosure even a day before the filing of a patent application by anyone will bar a patent right. Other countries, including the United States, are not as strict, allowing a defined grace period for inventor's pre-filing activities that would otherwise bar the patent.

⁶⁹ See 35 U.S.C. § 273 (2012).

⁷⁰ AIA § 15, 125 Stat. at 328; see Brian J. Love & Christopher B. Seaman, *Best Mode Trade Secrets*, 15 YALE J. L. & TECH. 1 (2012). Love and Seaman criticize this change and argue that equity could bar assertion of trade secrets that should have been disclosed as the best mode of a patent covering the same subject matter. *Id.* at 20-23.

⁷¹ See Mark Schafer, Note, *How the Leahy-Smith America Invents Act Sought To Harmonize United States Patent Priority with the World, A Comparison with the European Patent Convention*, 12 WASH. U. GLOBAL STUD. L. REV. 808, 828 (2013).

⁷² AIPLA REPORT, *supra* note 65, at 10; see also *supra* note 38 and accompanying text.

⁷³ See Karshtedt, *supra* note 9, at 329-31.

⁷⁴ See *id.* at 330 n.425.

⁷⁵ See *id.* at 320 n.361. Of course, for this rule to work properly, the patent applicant must reveal the use of the invention as a trade secret to the PTO during the prosecution of the patent pursuant to the duty to disclose. If the patentee fails to do so, the patent should be rendered unenforceable for equitable reasons in such a case. Although there might be a temptation to hide this information, the reputation harm to patent attorneys caused by a finding of inequitable conduct might serve as an adequate deterrent. See *Therasense v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1289 (Fed. Cir. 2011) (en banc). I thank Jonathan Masur for calling this point to my attention.

Appendix: Post- and Pre-AIA Section 102

<p>§ 102. Conditions for patentability; novelty (post-AIA)</p> <p>(a) Novelty; prior art.--A person shall be entitled to a patent unless--</p> <p>(1) the claimed invention was patented, described in a printed publication, or <i>in public use, on sale, or otherwise available to the public</i> before the effective filing date of the claimed invention;</p> <p>...</p> <p>(b) Exceptions.--</p> <p>(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 invention shall not be prior art to the claimed invention under subsection (a)(1) if--</p> <p>(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; . . .</p>	<p>§ 102. Conditions for patentability; novelty and loss of right to a patent</p> <p>A person shall be entitled to a patent unless -</p> <p>(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 a patent.</p> <p>(b) the invention was patented or described in a printed publication in this or a foreign country or <i>in public use or on sale in this country</i>, more than one year prior to the date of application for patent in the United States.</p>
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