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BEST MODE TRADE SECRETS[†]

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ABSTRACT

Trade secrecy and patent rights traditionally have been considered mutually exclusive. Trade secret rights are premised on secrecy. Without it, they evaporate. Patent rights, on the other hand, require public disclosure. Absent a sufficiently detailed description of the invention, patents are invalid.

However, with the passage of the Leahy-Smith America Invents Act (“AIA”) last fall, this once black-and-white distinction may melt into something a little more gray. Buried amidst myriad tweaks to the Patent Act is one that has the potential to substantially change the boundary between patent and trade secret protection. For the first time since at least 1952 (and as a practical matter since 1870), an inventor’s failure to disclose in her patent the preferred method for carrying out the invention—the so-called “best mode”—will no longer invalidate her patent rights or otherwise render them unenforceable.

In this brief Essay, we explain why it may become routine post-patent reform for patentees to attempt to assert both patent rights and trade secret rights for preferred embodiments of their invention in certain types of cases. We also consider potentially undesirable ramifications of this change and suggest one approach that courts may use to limit claims of concurrent trade secret and patent protection when equity demands.

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INTRODUCTION

Traditionally, trade secrecy and patent rights have been considered mutually exclusive.¹ Trade secret rights are premised on secrecy. Without it, they evaporate.² Patent rights, on the other hand, require public disclosure.³ Absent a sufficiently detailed description of the invention, patents are invalid.⁴

However, with the passage of the Leahy-Smith America Invents Act (“AIA”)⁵ last fall, this once black-and-white distinction may melt into something a little more gray. Buried amidst myriad tweaks to the Patent Act is one that has the potential to substantially change the boundary between patent and trade secret protection. For the first time since 1952, and as a practical matter since 1870, an inventor’s failure to disclose in her patent the preferred method for carrying out the invention—the so-called “best mode”—will no longer invalidate her patent rights or otherwise render them unenforceable.⁶ This reform lowers patent

¹ See, e.g., Michael Risch, *Trade Secret Law and Information Development Incentives*, in *THE LAW AND THEORY OF TRADE SECRETS: A HANDBOOK OF CONTEMPORARY RESEARCH* 152, 167-68 (Rochelle C. Dreyfuss & Katherine J. Strandburg eds., 2009) (“Patent law and trade secret law cannot be coextensive because trade secrets must be secret and patents must be publicly disclosed.”).

² See RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995) (defining a trade secret as “any information that can be used in the operation of a business or other enterprise and that is sufficiently valuable and secret to afford an actual or potential economic advantage over others.”).

³ See *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998) (“[T]he patent system represents a carefully crafted bargain that encourages . . . the public disclosure of new and useful advances in technology, in return for an exclusive monopoly for a limited period of time.”).

⁴ See 35 U.S.C. § 112 (2006) (“The specification shall contain a written description of the invention . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.”); *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993) (“[T]o be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without ‘undue experimentation.’”).

⁵ Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (codified in scattered sections of 35 U.S.C.).

⁶ AIA § 15(a) (codified at 35 U.S.C.A. § 282(a)(3)(A)) (West 2012) (effective Sept. 16, 2011). The Patent Act of 1952 was the first to require disclosure of the best mode for all classes of inventions. Patent Act of 1952, ch. 950, § 112, 66 Stat. 792, 798 (codified as amended at 35 U.S.C. § 112 (2006)). The Patent Act of 1870 demanded disclosure of the best mode for practicing the patented invention, but this early requirement applied only to machine patents. See Patent Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198. However, the lion’s share of patents issued in the nineteenth and early twentieth centuries covered

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applicants' disclosure incentives and may usher in a new era of patent practice in which inventors attempt to secure both twenty-year patent terms and possibly indefinite trade secret protection for their inventions—an outcome that Congress may not have considered before passing the law.⁷ Patent owners, applicants, attorneys, and courts will soon have to navigate the implications of this important change.⁸

In this brief Essay, we explain why it may become routine after patent reform for patentees to attempt to assert both patent rights and trade secret rights for preferred embodiments of their invention in certain types of cases. We also consider potentially undesirable ramifications of this change and suggest one approach courts may use to limit claims of concurrent trade secret and patent protection when equity demands.

mechanical inventions. See, e.g., Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L.J. 577, 585 (1999) (“Everyone knew that manufactures and machines were at the core of the patent system. Agricultural and industrial machinery was almost synonymous with ‘patents.’”); B. ZORINA KHAN, *THE DEMOCRATIZATION OF INNOVATION: PATENTS AND COPYRIGHTS IN AMERICAN ECONOMIC DEVELOPMENT, 1790-1920*, at 72 tbl.3.2 (2005) (breaking-down patents issued during the 1840s by technology).

⁷ Compare Tun-Jen Chiang, *Guest Post on Best Mode by Tun-Jen Chiang: Was Congress Dumb, or Was It Lying?—A Reply to Professor Sheppard*, PATENTLY-O (Sept. 29, 2011, 4:12 pm), <http://www.patentlyo.com/patent/2011/09/guest-post-was-congress-dumb-or-was-it-lying-a-reply-to-professor-sheppard.html> (arguing that the best mode disclosure requirement is meaningless without enforcement mechanisms and that Congress should have known this would be a consequence of the legislation), with A. Christal Sheppard, *Guest Post: Because Inquiring Minds Want to Know – Best Mode – Why Is It One-Sided?*, PATENTLY-O (Sept. 28, 2011, 12:42 pm), <http://www.patentlyo.com/patent/2011/09/guest-post-because-inquiring-minds-want-to-know-best-mode-why-is-it-one-sided-.html> (describing congressional intent in the AIA legislative process as removing best mode only from litigation while maintaining the requirement for disclosure).

⁸ See *infra* note 54 and accompanying text (explaining that AIA's changes to best mode became effective upon its enactment on September 16, 2011). Most patent cases filed after the AIA's enactment are still at the discovery stage at the time of this Essay's publication. See Catherine Rajwani, *Controlling Costs in Patent Litigation*, HARBOR LAW GROUP 2 (2008), <http://www.harborlaw.com/newsletters/november.pdf> (estimating that in a patent case fact discovery will last approximately 9 months from the answer deadline). Few of these cases will reach the summary judgment stage or trial—where there may be a substantive decision on best mode—until 2013. See *id.*; see also Mark A. Lemley, *Where to File Your Patent Case*, 38 AIPLA Q.J. 401, 416-18 tbl.6 (2010) (finding the average time to trial in a patent case is longer than two years in most districts).

I. THE TRADE SECRET-PATENT DICHOTOMY AND BEST MODE BEFORE AIA

Patentees have long been obligated to disclose in their patents enough information to teach others skilled in the relevant technological field how to use the invention once their patent rights expire. This requirement, called enablement, is “part of the quid pro quo of the patent bargain”—disclosure in exchange for a limited monopoly.⁹ Enablement, however, only serves as a floor for disclosure¹⁰—it requires a patentee to provide enough information “for a person skilled in the art to make and use the invention without undue experimentation” and nothing more.¹¹

Best mode,¹² which is “separate and distinct from enablement,”¹³ helps fill the gap between enablement’s minimum disclosure and the inventor’s own knowledge about her preferred implementation of the invention. Its purpose “is to restrain inventors from applying for patents while at the same time concealing from the public preferred embodiments of the inventions they have in fact conceived.”¹⁴ Best mode requires a patent applicant “to disclose the best mode contemplated by him, as of the time he executes the application, of carrying out the invention.”¹⁵ Unlike enablement, then, best mode has both subjective and objective components. The first part, which is subjective, inquires “whether the inventor considered a particular mode of practicing the invention to be superior to all other modes at the time of filing” the application.¹⁶ If so, the inventor must satisfy the objective prong, which requires that she “adequately disclose[] the mode . . . considered to be superior.”¹⁷

⁹ *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244 (Fed. Cir. 2003); see also Dmitry Karshedt, *Did Learned Hand Get It Wrong? The Questionable Patent Forfeiture Rule of Metallizing Engineering*, 57 VILL. L. REV. 261, 300 (2012) (“[T]he disclosure rationale for the patent system can be framed as part of the quid pro quo of the patent system: the patentee receives a monopoly right to exclude others from practicing his or her invention in exchange for revealing technical information to the public.”).

¹⁰ See Alan J. Devlin, *The Misunderstood Function of Disclosure in Patent Law*, 23 HARV. J.L. & TECH. 401, 445 (2010) (explaining that “§ 112 reflects the minimum disclosure required by Congress.”).

¹¹ *In re Wands*, 858 F.2d 731, 735 (Fed. Cir. 1988).

¹² See 35 U.S.C. § 112, ¶ 1 (2006) (“The specification . . . shall set forth the best mode contemplated by the inventor of carrying out his invention.”).

¹³ *Bayer AG v. Schein Pharm., Inc.*, 301 F.3d 1306, 1314 (Fed. Cir. 2002) (quoting *In re Gay*, 309 F.2d 769, 772 (C.C.P.A. 1962)).

¹⁴ *Teleflex, Inc. v. Ficosia N. Am. Corp.*, 299 F.3d 1313, 1330 (Fed. Cir. 2002).

¹⁵ *Bayer AG*, 301 F.3d at 1314 (quoting *In re Gay*, 309 F.2d at 772).

¹⁶ *Teleflex*, 299 F.3d at 1330.

¹⁷ *Id.*

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In addition to teaching future generations how to make and use the patented invention (in theory, anyway¹⁸), patent law's disclosure requirements also ensure that the invention eventually enters the public domain where it can be used by all for free. Like any other public disclosure, a patentee's disclosure of the best mode excludes trade secret protection for the invention's preferred embodiment.¹⁹ The Uniform Trade Secrets Act ("UTSA"), which has been adopted by 46 states,²⁰ defines a trade secret as "information . . . that . . . derives independent economic value . . . from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use."²¹ The dissemination of an alleged trade secret in a patent—or, since 1999, in a published patent application²²—is antithetical to this secrecy requirement. "Publication in a patent destroys the trade secret because patents are intended to be widely disclosed."²³ As a result, "the information contained within [a patent]," including best mode, "is

¹⁸ See Mark A. Lemley, *Ignoring Patents*, 2008 MICH. ST. L. REV. 19, 21-22 (noting that companies generally ignore patents in all stages of product development: when conducting research and design, when filing their own patents, when launching new products, and even after receiving initial cease-and-desist letters from patent owners); Lisa Larrimore Ouellette, *Do Patents Disclose Useful Information?*, 25 HARV. J.L. & TECH. 531, 534 (2012) (finding in a survey of nanotechnology researchers that 55% reported never reading a single patent to obtain technical information).

¹⁹ See, e.g., 2 R. CARL MOY, *MOY'S WALKER ON PATENTS* § 7:55 (4th ed. 2011) (explaining that the disclosure required under best mode and trade secret law are "in inherent conflict").

²⁰ See *Trade Secrets Act*, NATIONAL CONFERENCE OF COMMISSIONERS ON UNIFORM STATE LAWS, <http://www.uniformlaws.org/Act.aspx?title=Trade%20Secrets%20Act> (last visited Apr. 21, 2012).

²¹ UNIF. TRADE SECRETS ACT § 1(4)(i) (1985). Similarly, the *Restatement (Third) of Unfair Competition* defines a trade secret as "any information that can be used in the operation of a business or other enterprise and *that is sufficiently valuable and secret* to afford an actual or potential economic advantage over others." RESTATEMENT (THIRD) OF UNFAIR COMPETITION § 39 (1995) (emphasis added).

²² Before 1999, patent applications were not publicly disclosed by the PTO until and unless the application issued as a patent. The American Inventors Protection Act of 1999 provided that all patent applications would be published eighteen months after filing, unless the applicant requests otherwise and certifies that the invention has not and will not be the subject of an application filed in a foreign country. American Inventors Protection Act, Pub. L. No. 106-113, § 4502, 113 Stat. 1501 (1999) (codified at 35 U.S.C. § 122(b)); see *Tewari De-Ox Sys., Inc. v. Mt. States/Rosen, L.L.C.*, 637 F.3d 604, 612 (5th Cir. 2011) (holding that information in a published patent application cannot be a trade secret).

²³ *BondPro Corp. v. Siemens Power Generation, Inc.*, 463 F.3d 702, 706-07 (7th Cir. 2006) (internal citation omitted).

ordinarily regarded as public and not subject to protection as a trade secret.”²⁴

For example, in *Chemcast Corp. v. Arco Industries Corp.*,²⁵ the Federal Circuit made clear that the existence of an alleged trade secret did not excuse a patentee’s failure to comply with the best mode requirement. In that case, the plaintiff, Chemcast, held a patent claiming a sealing member designed to close an opening in a panel. The claim at issue contained an open-ended limitation that the locking portion of the sealing member must consist of a material exceeding a certain hardness level.²⁶ The inventor’s preferred material for the locking portion, a particular type of plastic specially developed for Chemcast and considered a trade secret, was not disclosed in the specification.²⁷ The Federal Circuit affirmed the district court’s conclusion that the inventor improperly concealed the best mode because “skilled practitioners could neither have known what [his] contemplated best mode was nor have carried it out” based on the patent’s disclosure.²⁸ It further explained that the material’s alleged trade secret status was not a defense to disclosure, holding that “[w]hatever the scope of [the] asserted trade secret, to the extent it includes information known by [the inventor] that he considered part of his preferred mode, section 112 requires that he divulge it.”²⁹

Under the 1952 Patent Act, an inventor’s failure to disclose best mode during patent prosecution could result in a rejection by the patent examiner.³⁰ In practice, however, this was extremely uncommon because it required “the examiner to conclude that the inventor, at the time of filing the application, actually knew of a better mode of practicing the claimed invention.”³¹ Rather, the primary means of enforcing best mode was in litigation. Failure to disclose best mode in an issued patent was a defense to infringement and would render the patent invalid.³² In addition, the intentional concealment of best mode also could result in a

²⁴ *On-Line Tech., Inc. v. Bodenseewerk Perkin-Elmer*, 386 F.3d 1133, 1141 (Fed. Cir. 2004).

²⁵ 913 F.2d 923 (Fed. Cir. 1990).

²⁶ *Id.* at 925.

²⁷ *Id.* at 929.

²⁸ *Id.* at 930.

²⁹ *Id.*

³⁰ Ryan G. Vacca, *Patent Reform and Best Mode: A Signal to the Patent Office or a Step Toward Elimination?*, 75 ALB. L. REV. 279, 293 (2012).

³¹ *Id.* at 294.

³² *See, e.g., U.S. Gypsum Co. v. Nat’l Gypsum Co.*, 74 F.3d 1209, 1211 (Fed. Cir. 1996).

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finding of inequitable conduct, which would render the patent unenforceable.³³

II. BEST MODE IN THE AIA

After years of unsuccessful attempts to reform patent law,³⁴ the AIA was signed into law on September 16, 2011. The AIA formally retained the best mode requirement in section 112 of the Patent Act, while at the same time eliminating the most important mechanism by far for enforcing that requirement. Specifically, section 15 of the AIA provides that “failure to disclose the best mode shall not be a basis on which any claim of a patent may be cancelled or held invalid or otherwise unenforceable.”³⁵ Thus, post patent reform, “patents applicants must disclose the best mode to receive a patent, but in the event a patent is obtained despite a failure to comply with section 112’s best mode requirement no challenge to the patent rights can be made on this failure.”³⁶

This unusual result appears to be a compromise between those who wanted to preserve best mode in some fashion and those who wanted to eliminate it entirely. Influenced by the National Academies’ 2004 report *A Patent System for the 21st Century*,³⁷ opponents cited several reasons for abolishing best mode. First, they argued that best mode “significantly increase[d] the expense and complexity of litigation” because it required extensive discovery into the inventor’s subjective belief regarding whether she had a preferred implementation of the invention at the time of the patent application’s filing.³⁸ As a result, they claimed, best

³³ See, e.g., *Consol. Aluminum Corp. v. Foseco Int’l Ltd.*, 910 F.2d 804, 807 (Fed. Cir. 1990).

³⁴ For additional discussion of the legislative history of patent reform and best mode, see Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 581-84 (2012); Wesley D. Markham, *Is Best Mode the Worst? Dueling Arguments, Empirical Analysis, and Recommendations for Reform*, 51 IDEA 129, 157-61 (2011); and Vacca, *supra* note 30, at 290-293.

³⁵ AIA § 15(a) (codified at 35 U.S.C.A. § 282(b)(3)(A) (West 2012)). The AIA also eliminates compliance with best mode as a requirement for benefiting from an earlier filing date for previously-filed foreign and U.S. patent applications. AIA § 15(b).

³⁶ Vacca, *supra* note 30, at 292.

³⁷ NAT’L RES. COUNCIL OF THE NAT’L ACADEMIES, *A PATENT SYSTEM FOR THE 21ST CENTURY* (Stephen A. Merrill et al. eds., 2004).

³⁸ H.R. REP. NO. 110-314, at 44 (2007); see also NAT’L RES. COUNCIL, *supra* note 37, at 121 (“Because the [best mode] defense depends on historical facts and because the inventor’s state of mind usually can be established only by circumstantial evidence, litigation of this issue—especially pretrial discovery—can be extensive and time consuming.”).

mode imposed an unnecessary cost on inventors.³⁹ Second, opponents contended that best mode violations were difficult to prove because the doctrine is “inherently subjective” and “the best mode contemplated at the time of the invention may not be the best mode for practicing or using the invention years later” when the patent might wind up challenged in court.⁴⁰ Third, best mode was noted as inconsistent with international norms, as the requirement was unique to American law.⁴¹ This imposed a burden on foreign applicants seeking patent protection in the U.S., as well as requiring domestic inventors to make a more detailed disclosure compared to foreign inventors who did not desire U.S. patent protection.⁴²

In contrast, proponents of maintaining the best mode requirement contended it was valuable because it required an inventor seeking patent protection to make a “high quality” disclosure.⁴³ As a 2007 House Judiciary Committee report explained:

The public policy behind [best mode] goes to the heart of the reason that patents existed in the United States[:] to advance technology (the useful arts) by rewarding inventors for teaching the public how to make and use their inventions in the best, most effective way of which they are aware. Its inclusion . . . is intended to preclude a patentee from maintaining a competitive advantage after patent expiration.⁴⁴

In light of these competing positions, members of the House and Senate initially split regarding best mode in patent

³⁹ See, e.g., 157 CONG. REC. E1175 (daily ed. June 23, 2011) (statement of Rep. Mike Pence) (“In my view, the best mode requirement of American law imposes extraordinary and unnecessary costs on inventors.”).

⁴⁰ H.R. REP. NO. 112-98, at 52 (2011); see also S. REP. NO. 111-18, at 24-25 (2009); 157 CONG. REC. S1360 (daily ed. Mar. 8, 2011) (statement of Sen. Jon Kyl) (asserting that “many consider” best mode as a defense to patent infringement to be “subjective and possibly irrelevant, as the best mode may change over time”).

⁴¹ See, e.g., H.R. REP. NO. 112-98, at 52; S. REP. NO. 111-18, at 24; see also NAT’L RES. COUNCIL, *supra* note 37, at 121 (“Only the United States imposes a best mode requirement.”).

⁴² See H.R. REP. NO. 110-314, at 44 (2009) (“The third objection to best mode is the expense it adds to international filings. Foreign patent applicants wishing to protect their inventions in the United States must amend or prepare their applications to meet a requirement that is unnecessary anywhere else.”).

⁴³ ADVISORY COMM. ON PATENT LAW REFORM, A REPORT TO THE SECRETARY OF COMMERCE 101 (1992). Despite this, the Advisory Committee on Patent Law Reform advocated abolishing best mode. *Id.* at 100-103.

⁴⁴ H.R. REP. NO. 110-314, at 43.

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reform legislation. In 2005, a bill co-sponsored by Rep. Lamar Smith (R-TX) and Rep. Howard Berman (D-CA) would have entirely eliminated the best mode requirement from section 112.⁴⁵ In contrast, a 2006 bill co-sponsored by Sen. Orrin Hatch (R-UT) and Sen. Patrick Leahy (D-VT) would have retained best mode unchanged.⁴⁶ Both bills died in committee.

In 2007, the House passed a bill that would have eliminated best mode as a ground for challenging the patent's validity in litigation, but retained it in section 112 as a requirement for patentability.⁴⁷ In contrast, the Senate's version of patent reform kept best mode unchanged after the Senate Judiciary Committee defeated an amendment by Sen. Arlen Specter (R-PA) that would have eliminated it as a litigation defense.⁴⁸ This bill was favorably reported out of committee but did not receive a floor vote in the Senate.⁴⁹ Much of the opposition to these bills was based on new provisions that would have redefined the standard for awarding damages for infringement, as well as imposing additional substantive and procedural barriers to awards of enhanced damages as a remedy for willfulness.⁵⁰

However, in 2009, the Senate Judiciary Committee switched positions and adopted the House position on best mode. Specifically, it favorably reported a version of patent reform legislation which provided that "failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable."⁵¹ While neither the House nor the Senate was able to pass their respective versions of patent reform in the 111th Congress,⁵² the Senate's action set the stage to finally resolve the issue. In 2011, both

⁴⁵ H.R. 2795, 109th Cong. § 4(d) (2005).

⁴⁶ S. 3818, 109th Cong. (2006). The co-sponsors recognized legislators' disagreement regarding best mode but were hopeful that a mutually acceptable compromise could be reached on the issue. 152 CONG. REC. S8830 (Aug. 3, 2006) (statement of Sen. Orrin Hatch).

⁴⁷ H.R. 1908, 110th Cong. §§ 6(f)(1), 13 (2007).

⁴⁸ S. REP. NO. 110-259, at 40 (2008).

⁴⁹ Sen. Jon Kyl (R-AZ) introduced another, competing bill that would have eliminated best mode entirely. S. 3600, 110th Cong. §§ 3(c), 15 (2008). No action was taken on this bill.

⁵⁰ See S. 1145, 110th Cong. § 4 (2007); H.R. 1908, 110th Cong. § 4 (2007); see also Joe Matal, *A Guide to the Legislative History of the America Invents Act, Part I of II*, 21 FED. CIR. B.J. 435, 440 (2012) (explaining that "both pieces of legislation . . . proved very controversial—primarily because of provisions that would have redefined the standard for awarding damages . . .").

⁵¹ S. 515, 111th Cong. § 14 (2009).

⁵² Somewhat surprisingly, the bill introduced by Chairman of the House Judiciary Committee Rep. John Conyers (D-MI) during the 111th Congress was silent on best mode. H.R. 1260, 111th Cong. (2009). This bill died in committee.

chambers passed bills that were substantively identical to the 2009 Senate bill regarding best mode.⁵³ The AIA's prohibition on best mode as a litigation defense was effective for all cases filed on or after the date of its enactment.⁵⁴

Notably, the legislative history of patent reform is largely silent regarding the possibility that removing the most common enforcement mechanisms for best mode—invalidity and unenforceability—might result in inventors withholding best mode from patent applications and subsequently claiming trade secret protection for it. In the rare occasion when trade secrecy was mentioned, however, Congress recognized its incompatibility with patent law. For instance, in its 2007 report supporting best mode's retention as a patentability requirement in section 112 but its removal as an invalidity defense, the House Judiciary Committee stated that “effectively retain[ing] a trade secret at the same time as receiving patent protection” would “break[] faith with the fundamental bargain of patent law.”⁵⁵ But by removing the most credible enforcement mechanisms,⁵⁶ the AIA has apparently opened the door to this type of dual protection.

III. CONCURRENT PATENT AND TRADE SECRET RIGHTS AFTER THE AIA

In the remainder of this Essay, we discuss the likelihood that with this door now open, some patentees will attempt to claim both patent and trade secret protection by failing to disclose best mode. We then explain why this development appears problematic from a policy perspective. Finally, we offer one potential equitable

⁵³ H.R. 1249, 112th Cong. § 15 (2011) (approved 6/23/11, 304-117); S. 23, 112th Cong. § 15 (2011) (approved 3/8/11, 95-5). The Senate ultimately approved the House's version of patent reform without amendment on Sept. 8, 2011. 157 CONG. REC. S5442 (daily ed. Sept. 8, 2011) (approved 89-9).

⁵⁴ See AIA § 15(c) (providing that best mode changes “shall take effect upon the date of the enactment of this Act and shall apply to proceedings commenced on or after that date”); U.S. PATENT & TRADEMARK OFFICE, AMERICA INVENTS ACT: EFFECTIVE DATES (Oct. 5, 2011), http://www.uspto.gov/aia_implementation/aia-effective-dates.pdf.

⁵⁵ H.R. REP. NO. 110-314, at 43 (2009).

⁵⁶ See Lee Petherbridge & Jason Rantanen, *In Memoriam Best Mode*, 64 STAN. L. REV. ONLINE 125, 126-27 (2012) (“[W]hile it is technically true that amended 35 U.S.C. § 112 still ‘requires’ patent applicants to disclose a best mode if they know of one There is little dispute that this development has, as a practical matter, effectively eliminated the best mode requirement from patent law.”). There may, however, be a few limited avenues for the PTO to attempt to enforce the best mode requirement during prosecution, such as through attorney disciplinary procedures at the PTO and the federal False Statements Statute, 18 U.S.C. § 1001(a). See Vacca, *supra* note 30, at 296-301.

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response that can help prevent unscrupulous patentees from unfairly benefitting from their failure to disclose best mode.

A. Could Concurrent Protection Become Common?

Though some anticipate that very little will change as a result of the AIA's best mode reforms,⁵⁷ we predict that a significant number of patent owners will attempt to obtain belt-and-suspenders protection for their inventions by relying on patents *and* trade secrecy. Indeed, look no further than the fact that several top law firms have publicly alerted clients to the possibility.⁵⁸

And, unfortunately, withholding invention specifics for trade secret protection is a strategic move that even a risk-averse inventor might consider.⁵⁹ For one, the PTO's ability to enforce

⁵⁷ See Charles Everingham, David Healey & Stephen Susman, *2011 Patent Reform's Impact on Patent Litigation*, IPO'S CHAT CHANNEL, at slides 23-24 (Nov. 8, 2011), available at http://patentmath.com/multi-party-patent-litigation-after-the-america-invents-act/multi-party_litigation-slides_revised_post-presentation_dhealey/ (asserting that “[e]limination of Best Mode is not a ‘big deal’ to Patent Litigation” and that even after reform the “[p]referred embodiment will always be in [the] patent”).

⁵⁸ See, e.g., Robert L. Maier, *The Big Secret of the America Invents Act*, INTELLECTUAL PROP. TODAY 20 (Dec. 2011), http://www.bakerbotts.com/files/Uploads/Documents/Maier_DEC11.pdf (stating that elimination of the best mode defense “theoretically provides the option for dual rights: the inventor may still pursue patent protection for his or her invention, and seek broadly-worded patent claims covering numerous different implementations, while at the same time maintaining in secret . . . his or her best mode for practicing the invention.”); *Obtaining Patents Under the America Invents Act (Patent Reform)*, VENABLE LLP (Oct. 17, 2011), <http://www.venable.com/obtaining-patents-under-the-america-invents-act-patent-reform-10-17-2011> (“[I]t may be advantageous to seek patent protection on general aspects of an invention, while maintaining the best mode as a trade secret.”); Clifton E. McCann & Lars H. Genieser, *Why Do I Need to Know About The New Patent Law (American [sic] Invents Act of 2011)*, VENABLE LLP (2011), http://www.venable.com/files/Event/b109636b-04ee-4ea8-82f9-0fe256895686/Presentation/EventAttachment/b6fe68b7-41c6-4a0e-987c-7adc9ca5e111/AIA_Webinar_2011_12_06.pdf (“Strategic opportunity: . . . Disclose and claim general aspects of an invention in an application. But maintain a specific ‘best mode’ aspect of an invention as a trade secret.”).

⁵⁹ As recent history shows, some patentees have been reluctant to make full disclosures in the face of uncertainty about the limits of the best mode requirement. For example, many inventors seeking early software patents chose not to disclose their source code to the PTO, even though that code arguably represented their preferred embodiment. See *Fonar Corp. v. Gen. Elec. Co.*, 107 F.3d 1543, 1549 (Fed. Cir. 1997) (“[W]here software constitutes part of a best mode . . . , description of such a best mode is satisfied by a disclosure of the functions of the software.”). Similarly, many early biotech inventors chose not to disclose the specific cell lines used to produce their products. See *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1212 (Fed. Cir. 1991) (holding that

the best mode requirement during prosecution is limited given that patent examiners generally lack the resources and tools necessary to investigate inventors' subjective knowledge of preferred embodiments.⁶⁰ Also, by the time a patent is litigated in court, there is little hope that an accused infringer can determine from the face of a complaint whether the patentee's parallel trade secret claim is based on information held back from the PTO years earlier.⁶¹ The "best mode" the inventor must disclose is the one she subjectively believed to be best at the time the patent application was filed, which of course is not necessarily the embodiment that is objectively superior to all others at the time of litigation.⁶² Thus, short of uncovering a smoking gun in discovery, an accused infringer often cannot tell *ex post* that a trade secret asserted today was the patentee's best mode years prior.

Moreover, the AIA's expansion of prior user rights considerably reduces the risks associated with protecting preferred embodiments as trade secrets. Before patent reform, a trade secret holder ran the risk that another inventor might independently discover the same technology and obtain a patent.⁶³ If that

Amgen did not violate the best mode requirement by failing to deposit with the PTO the cell line it used to create EPO).

⁶⁰ Vacca, *supra* note 30, at 294; *see also* U.S. DEP'T OF COMMERCE, U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2165.03 (8th ed., 9th rev. 2012) ("It is extremely rare that a best mode rejection properly would be made in *ex parte* prosecution. The information that is necessary to form the basis for a rejection based on the failure to set forth the best mode is rarely accessible to the examiner, but is generally uncovered during discovery procedures in interference, litigation, or other *inter partes* proceedings."). In addition to the *ex parte* nature of patent prosecution, a patent examiner will spend just 18 hours total on the average application he reviews. *See* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1500 (2001). As of October 2009, the PTO employed just over 6,000 examiners and faced a backlog of more than 700,000 applications awaiting their first office action. *Patent Inventory Statistics - FY09*, U.S. PATENT & TRADEMARK OFFICE, <http://www.uspto.gov/patents/stats/appbacklog.jsp> (last modified Oct. 7, 2009).

⁶¹ The average litigated patent owned by a product-producing company is asserted 8.7 years after its earliest filing date; the average patent owned by a nonpracticing entity (NPE) is asserted about 12 years post-filing. Brian J. Love, *An Empirical Study of Patent Litigation Timing: Could a Patent Term Reduction Decimate Trolls without Harming Innovators?*, 161 U. PA. L. REV. (forthcoming 2013) (manuscript at 28, tbl.5), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1917709.

⁶² *See* Donald S. Chisum, *Best Mode Concealment and Inequitable Conduct in Patent Procurement: A Nutshell, A Review of Recent Federal Circuit Cases and a Plea for Modest Reform*, 13 SANTA CLARA COMPUTER & HIGH TECH. L.J. 277, 281 (1997) ("The 'mode' that must be disclosed is not the best in fact but rather the one believed to be best by the inventor.").

⁶³ This is because trade secrecy does not protect against independent invention, and under the previous version of 35 U.S.C. § 102(g), a prior inventor who

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happened (and the invention was not a business method⁶⁴), the trade secret holder would be liable for infringement of the independent inventor's patent unless she ceased using the heretofore-secret technology after the patent issued. Post patent reform, however, many incumbent trade secret holders need no longer fear patent infringement claims, as the expanded prior user rights in the AIA provide a defense to infringement for any person who "commercially used" an invention at least one year before the earlier of the asserted patent's filing date and the first public disclosure of the patented invention.⁶⁵

B. The Costs and Benefits of Concurrent Protection

If patentees in fact change strategy and attempt to withhold preferred embodiments for trade secret protection, the result will be suboptimal for the patent system and the public more generally.⁶⁶ For one, the change means that inventors can retain potentially perpetual rights (though admittedly narrow ones) in

suppressed or concealed her invention was not entitled to a patent, thus opening the door for a subsequent inventor to obtain patent protection. See Andrew Beckerman-Rodeau, *The Choice Between Patent Protection and Trade Secret Protection: A Legal and Business Decision*, 84 J. PAT. & TRADEMARK OFF. SOC'Y 371, 387 (2002) ("[I]f the first inventor maintains her invention as a trade secret a subsequent second inventor may be entitled to a patent on the invention rather than the first inventor.").

⁶⁴ See 35 U.S.C. § 273(b) (2006), amended by AIA § 5 (codified at 35 U.S.C.A. § 273(a) (West 2012)).

⁶⁵ AIA § 5 (codified at 35 U.S.C.A. § 273(a) (West 2012)) (explaining that this prior user defense applies to inventions that are "a process . . . , a machine, manufacture or composition of matter used in a manufacturing or other commercial process"); see also Karshedt, *supra* note 9, at 333-34 (contending that prior user rights in the AIA "appear to encourage trade secrecy" in lieu of patent protection because "while the owner of a trade secret may still end up facing the patenting of the same invention by a subsequent inventor, he or she now has a new defense against infringement of the patent"). However, this prior commercial user defense is limited by several constraints, including that it creates only a nontransferable personal defense and that the defense does not apply if the patent was "owned or subject to an obligation of assignment" to an institution of higher education. AIA § 5(e) (codified at 35 U.S.C.A. § 273(e) (West 2012)).

⁶⁶ In this Essay, we do not take a normative position regarding the relative merits of patents vs. trade secrecy in promoting innovation generally. Rather, our more limited objective is to explain how the AIA has unexpectedly opened the door to dual patent and trade secret protection for the same invention and some of the undesirable consequences that may flow from this development. For recent scholarship regarding the perceived benefits of trade secret protection in lieu of patenting, at least in certain circumstances, see generally J. Jonas Anderson, *Secret Inventions*, 26 BERKELEY TECH. L.J. 917 (2011); and Mark A. Lemley, *The Surprising Virtues of Treating Trade Secrets as IP Rights*, 61 STAN. L. REV. 311 (2008).

their inventions despite receiving a patent. This undermines the fundamental disclosure-for-limited-monopoly exchange at the heart of the patent system. Encouraging inventors to disclose their secret inventions and thereby ensuring that they eventually enter the public domain has long been viewed as one of the primary justifications for exclusive patent rights.⁶⁷ Elimination of the best mode requirement, therefore, may tilt the balance underlying the patent system in favor of inventors, who can now obtain exclusive rights while giving up fewer valuable secrets, at the expense of the general public, which may continue to see supracompetitive prices for technologies protected by best mode trade secrets after contemporaneously-issued patent rights expire.⁶⁸

This reform also provides a strong incentive for inventors to include in current and future patent applications less detail than in applications prosecuted in prior decades. In light of widespread dissatisfaction in the patent community with the level of disclosure and detail in many patents now in force,⁶⁹ any reform that lowers the disclosure bar is due a heavy dose of skepticism.

⁶⁷ See, e.g., *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736 (2002) (“[E]xclusive patent rights are given in exchange for disclosing the invention to the public.”); Anderson, *supra* note 66, at 928 (“[T]heorists justify the patent system as a means of inducing the creation and disclosure of new and useful inventions. . . . The goal is that in exchange for a twenty-year period of exclusivity, inventors will be incentivized to create new and useful inventions and then reveal those innovations to the public.”).

⁶⁸ Congress’ decision to weaken the “quid pro quo” rationale for patent rights also comes at a time when some scholars have expressed serious doubts about common justifications for the patent system. See generally MICHELE BOLDRIN & DAVID K. LEVINE, *AGAINST INTELLECTUAL MONOPOLY* (2008) (arguing for the abolition of all intellectual property protection); Mark A. Lemley, *The Myth of the Sole Inventor*, 110 MICH. L. REV. 709, 736-60 (2012) (summarizing deficiencies in each common justification for patent rights and proposing a new “patent race” rationale for the patent system).. But see generally ROBERT P. MERGES, *JUSTIFYING INTELLECTUAL PROPERTY* (2011).

⁶⁹ Literature decrying the uncertain boundaries of patent rights is legion. See Brian J. Love, *The Misuse of Reasonable Royalty Damages as a Patent Infringement Deterrent*, 74 MO. L. REV. 909, 938-39 (2009) (collecting articles documenting the uncertainty of patent scope). Moreover, some commentators report that patents are viewed in industry circles as so unhelpful that few innovators read them to learn about new technology. See Lemley, *supra* note 18, at 21-22; Mark A. Lemley & Ragesh K. Tangri, *Ending Patent Law’s Willfulness Game*, 18 BERKELEY TECH. L.J. 1085, 1100-01 (2003) (“[I]n-house patent counsel and many outside lawyers regularly advise their clients not to read patents if there is any way to avoid it.”); Note, *The Disclosure Function of the Patent System (or Lack Thereof)*, 118 HARV. L. REV. 2007, 2025 (2005) (explaining that due to “drafting strategies meant to ensure that patents are interpreted broadly by the courts . . . engineers often find it difficult to extract useful information” from them). But cf. Ouellette, *supra* note 18, at 534 (finding in a survey of nanotechnology researchers that 45% reported having read at least one patent to obtain technical information).

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All that said, is patent law nonetheless better off without a best mode litigation defense? We doubt it. Under scrutiny, Congress's justifications do not hold much water. First, although the decision to eliminate the best mode defense was primarily made to reduce litigation costs,⁷⁰ there is good reason to believe the savings will be modest in most cases, while in others the reform may actually act to increase costs.

In any case where a trade secret claim might be asserted along with patent rights⁷¹—typically when the accused infringer is a former employee, business partner, or prospective customer of the patentee⁷²—the existence of best mode trade secrets may extend litigation considerably. In these cases, even if the patent-in-suit is invalidated in pretrial proceedings or on reexamination by the PTO, the patentee may continue to pursue the case on the remaining trade secret claim.⁷³ A patentee may also benefit in other ways from bringing a parallel trade secret claim. Most notably, while preliminary injunctions are relatively uncommon in patent cases,⁷⁴ rightsholders asserting trade secret claims obtain a

⁷⁰ See *supra* notes 38-39 and accompanying text; see also Sheppard, *supra* note 7.

⁷¹ Prior to the AIA's passage, one study suggested that parallel assertion of patent and trade secret claims was relatively uncommon. See Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law*, 87 N.C. L. REV. 1421, 1445 tbl.1 (2009) (finding that trade secret misappropriation was alleged in 2.6% (5 of 193) of patent infringement complaints reviewed).

⁷² See David S. Almeling et al., *A Statistical Analysis of Trade Secret Litigation in State Courts*, 46 GONZ. L. REV. 57, 69 (2011) (State Study Table 2) (reporting that 77% of trade secret actions brought in state court were brought against the rightsholders' employees or former employees, and 20% more were filed against business partners); David S. Almeling et al., *A Statistical Analysis of Trade Secret Litigation in Federal Courts*, 45 GONZ. L. REV. 291, 302 tbl.2 (2010) (reporting that 52% of trade secret actions brought in federal court were brought against the rightsholders' employees or former employees, and 40% more were filed against business partners).

⁷³ For example, a prior public sale of the relevant technology by the patentee might invalidate a patent under 35 U.S.C.A. § 102(a)(1), but not a trade secret if proper precautions were taken. See, e.g., *Syncsort, Inc. v. Innovative Routines, Int'l, Inc.*, No. 04-3623, 2011 WL 3651331, at *15 (D.N.J. Aug. 18, 2011) ("Since customers were required to sign a non-disclosure agreement . . . the plaintiff's measures were adequate to maintain its trade secrets.").

⁷⁴ Carl Shapiro, *Injunctions, Hold-Up, and Patent Royalties*, 12 AM. L. & ECON. REV. 280, 288 n.15 (2010) (noting that in patent cases "[preliminary] injunctions are rare"). A preliminary injunction motion in a patent case may be defeated by raising a good faith challenge to the patentee's infringement claims or to the asserted patent's validity. See *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1350-51 (Fed. Cir. 2001) ("If [the accused infringer] raises a substantial question concerning either infringement or validity, *i.e.*, asserts an infringement or invalidity defense that the patentee cannot prove 'lacks substantial merit,' the preliminary injunction should not issue.") (internal

preliminary injunction more than one-third of the time.⁷⁵

Consider, for example, an inventor who files a patent application covering the formula for a new plastic resin, but chooses not to disclose certain additional ingredients she uses to augment her own commercial embodiment.⁷⁶ The PTO fails to discover this nondisclosure and issues a patent for the resin. Meanwhile, the patentee protects her augmented version of the resin formula as though it were a trade secret. In future litigation, the inventor could bring claims for both patent infringement and trade secret misappropriation. Even if the accused infringer successfully invalidates the patent, post-AIA the case can continue on the theory that the accused infringer misappropriated the trade secret.⁷⁷ Moreover, the inventor may have a better chance obtaining a preliminary injunction by virtue of the parallel trade secret claim, which could impose holdup costs on the accused infringer and lead to a quick, lucrative settlement that exceeds the invention's actual economic value.⁷⁸

In other patent cases, the cost savings associated with eliminating best mode as a litigation defense may be quite modest, or even nonexistent, because the change likely will not significantly reduce the volume of discovery. In post-AIA patent litigation, there is little reason to think that inventors will not be

citation omitted). As a result, few patentees bother to ask for preliminary injunctive relief unless the patent-in-suit has already survived scrutiny in a prior enforcement action. And even those who believe their infringement claims are strong enough to justify the expense of a motion prevailed in preliminary injunction requests just 30% of the time during 2010-2011 (21 of 69 cases) according to Patstats.org, a database of patent litigation statistics. See *Full Calendar Year 2010 Report*, PATSTATS.ORG, http://patstats.org/2010_full_year.rev5.htm (last visited July 2, 2012); *Full Calendar Year 2011 Report*, PATSTATS.ORG, http://patstats.org/2011_Full_Year_Report.html (last visited July 2, 2012).

⁷⁵ See Almeling et al., *A Statistical Analysis of Trade Secret Litigation in Federal Courts*, *supra* note 72, at 316 tbl.14 (reporting a success rate of 34.4% for preliminary injunction motions by trade secret holders in federal court).

⁷⁶ This example is loosely based on the facts of *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355 (Fed. Cir. 2011) (affirming summary judgment of invalidity of patent that failed to disclose certain ingredients used in inventors' preferred formula and kept by inventors as a trade secret).

⁷⁷ Even when the accused infringer can advance evidence of independent invention, which is a defense to trade secret misappropriation, it is unlikely this issue will be resolved on summary judgment in any case where the inventor can proffer evidence of at least constructive knowledge of the secret information, as independent invention (or lack thereof) is a question of fact. See, e.g., *Droeger v. Welsh Sporting Goods Corp.*, 541 F.2d 790, 793 (9th Cir. 1976).

⁷⁸ See Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 TEX. L. REV. 1991, 1993 (2007) (“[T]he threat of an injunction can enable a patent holder to negotiate royalties far in excess of the patent holder’s true economic contribution.”).

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deposed, will be deposed for less time, or that substantially fewer documents will be requested or reviewed in discovery as a result of the AIA's treatment of best mode. So long as inequitable conduct remains a viable defense,⁷⁹ accused infringers will still undertake expensive discovery to uncover what the inventor knew at the time his application was filed.⁸⁰ To be sure, best mode's elimination may occasionally knock a paragraph or two from accused infringers' summary judgment briefs and shorten the list of issues for trial. But we believe these savings are overstated by best mode critics. As a fact-bound inquiry,⁸¹ best mode invalidations are rare at the summary judgment stage, and of course most patent cases settle before a summary judgment ruling.⁸² Also, like other types of complex civil litigation, only a small percentage of patent cases go to trial,⁸³ and those that do are typically so complex that the myriad issues remaining will expand to fill the void left by best mode's elimination.⁸⁴

⁷⁹ The Federal Circuit's recent *en banc* decision in *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276 (Fed. Cir. 2011), which is widely perceived as making inequitable conduct more difficult to establish, may have the effect of reducing the number of inequitable conduct claims. *But see* Jason Rantanen & Lee Petherbridge, *Therasense v. Becton Dickinson: A First Impression*, 14 YALE J.L. & TECH. 226, 249 (2012) (contending that "there is little reason to think" that *Therasense* "will result in fewer charges of inequitable conduct"). Despite this, there have been several findings of inequitable conduct post-*Therasense*, suggesting that it will remain a viable defense. *See, e.g.*, *Aventis Pharma S.A. v. Hospira, Inc.*, 675 F.3d 1324, 1334 (Fed. Cir. 2012) (affirming a district court's finding of inequitable conduct because it "withstands even the more rigorous standard adopted in *Therasense*"); *Therasense, Inc. v. Becton Dickinson & Co.*, 864 F. Supp. 2d 856 (N.D. Cal. 2012) (on remand in *Therasense*, finding that the patent-in-suit was unenforceable due to inequitable conduct even under the new standard articulated by the Federal Circuit); *Network Signatures, Inc. v. State Farm Auto. Ins. Co.*, No. 11-00982, 2012 WL 2357307 (N.D. Cal. June 13, 2012) (finding both "but for" materiality and specific intent to deceive the PTO under the *Therasense* standard and holding the patent-in-suit unenforceable due to inequitable conduct).

⁸⁰ *See Therasense*, 649 F.3d at 1287 ("To prevail on the defense of inequitable conduct, the accused infringer must prove that the applicant misrepresented or omitted material information with the specific intent to deceive the PTO.") (emphasis added).

⁸¹ *See, e.g.*, *Bayer AG v. Schein Pharm., Inc.*, 301 F.3d 1306, 1312 (Fed. Cir. 2002) ("Whether an applicant has complied with the best mode requirement of section 112 is a question of fact . . .").

⁸² *See, e.g.*, Jay Kesan & Gwendolyn Ball, *How Are Patent Cases Resolved? An Empirical Examination of the Adjudication and Settlement of Patent Disputes*, 84 WASH. L. REV. 237, 273 tbl. 4 (2006) (finding that over 80% of patent cases are resolved before summary judgment).

⁸³ *Id.* at 273 tbl. 4 (finding that only 6% of patent cases are decided at trial).

⁸⁴ *Cf.* Patrick E. Longan, *The Shot Clock Comes to Trial: Time Limits for Federal Civil Trials*, 35 ARIZ. L. REV. 663, 698-703 (1993) (discussing why trials tend to expand far beyond their optimal length).

Some legislators' additional criticism of best mode as overly subjective⁸⁵ also misses the mark. Though it is true that proving a best mode violation requires proof of the inventor's subjective beliefs about the superiority of a particular embodiment,⁸⁶ that subjective intent may be proven by inference from evidence obtained in discovery that is otherwise objective in nature—e.g., data from an analysis of various embodiments of the invention showing that one outperforms the others.⁸⁷

Moreover, despite some legislators' expressed desire to align U.S. disclosure requirements with those of other countries,⁸⁸ best mode reform in its current form does very little, if anything, to advance patent law harmonization. In fact, the reform reduces patent prosecution costs for foreign inventors only to the extent it facilitates applicants' ability to ignore the best mode requirement altogether and obtain U.S. patents with copies of foreign applications that do not disclose preferred embodiments.⁸⁹ This, of

⁸⁵ See *supra* notes 38-39 and accompanying text.

⁸⁶ See, e.g., *Liquid Dynamics Corp. v. Vaughn Co.*, 449 F.3d 1209, 1223 (Fed. Cir. 2006) (explaining that best mode requires inquiring whether “the inventor subjectively considered a particular mode of practicing the invention to be superior to all other modes at the time of the filing the application”) (internal quotations and citation omitted).

⁸⁷ See DONALD S. CHISUM, 3 CHISUM ON PATENTS § 7.05[1] [c][i][B] (2012) (explaining that best mode is not violated “if there is no evidence that the inventor subjectively preferred any one of several possible implementations of the invention”).

⁸⁸ See *supra* notes 41-42 and accompanying text.

⁸⁹ As discussed above, the best mode requirement is uniquely American. See *supra* note 41 and accompanying text. Thus, a natural experiment to determine the consequences of best mode elimination in the United States might be to survey jurisdictions where best mode presently does not exist for related costs and benefits. We believe, however, that such a comparison is impractical due to other confounding differences between U.S. and foreign patent practice. For one, as a practical matter, most sophisticated foreign inventors are in fact subject to a best mode requirement and have been disclosing it for decades—i.e., the U.S. best mode requirement. International patentees routinely file parallel patent applications in the United States, where they must publicly disclose their best mode and thus give up the possibility of trade secret protection here in the United States and abroad. See *Number of Utility Patent Applications Filed in the United States, By Country of Origin, Calendar Years 1965 to Present*, U.S. PATENT & TRADEMARK OFFICE, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/appl_yr.htm (last updated May 21, 2012, 8:22 PM) (reporting that in 2010 more than half of all patent applications filed in the US were filed by foreign inventors). Also, parallel intellectual property infringement claims are far less common in international jurisdictions—virtually all of which have fee-shifting regimes—because failure to prevail on even one cause of action will make the plaintiff responsible for a sizeable chunk of the accused infringers' attorneys' fees. See Issachar Rosen-Zvi, *Just Fee Shifting*, 37 FLA. ST. U. L. REV. 717, 740 (2010) (“The English Rule, also known as the ‘loser pays rule,’ . . . reigns in the rest of the industrialized world . . .”).

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course, is precisely what we fear will happen, and may well explain why legislators who hoped to bring U.S. disclosure requirements in line with those elsewhere in the world agreed to a compromise that retained the best mode requirement but in an emasculated form.

Finally, we believe Congress's calculus on this issue failed to give proper weight to the fact that best mode may be more valuable to accused infringers as a shield rather than a sword. While best mode rarely acts to affirmatively invalidate a patent, it has seemingly proven effective as a deterrent to parallel trade secret claims in U.S. patent litigation. Before the AIA, an accused infringer faced with simultaneous patent and trade secret claims on the same technology could usually argue that the asserted patent was invalid for not disclosing the asserted trade secret as the best mode for practicing the patented invention. In other words, the claims seriously undermined one another.⁹⁰ Patentees thus tended to forego trade secret claims for fear of jeopardizing their patent rights. In our estimation, best mode critics have focused too little on this invisible hand of deterrence—a deterrence that no longer exists unless courts can fashion an alternative enforcement mechanism not precluded by the AIA.⁹¹

C. A Potential Response to Best Mode Trade Secret Claims

Fortunately, the AIA appears to have left enough wiggle room for accused infringers to advance, and courts to apply, an alternative means of policing best mode violations.⁹² In this final

⁹⁰ See, e.g., Joseph N. Hosteny, *Patent or Trade Secret: Which One is Best?*, IP TODAY 2 (Aug. 2000), <http://www.hosteny.com/archive/hosteny%2008-00.pdf> (describing a case in which the inventor's parallel trade secret claim was used to invalidate his patent on best mode grounds).

⁹¹ Lee Petherbridge and Jason Rantanen have identified another underappreciated benefit of the best mode requirement: it prevents others from patenting improvements to existing inventions that are obvious in light of disclosed preferred embodiments. See Petherbridge & Rantanen, *supra* note 56, at 127-30.

⁹² Others have written about deterrents to best mode concealment that focus on punishing lawyers later found to have assisted clients with the prosecution of patent applications that conceal best mode. See Vacca, *supra* note 30, at 299-301; Sheppard, *supra* note 7. In this Essay, we focus instead on avenues that accused infringers and courts can use to enforce the best mode requirement ex post in litigation. We see this as the preferable solution for at least two reasons. First, inventors who wish to hold back best mode information may not share this intent with their counsel. Counsel who unknowingly prosecute deficient patents cannot be found to have acted unethically. Second, as a practical matter, best mode concealment will likely be uncovered only through discovery in patent litigation, and only about one percent of patents are ever litigated. See Love, *supra* note 61, at *8, n.38 (finding that roughly 1.1% of issued patents are litigated); Lemley, *Rational Ignorance at the Patent Office*, *supra* note 60, at

Section, we outline one possible avenue for pursuing best mode violators in litigation without defying the AIA's requirement that an undisclosed best mode will no longer render a patent "invalid or otherwise unenforceable."⁹³

First, for best mode to continue to play any role in litigation, accused infringers must have access to relevant discovery. Without the opportunity to probe inventors' understanding of their inventions prior to applying for patent protection, best mode violations will virtually always go undetected.⁹⁴ As we suggest above, though, this should be a very low hurdle to best mode enforcement in litigation. Routine discovery into possible inequitable conduct by the inventor already covers the same ground. Further, even if evidence supporting a traditional best mode defense is no longer admissible at trial, an applicant's knowledge of a best mode seems "reasonably calculated to lead to the discovery of admissible evidence" relevant to a claim of inequitable conduct (not to mention the equitable defenses mentioned below).⁹⁵

Second, if discovery reveals an undisclosed best mode, nothing in the AIA prohibits an accused infringer or court from looking to equitable defenses for a response. Before the development of the modern defenses of "inequitable conduct" and "patent misuse," courts in patent cases routinely applied instead the amorphous equitable doctrine of unclean hands,⁹⁶ which was specifically designed to flexibly combat sharp legal maneuvers.⁹⁷

1507 (estimating that only 1.5% of patents are litigated). Thus, viewed *ex ante*, the chances of discovery of an inventor's failure to disclose best mode are quite slim—and virtually nil without a motivation for their discovery in litigation.

⁹³ AIA § 15(a)(3)(A) (codified at 35 U.S.C.A. § 282(a)(3)(A) (West 2012)) (emphasis added). As another possible avenue, Sharon Sandeen has recently argued that trade secrecy claims for an invention's best mode may be preempted by federal law because such claims would conflict with the disclosure purpose of federal patent law. See Sharon K. Sandeen, *Be Careful What You Wish For: Trade Secrets and the America Invents Act (2012)* (unpublished manuscript), <http://www.stanford.edu/dept/law/ipsc/PDF/Sandeen,%20Sharon%20-%20Abstr%20act.pdf>.

⁹⁴ See *supra* notes 60-61 and accompanying text.

⁹⁵ See FED. R. CIV. P. 26(b)(1) ("Relevant information need not be admissible at the trial if the discovery appears reasonably calculated to lead to the discovery of admissible evidence.").

⁹⁶ See *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011) ("Inequitable conduct is an equitable defense to patent infringement that . . . evolved from a trio of Supreme Court cases that applied the doctrine of unclean hands to dismiss patent cases involving egregious misconduct."); see also Alan G. Greenberg, *Unclean Hands as a Defense to Patent Infringement*, 50 J. PAT. OFF. SOC'Y 12 (1968).

⁹⁷ See T. Leigh Anenson, *Limiting Legal Remedies: An Analysis of Unclean Hands*, 99 KY. L.J. 63, 64 (2010) ("[D]iscretionary dismissals for unclean hands . . . extend to any inequitable, unconscionable, or bad faith conduct that is

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Though it gradually fell out of fashion, we are aware of nothing that would prevent an accused infringer from invoking the doctrine now as a basis for a modicum of relief in a patent case short of invalidity or unenforceability of the patent in suit.⁹⁸ In fact, unclean hands seems perfectly suited for that purpose—the doctrine “extend[s] to any inequitable, unconscionable, or bad faith conduct that is connected to the case”⁹⁹ and grants courts a “wide range . . . of discretion in refusing to aid [an] unclean litigant.”¹⁰⁰

Relying on unclean hands, a court could at minimum dismiss a parallel trade secret claim brought in a case where the asserted trade secret should have been disclosed as the best mode in the inventor’s patent.¹⁰¹ Accused infringers can reasonably argue that it is unjust for courts to allow patentees to violate the best mode requirement and then improperly reap the benefits of their misconduct by turning to trade secrecy. Most importantly, because this remedy only limits the patentee’s recourse to trade secret protection without impacting her patent claims at all, it would not run afoul of the AIA’s restriction on best mode litigation defenses.

In fact, unclean hands could do even more work for an accused infringer facing a best mode violator by, for example, limiting the types of available relief in the underlying patent case. Patent claims are not completely sacrosanct under § 15 of the AIA; rather, it precludes only those responses to a best mode violation that would render the patent invalid or unenforceable. Thus, courts could presumably rely on unclean hands to limit a patentee’s equitable remedies, specifically injunctive relief, for failing to disclose best mode. It is long established that a plaintiff “cannot be awarded equitable remedy where it has gained an advantage by

connected to the case. For reasons of court and party protection, judges have invoked unclean hands to preclude an assortment of common law and statutory causes of action.”).

⁹⁸ In addition to serving as the underlying basis for both the inequitable conduct and patent misuse doctrines in patent law, *see id.*, unclean hands has also long been applied in copyright and trademark law. *See, e.g.*, *Supermarket of Homes, Inc. v. San Fernando Valley Bd. of Realtors*, 786 F.2d 1400, 1408 (9th Cir. 1986) (applying “[t]he defense of unclean hands by virtue of copyright misuse”); *Metro Publ’g., Ltd. v. San Jose Mercury News, Inc.*, 861 F. Supp. 870, 880-81 (N.D. Cal. 1994) (barring trademark infringement and dilution claims for unclean hands).

⁹⁹ *Anenson*, *supra* note 97, at 64.

¹⁰⁰ *Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co.*, 324 U.S. 806, 815 (1945).

¹⁰¹ *See Cataphote Corp. v. Hudson*, 422 F.2d 1290, 1295-96 (5th Cir. 1970) (“Protection of trade secrets is an equitable doctrine. Secrets obtained by wrongful means are not entitled to protection, and the ‘unclean hands’ doctrine may apply to deny the [rightsholder] protection.”).

fraud or deceit”¹⁰² and, in other contexts, courts have recognized that a patentee’s unclean hands will bar the issuance of an injunction.¹⁰³ This principle easily could be extended to prevent a preliminary or permanent injunction if the patentee has acted deceitfully in failing to disclose best mode.

* * *

Thus, while Congress may have unwittingly opened the door for best mode trade secrets, it may likewise have unwittingly left courts enough leeway to fashion equitable remedies that substantially remediate the problem. Though less effective than the litigation defenses eliminated by the AIA, these measures can help courts and accused infringers ensure that patent holders do not benefit from failure to disclose valuable information that rightfully belongs in the public domain after the patent's expiration, rather than locked away potentially indefinitely as a trade secret.

¹⁰² *Neo Gen Screening, Inc. v. TeleChem Int’l, Inc.*, 69 Fed. Appx. 550, 556 (3d Cir. 2003) (citing *Keystone Driller Co. v. General Excavator Co.*, 290 U.S. 240, 245 (1933)). Courts are, however, divided on whether unclean hands may limit damages. *See Anenson, supra* note 97, at 65.

¹⁰³ *See, e.g., Keystone Driller Co.*, 290 U.S. at 245 (holding unclean hands doctrine barred patent action for injunctive relief where plaintiff bribed third party to suppress evidence of possible use of invention prior to filing of plaintiff’s application for patent on same invention).