2009

Modernizing Patent Law's Inequitable Conduct Doctrine

Christopher A. Cotropia
University of Richmond, ccotropi@richmond.edu

MODERNIZING PATENT LAW'S INEQUITABLE CONDUCT DOCTRINE

By Christopher A. Cotropia[†]

TABLE OF CONTENTS

---

† Professor of Law, Intellectual Property Institute, University of Richmond School of Law. I would like to thank Dawn-Marie Bey, Jim Gibson, Mary Heen, Corinna Lain, Shari Motro, Michael Risch, Sean Seymore, and the participants at the 2007 Works in Progress Intellectual Property Colloquium at the American University Washington College of Law and a Richmond Law School Colloquium for their comments on an earlier draft of this Article.

I. INTRODUCTION

The inequitable conduct doctrine governs a patent applicant's duties before the United States Patent and Trademark Office ("USPTO"). The doctrine requires the inventor to disclose information to the USPTO that is relevant to the patentability—the utility, novelty, nonobviousness, and adequate disclosure—of the invention at issue.[1] The doctrine is pervasive, imposing a duty to disclose and be truthful in every correspondence with the USPTO.

The penalty for failing to discharge this duty is dramatic—coined an "atomic bomb" by one Federal Circuit judge.[2] A finding of inequitable conduct renders the entire patent unenforceable for the rest of the patent term, even when the undisclosed information was material to only a particular patent claim.[3] In some cases, the doctrine extends its reach to related patents, rendering them unenforceable as well.[4] The resulting unenforceability persists even if the invention actually meets the patent requirements.[5] The nature of the inequitable conduct doctrine makes it unique in patent law, in that it is an individual's failure to disclose—rather than an inherent trait of the claimed invention—that results in the denial of protection for the invention and other related patents.

Given the all-encompassing nature of the inequitable conduct doctrine and its death-penalty-like remedy, it is not surprising that the doctrine has garnered much attention and criticism since its inception. The Federal Circuit has gone out of its way on more than one occasion to criticize aspects of the doctrine.[6] There has been a tremendous amount of recent activity at

---

1. *See* Molins PLC v. Textron, Inc., 48 F.3d 1172, 1178 (Fed. Cir. 1995) (setting forth the three basic elements of inequitable conduct—materiality, non-disclosure, and intent); 37 C.F.R. § 1.56 (2008) (describing the type of information a patent applicant is under a duty to disclose).

2. *See* Aventis Pharma S.A. v. Amphastar Pharms., Inc., 525 F.3d 1334, 1349 (Fed. Cir. 2008) (Rader, J., dissenting).

3. *See* Kingsdown Med. Consultants, Ltd. v. Hollister, Inc., 863 F.2d 867, 877 (Fed. Cir. 1988) (en banc) ("When a court has finally determined that inequitable conduct occurred in relation to one or more claims during prosecution of the patent application, the entire patent is rendered unenforceable.").

4. If there is a pattern of inequitable conduct, unenforceability can transfer from one patent to another. *See* Consol. Aluminum Corp. v. Foseco Int'l, Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990).

5. *See* Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1365 (Fed. Cir. 2008) (noting that "the penalty for inequitable conduct is so severe, the loss of the entire patent even where every claim clearly meets every requirement of patentability").

6. Judges on the court have characterized the doctrine as "overplayed," *Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1454 (Fed. Cir. 1984), and labeled its

the Federal Circuit regarding the proper strength of the doctrine, resulting in enough of a conflict to prompt two judges over a five-month period to draft dissents addressing the doctrine in general.[7] One Federal Circuit judge recently expressly called for reconsideration of the doctrine by the whole court.[8] Patent practitioners constantly monitor and critique the development of the doctrine, partly because it focuses on "the person rather than the patent."[9] This attention by both judiciary and bar spurred two major patent system studies to discuss possible modifications to the inequitable conduct doctrine.[10] One study went so far as to suggest the elimination of the doctrine altogether.[11] Congress has also begun to pay attention, with essentially every draft of its recent patent reform legislation containing some amendment to the doctrine.[12] Even the USPTO has suggested rule changes that would affect the doctrine.[13]

Every facet of the patent system—Congress, the Federal Circuit, the USPTO, and patent practitioners—is concerned about the state of the inequitable conduct doctrine. No consensus exists, however, as to what is wrong with the doctrine and how it should be changed. As a result, the dis-

---

habitual assertion in litigation as "an absolute plague," *Burlington Indus., Inc. v. Dayco Corp.*, 849 F.2d 1418, 1422 (Fed. Cir. 1988).

7. *See* Praxair, Inc v. ATMI, Inc., 543 F.3d 1306, 1329–31 (Fed. Cir. 2008) (Lourie, J., dissenting); *Aventis*, 525 F.3d at 1349 (Rader, J., dissenting).

8. *See* Larson Mfg. Co. of S. Dakota, Inc. v. Aluminart Prods. Ltd., 559 F.3d 1317, 1342, 1344 (Fed. Cir. Mar. 18, 2009) (Linn., J., concurring) (concluding that the recent inequitable conduct precedent "has significantly diverged from the Supreme Court's treatment of inequitable conduct" and "the time has come for the court to review the issue en banc").

9. 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, 279 (1997).

10. *See* Fed. Trade Comm'n, To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy 12–13 (2003), *available at* http://www.ftc.gov/os/2003/ 10/innovationrpt.pdf; Nat'l Research Council, A Patent System for the 21st Century 121–23 (Stephen A. Merrill et al. eds., 2004).

11. *See* NAT'L RESEARCH COUNCIL, *supra* note 10, at 123.

12. *See, e.g.*, Patent Reform Act of 2007, H.R. 1908, 110th Cong. § 123 (2007); Patent Reform Act of 2006, S. 3818, 109th Cong. § 5 (2006); Patent Reform Act of 2005, H.R. 2795, 109th Cong. § 136 (2005).

The 2009 legislative draft pending before the Senate does not contain any inequitable conduct language. *See* Patent Reform Act of 2009, S. 515, 111th Cong. (2009). Senator Orin Hatch, however, is still pushing for inequitable conduct reform to be included in the legislation. *See* 155 CONG. REC. S2715 (daily ed. Mar. 3, 2009) (statement of S. Hatch).

13. *See* Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808 (July 10, 2006) (to be codified at 37 C.F.R. pt. 1) (proposing to change the IDS requirements to include relevancy statements, in addition to other requirements).

jointed discussion has created inconsistency at the legislative level—with reform proposals driven by whichever critique Congress is focused on in a given session.

Running in parallel with the conversation about the inequitable conduct doctrine is a broader discussion of patent quality. One of the major focuses of the patent reform movement is to ensure that the USPTO issues only those patents that claim truly patentable inventions.[14] The number of patent applications is rising exponentially, the time a patent examiner can spend examining them is decreasing, and the quality of patent applications and the information available for examination is dropping.[15] All of these factors cause more patents to issue that, in actuality, should not be issued. The resulting "bad" patents—patents that fail to meet the patentability requirements—are harmful, creating detrimental societal costs via hold-ups and the in terrorem effects that invalid patents create.[16]

These two topics—the inequitable conduct doctrine and patent reform in general—are being addressed with increasing frequency by academics. Academics have written articles on the patent examination process, ways to reform it, and the negative impact of issuing bad patents.[17] Likewise, many scholars have written articles specifically on the inequitable conduct doctrine.[18] However, this scholarship has failed to fully link these two areas. As a result, it has failed to engage in two basic, interrelated exercises that would greatly assist the discourse on the inequitable conduct doctrine and patent reform in general.

First, no one has attempted a comprehensive, theoretical analysis of how the inequitable conduct doctrine as a whole affects patent applicants,

---

14. *See* Stuart Minor Benjamin & Arti K. Rai, *Who's Afraid of the APA? What the Patent System Can Learn From Administrative Law*, 95 GEO. L.J. 269, 270, 276–78 (2007) ("In the last few years, widespread dissatisfaction with the patent system--and particularly with the perceived poor quality of issued patents--has spurred a broad range of groups to call for reform.").

15. *See* Doug Lichtman & Mark A. Lemley, *Rethinking Patent Law's Presumption of Validity*, 60 STAN. L. REV. 45, 46–47 (2007) (identifying these problems as the cause of the USPTO's "mistakes" while reviewing patent applications).

16. *See* Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 MINN. L. REV. 101, 113 (2006) ("[S]ome invalid patents can deter market entry and decrease consumer welfare even without active enforcement.").

17. *See, e.g.*, John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 305 (2001) ("By awarding prior art informants with a bounty assessed against applicants, the Patent Office can restore order to the patent system and reduce its social costs.").

18. *See, e.g.*, Robert J. Goldman, *Evolution of the Inequitable Conduct Defense in Patent Litigation*, 7 HARV. J.L. & TECH. 37 (1993) (tracing "the development of the law concerning inequitable conduct from the beginning of the patent system").

patent examination, and potential inventors.[19] Performing a fundamental analysis of the doctrine would provide a framework by which proposed changes could be tested. Such an analysis would also flesh out how the doctrine plays a significant role in the patent system overall.

Second, and related, almost all of the scholarship on the inequitable conduct doctrine has kept the discussion tied to its equitable roots, focusing on the doctrine as an ethical tool.[20] These discussions are of little help when the specific criticisms of the doctrine are not morally focused. Furthermore, any proposed change to the doctrine needs to be considered in the context of broader reforms rooted in the utilitarian theory that underlies American intellectual property law. Thinking on the inequitable conduct doctrine needs to be modernized and framed in the same utilitarian terms that form the foundation for the patent system. This Article attempts to fill these scholarly holes and answer the question as to how the doctrine should be changed and used to improve the patent system.

This Article's main finding is that the inequitable conduct doctrine has the ability to improve patent quality as long as the inherent tendency to overcomply with the doctrine by overloading the USPTO with information is kept in check. The Article reaches this conclusion by proceeding in five parts. Part II describes the current thinking on the inequitable conduct doctrine, with particular focus on the major critiques of the doctrine and proposed legislative and administrative responses. Part III of the Article begins the construction of a fundamental, conceptual framework for the doctrine by explaining how it impacts both patent quality and patent examination. If properly calibrated, the doctrine can improve both the quality of the patent application (by increasing the patent attorney's knowledge and

19. A majority of the articles are sound, but focus on specific parts of the doctrine, particular proposed statutory changes and individual Federal Circuit cases. *See, e.g.*, David Hricik, *Where the Bodies Are: Current Exemplars of Inequitable Conduct and How to Avoid Them*, 12 TEX. INTELL. PROP. L.J. 287, 289 (2004) (discussing, in detail, the various fact patterns that have supported a finding of inequitable conduct); James Cronin, Comment, *Inequitable Conduct and the Standard of Materiality: Why the Federal Circuit Should Use the Reasonable Patent Examiner Standard*, 50 ST. LOUIS U. L.J. 1327 (2006) (discussing the materiality requirement of the inequitable conduct doctrine).

20. One commentator even affirmatively dismissed the linkage between the doctrine and patent quality, concluding that reforms should focus on "punishing bad behavior on the part of applicants." Cronin, *supra* note 19, at 1360. Articles have mentioned the doctrine's possible impact on patent quality. *See, e.g.*, Kevin Mack, Note, *Reforming Inequitable Conduct to Improve Patent Quality: Cleansing Unclean Hands*, 21 BERKELEY TECH. L.J. 147, 166–69 (2006). These articles mention this linkage only in passing, failing to fully develop the discussion conceptually. For example, no article has discussed the huge potential for over compensation under the doctrine, a significant aspect of the doctrine's impact on patent quality developed in this Article. *See infra* Parts IV, V.

care) and the quality of the examination (by acting as an information producer and verifier).

The doctrine's potential impact is not all positive. The tremendous incentive for applicants to overcomply can actually decrease patent quality. Part IV completes the conceptual framework by detailing how the doctrine, through the extreme legal and extra-legal costs it currently imposes, incentivizes inventors and, in particular, patent attorneys to overcomply by submitting all information, regardless of relevance, to the USPTO. Part V explains how this overcompliance negatively affects patent examination and the patent system by causing information overload that hampers the USPTO's ability to operate effectively and by creating high compliance costs that price inventors out of the patent system. Finally, in Part VI, the Article uses this framework to suggest changes that maintain the positive effects of the doctrine on patent quality while minimizing overcompliance.

II. CURRENT THINKING ON THE INEQUITABLE CONDUCT DOCTRINE

Before a conceptual framework regarding the inequitable conduct doctrine can be developed, the basic process of obtaining a patent, the current contours of the inequitable conduct doctrine, and the debate surrounding it need to be detailed. This Part begins with a description of the patent prosecution process. It then details the three requirements of the inequitable conduct doctrine—materiality, disclosure, and intent—and available remedies. This Part concludes by describing the popular critiques of the doctrine, the proposed legislative responses, and the major disconnects in this discourse. Those familiar with the patenting process and the inequitable conduct doctrine can skip directly to Section II.C.

A. Basics of Patent Prosecution

To patent an invention in the United States, an inventor must file a patent application with the USPTO. The patent application contains a textual and graphical description of the invention called the specification. The specification includes general statements regarding the technical background of the invention, the problem it is trying to solve, and some specific examples—embodiments—of the invention.[21] The patent application

21. *See* 35 U.S.C. § 112, para. 1 (2006) (reciting the written description, enablement, and best mode requirements for the specification); Christopher A. Cotropia, *Patent Claim Interpretation and Information Costs*, 9 LEWIS & CLARK L. REV. 57, 68–69 (2005) (discussing the various kinds of information patent law requires the inventor put in the patent's specification); 37 C.F.R. §§ 1.71, 1.77(b) (2008) (indicating the various types of information the specification should include).

also includes a set of claims. Each claim is a single sentence that defines the exact invention the inventor wishes to protect.[22] The application can either be filed by the inventor herself or by a patent attorney or agent, who must be a member of the USPTO bar and represents the inventor.[23]

Once filed, the application is given to a patent examiner assigned to the invention's technological area. The examiner reviews each claim to determine whether it meets the requirements for patentability—whether the claim defines an invention that is useful, novel, and nonobvious, and whether the specification adequately describes and enables the claimed invention.[24] To make this determination, the examiner must first gain an understanding of the exact scope of the claims. From there, the examiner searches for information—referred to as "prior art"—that might render the claims invalid.[25] This information can come in many forms, such as scien-

---

22. *See* 35 U.S.C. § 112, para. 2; Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S. 336, 339 (1961) ("[T]he claims made in the patent are the sole measure of the grant . . . ."); Christopher A. Cotropia, *Patent Claim Interpretation Methodologies and Their Claim Scope Paradigms*, 47 WM. & MARY L. REV. 49, 61–62 (2005).

23. 37 C.F.R. § 1.31 (2008). For the purposes of this Article, patent attorneys and patent agents, those who are members of the USPTO bar but not lawyers, are referred to collectively as "patent attorneys." Most patent applicants are represented by patent attorneys or patent agents—few go "pro se." *See* Martin B. Schwimmer, *Domain Names and Everything Else: Trademark Issues in Cyberspace*, *in* UNDERSTANDING BASIC TRADEMARK LAW 1998, at 263, 268 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. G0-001S, 1998) ("Finally, the 'constituency' of the PTO, namely patent and trademark applicants, are represented, for the most part, by attorneys who, as members of bar committees, communicate with the PTO.").

24. 35 U.S.C. §§ 101–103, 112 (2006) (setting forth the requirements for patentability); 37 C.F.R. § 1.104(c) (2008).

The USPTO is currently forced to examine applications under extreme time constraints and in the face of a significant backlog of pending applications. *See* Eric B. Chen, *Conflicting Objectives: The Patent Office's Quality Review Initiative and the Examiner Count System*, 10 N.C. J. L. & TECH. 28, 30 (2009) ("Despite this success, several challenges continue to plague the USPTO, namely the backlog of unexamined patent applications, concerns over examiner attrition, and the increasing volume of continuing applications. . . ."). This situation leads to long delays between the filing of a patent application and an examiner's action on that application. *See* Gary C. Ganzi, *Patent Continuation Practice and Public Notice: Can They Coexist?*, 89 J. PAT. & TRADEMARK OFF. SOC'Y 545, 563 (2007) ("However, with present application pendency delays, a typical patent application does not usually even receive the benefit of a first examiner office action at the USPTO within the publication time of eighteen months after filing."). These circumstances have import for later analysis in this Article. *See infra* Section III.A.

25. Information relevant to examination, while described in all subsections of 35 U.S.C. § 102 (2006), falls into two basic categories, both defining the universe of "prior art." The first set of prior art is that information produced by those other than the inventor prior to the date of the invention. *See, e.g.*, § 102(a). The second is art produced by any-

tific articles, general publications, other United States patents or patents issued by other countries, and general public knowledge or use.[26]

The applicant can submit potential prior art to the USPTO. Such art may be cited in the background section of the patent application to give context to the claimed invention.[27] The information is usually submitted via an information disclosure statement ("IDS").[28] Depending on the timing of the submission of the IDS, the applicant may have to request another round of examination to give the examiner time to consider the submitted information.[29]

The examiner compares the prior art to the application's claims to determine whether the claims are novel and nonobvious.[30] The examiner also looks to see if the specification adequately describes and enables the claimed invention.[31] Based on the results of this initial examination, the examiner issues an "office action" to the applicant describing the examiner's findings and identifying which claims she believes to be and not to be patentable and the reasons for this conclusion.[32]

---

one—including the inventor—more than one year before the patent application's filing. *See, e.g.*, § 102(b).

26. *See, e.g.*, §102(a)–(b) (detailing these different types of prior art).

27. 37 C.F.R. § 1.77(e) (2008).

28. 37 C.F.R. §§ 1.97, 1.98 (2008) (detailing the filing procedure of an IDS and its content). Prior art may also be disclosed in the patent specification itself. *See, e.g.*, 37 C.F.R. § 1.71(b) (2008) (indicating that applicant should distinguish her invention "from what is old").

29. *See* 37 C.F.R. § 1.98(b)–(d) (listing the timing requirements for filing a proper IDS); 35 U.S.C. § 132(b) (2006) (establishing a method for continuing examination—a request for continued examination ("RCE")).

30. The examiner looks to see if the claims have already been disclosed in the prior art—that is, whether they are not novel or statutorily barred. *See* 35 U.S.C. § 102; *In re* Paulsen, 30 F.3d 1475, 1478–79 (Fed. Cir. 1994) ("A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference."). The examiner also looks to see if pieces of the prior art would have been combined together to duplicate an application's claim—that is, whether the claim is obvious. *See* 35 U.S.C. § 103 (2006); KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 405 (2007). The Court in *KSR* stated:

> Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'

Id.

31. 35 U.S.C. § 112, para. 1 (2006); *In re* Fisher, 421 F.3d 1365, 1378 (Fed. Cir. 2005).

32. 35 U.S.C. § 151 (2006) (detailing the issuance of a patent).

The applicant responds to the office action by rebutting the examiner's analysis, amending the patent's claims to overcome the examiner's objections, or canceling patent claims altogether.[33] The examiner then reviews the applicant's response and either agrees and allows the claims or does not and maintains the rejections. The examination ends when either some of the patent claims are allowed or the patent is abandoned altogether. Once a patent is issued, it may be used to exclude others from practicing the claimed invention.[34] The patent claims that the USPTO concludes are patentable enjoy a strong presumption of meeting the patentability standards, requiring a challenger to prove by clear and convincing evidence that the claims are invalid.[35]

This whole process is secret, with the application and the correspondence only being publicly disclosed when and if the patent issues (or sooner if the applicant so elects).[36] The process is ex parte with the examiner representing the public's interest and is meant to be non-adversarial.[37] The public may comment on or submit art relating to a pending application,[38] but these options are rarely used.[39] This makes the patent examiner, the reviewing authorities within the USPTO, and the reviewing courts incredibly important to the patent process. They are essen-

33. 35 U.S.C. § 132(a) (2006) (noting that examination continues when "the applicant persists in his claim for a patent, with or without amendment").

34. 35 U.S.C. § 271 (2006).

35. *See* 35 U.S.C. § 282 (2006); Am. Seating Co. v. USSC Group, Inc., 514 F.3d 1262, 1267 (Fed. Cir. 2008) (noting that the presumption of validity can be overcome with only "clear and convincing evidence"). This strong presumption makes examination incredibly important. *See* Lichtman & Lemley, *supra* note 15, at 47 (concluding that the presumption makes "issuance mistakes hard to reverse").

36. The application, and all related correspondence, is published eighteen months after filing, unless the applicant requests no such publication. 35 U.S.C. § 122(b) (2006).

37. *See* Hercules Inc. v. Exxon Corp., 434 F. Supp. 136, 152 (D. Del. 1977) ("The prosecution of an application before the Patent Office is not an adversary, but an ex parte proceeding."). The USPTO even views patent applicants as "customers." *See* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS, AND WHAT TO DO ABOUT IT 11, 20 (2004).

38. *See* 37 C.F.R. § 1.291 (2008) (describing the protest procedure and allowing prior art to be filed along with a protest).

39. Andrew Kopelman, Note, *Addressing Questionable Business Method Patents Prior to Issuance: A Two-Part Proposal*, 27 CARDOZO L. REV. 2391, 2413–14 (2006) (indicating that most do not use the protest mechanism because it is difficult to discover a pending application).

tially the only gatekeepers to the initial and very important determination that an invention is worthy of twenty years of exclusivity.[40]

B. Requirements of the Inequitable Conduct Doctrine

The current inequitable conduct doctrine is judicially-created and impacts the entire patent prosecution process. The doctrine focuses on the patent application and related correspondence between the applicant and the USPTO during patent prosecution. It is comprised of three basic elements: materiality, intent, and disclosure. Specific remedies accompany a finding of inequitable conduct.

1. Materiality

The doctrine focuses on the disclosure of material information. Information is material if it is relevant to the patentability of the claimed invention being examined.[41] The standard for materiality is articulated in a USPTO regulation, 37 C.F.R. § 1.56 (Rule 56).[42] The most recent version of Rule 56 deems information material if

> (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or (2) It refutes, or is inconsistent with, a position the applicant takes in: (i) Opposing an argument of

40. *See* 35 U.S.C. § 131 (2006) (granting authority to the USPTO to examine applications and issue patents); 28 U.S.C. § 1295(a)(4)(A) (2006) (giving the Federal Circuit appellate jurisdiction over appeals from the Board of Appeals and Patent Interferences (BPAI)); 35 U.S.C. § 134 (2006) (authorizing the appeal from a final rejection to the BPAI). An applicant can, instead of appealing to the Federal Circuit, appeal a BPAI ruling to the United States District Court for the District of Columbia, whose decision is then appealed to the Federal Circuit. 35 U.S.C. § 145 (2006).

41. Dayco Prods., Inc. v. Total Containment, Inc., 329 F.3d 1358, 1363 (Fed. Cir. 2003) ("For many years this court held that materiality for purposes of an inequitable conduct determination required a showing that 'a reasonable examiner would have considered such prior art important in deciding whether to allow the parent application.'"). *Id.* at 1362 ("Information did not need to be prior art in order to be material, but 'instead embrace[d] any information that a reasonable examiner would substantially likely consider important in deciding whether to allow an application to issue as a patent.'") (quoting Akron Polymer Container Corp. v. Exxel Container, Inc., 148 F.3d 1380, 1382 (Fed. Cir. 1998)).

42. Purdue Pharma L.P. v. Endo Pharm. Inc., 438 F.3d 1123, 1129 (Fed. Cir. 2006) ("In evaluating materiality, this court has consistently referred to the standard set forth in PTO Rule 56."); 37 C.F.R. § 1.56(b) (2008). Rule 56 does not supplant the materiality standard articulated by the courts, it merely informs the standard. *See* Digital Control Inc. v. Charles Mach. Works, 437 F.3d 1309, 1314–16 (Fed. Cir. 2006).

> unpatentability relied on by the Office, or (ii) Asserting an argument of patentability.[43]

The materiality standard does not create a "but for" test, in which the information needs be disclosed only if it would actually render a pending patent claim invalid.[44] Instead, materiality is broader, requiring disclosure of information that would merely establish a prima facie case of invalidity that may be rebuttable.[45]

2. Intent

The non-disclosure of material information must be intentional to rise to the level of inequitable conduct.[46] An omission or misrepresentation of material information is considered intentional if the applicant actually intended to deceive or mislead the USPTO.[47] Gross negligence is not enough.[48] Circumstantial evidence can be used to prove the relevant party's intent.[49]

---

43. 37 C.F.R. § 1.56(b). This new standard, compared to the earlier "reasonable examiner" standard, "was not intended to constitute a significant substantive break with the previous standard." Hoffmann-La Roche, Inc. v. Promega Corp., 323 F.3d 1354, 1368 n.2 (Fed. Cir. 2003).

44. *See* Am. Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1362–63 (Fed. Cir. 1984) (dismissing an objective "but for" test that would have required a prerequisite finding of invalidity to establish materiality).

45. *See* Monsanto Co. v. Bayer Bioscience N.V., 514 F.3d 1229, 1237 (Fed. Cir. 2008).

46. *See* Eli Lilly & Co. v. Zenith Goldline Pharm., Inc., 471 F.3d 1369, 1381 (Fed. Cir. 2006) ("[T]he trial court must also determine whether the evidence shows a threshold level of intent to mislead the PTO.").

47. *See* Ferring B.V. v. Barr Labs., Inc., 437 F.3d 1181, 1190 (Fed. Cir. 2006) ("Even if an omission is found to be material, the omission must also be found to have been made with the intent to deceive.").

48. *See* Kingsdown Med. Consultants, Ltd. v. Hollister Inc., 863 F.2d 867, 872 (Fed. Cir. 1988) (en banc). The Federal Circuit noted:

> We adopt the view that a finding that particular conduct amounts to 'gross negligence' does not of itself justify an inference of intent to deceive; the involved conduct, viewed in light of all the evidence, including evidence indicative of good faith, must indicate sufficient culpability to require a finding of intent to deceive.

Id. at 876.

49. *See* Hoffman-La Roche Inc. v. Lemmon Co., 906 F.2d 684, 688 (Fed. Cir. 1990). The use of circumstantial evidence is one of the main areas of recent disagreement amongst Federal Circuit judges. Intent needs to be independently proven. *See* Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1366 (Fed. Cir. 2008) ("[W]e have emphasized that 'materiality does not presume intent, which is a separate and essential component of inequitable conduct.'"). And many agree that finding direct evidence is

3. *Disclosure*

The doctrine requires the disclosure of material information.[50] A failure to disclose can occur in two instances—by omission or misrepresentation.[51] Omission is where the patentee fails to disclose material information in her filings with the USPTO. The typical non-disclosure by omission situation involves an applicant who fails to submit information which is in her possession, qualifies as prior art, and is material to one or more of the application's claims.[52] Misrepresentation, in contrast, occurs when the patentee does disclose information to the USPTO, but misrepresents a material aspect of the disclosed information.[53] Misrepresentation can also be

---

very unlikely. *Id.* Therefore, the question becomes what evidence is proper circumstantial evidence of intent, *id.*, and how does a court weigh such circumstantial evidence. *Compare id.* at 1366–67 (noting that a finding of intent based on circumstantial evidence must be "the single most reasonable inference"), *with* Praxair, Inc v. ATMI, Inc., 543 F.3d 1306, 1315 (2008) (stating that intent can be inferred if materiality is high, the applicant knew or should have known of the materiality, and the applicant failed to "come forward with any credible good faith explanation" for nondisclosure). This dispute over the standard for intent is important for the prescriptive portion of this Article. *See infra* Section VI.A.2.

50. 37 C.F.R. § 1.56(a) (2008). The regulation provides:

> Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section.

Id.

51. *See* Pharmacia Corp. v. Par Pharm., Inc., 417 F.3d 1369, 1373 (Fed. Cir. 2005) ("[I]nequitable conduct includes affirmative misrepresentation of a material fact, failure to disclose material information, or submission of false material information, coupled with an intent to deceive." (quoting Molins PLC v. Textron, Inc., 48 F.3d 1172, 1178 (Fed. Cir. 1995))).

52. The failure to submit an earlier chemistry report and previous test data indicating that a prior canola oil formulation exhibited similar properties to the claimed canola oil formula is an example of material non-disclosure. Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1365–66 (Fed. Cir. 2007).

53. The facts of *Frazier v. Roessel Cine Photo Tech, Inc.*, 417 F.3d 1230 (Fed. Cir. 2005), provide a good example of a material misrepresentation. The patent at issue in *Frazier* claimed a "Z lens" that provided for an increased depth of field—allowing both a close-up object and a distance background to both appear in focus at the same time. *Id.* at 1234–36. During prosecution, the applicant submitted a videotape to help demonstrate the superiority of the invention over the prior art. *Id.* This submission was deemed a material misrepresentation because some of the most striking examples of depth of field in the video were from the unlabeled use of a "L-shaped lens," not the claimed Z lens. *Id.*

more blatant, with the application simply submitting false information to the USPTO.[54] Again, there is disclosure, but the truth is not disclosed.

The inequitable conduct doctrine does not require the disclosure of information that is material if it is cumulative in light of information already provided to the USPTO.[55] Cumulative information is information already before the USPTO, albeit from a different source. Thus, not providing the USPTO with cumulative information is not, in fact, a failure to disclose.[56]

The duty to disclose imposed by the doctrine applies to more than just the inventor. Rule 56 extends the duty to all "[i]ndividuals associated with the filing or prosecution of [the] patent application."[57] This includes the attorney or agent who prepares or prosecutes the patent application.[58] The duty also applies to those who are "substantively involved" and associated with the inventor or her employer.[59]

The duty to disclose does not currently include a duty to search. The inequitable conduct doctrine only requires the applicant to disclose material information within her possession or the possession of those other individuals associated with prosecution. The duty does not, however, compel an applicant to actively search for additional prior art and, in turn, disclose it to the USPTO.[60]

---

54. *See* Digital Control, Inc. v. Charles Mach. Works, 437 F.3d 1309, 1316 (Fed. Cir. 2006) (concerning potentially false statements by the inventor to the USPTO about the use of a prior art boring tool).

55. Honeywell Int'l Inc. v. Universal Avionics Sys. Corp., 488 F.3d 982, 1000 (Fed. Cir. 2007) ("Information cumulative of other information already before the Patent Office is not material."); 37 C.F.R. § 1.56(b) (2008) ("[I]nformation is material to patentability when it is not cumulative to information already of record or being made of record in the application . . . .").

56. *See* Adenta GmbH v. OrthoArm, Inc., 501 F.3d 1364, 1374 (Fed. Cir. 2007) (agreeing with a district court's finding of no inequitable conduct based, in part, on the applicant's belief that the undisclosed information was cumulative).

57. *See* 37 C.F.R. § 1.56(c) (2008).

58. *Id.* § 1.56(c)(2).

59. *Id.* § 1.56(c)(3) ("Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application."). For example, a senior scientist who is not a listed inventor, but worked with the inventor on the invention's underlying chemistry, is under a duty to disclose. *See* Sython IP, Inc. v. Pfizer Inc., 472 F. Supp. 2d 760, 775 (E.D. Va. 2007) (identifying at least six individuals under a duty to disclose).

60. *See* FMC Corp. v. Hennessy Indus., Inc., 836 F.2d 521, 526 n.6 (Fed. Cir. 1987) ("As a general rule, there is no duty to conduct a prior art search, and thus there is no duty to disclose art of which an applicant could have been aware."). There have been recent cases that, arguably, establish a duty to inquire in limited circumstances as to possible prior art. *See* Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1380

4. Remedy

The inequitable conduct doctrine is available as an affirmative defense to allegations of patent infringement.[61] An alleged infringer must prove, by clear and convincing evidence, that the applicant intentionally failed to disclose information material to the invention's patentability during patent prosecution.[62] If inequitable conduct is established, all the patent's claims are rendered unenforceable.[63] Depending on the circumstances, inequitable conduct with respect to a particular patent can infect and render unenforceable other related patents.[64] The doctrine has a much larger effect than a finding of invalidity for non-novelty or obviousness, which simply renders the particular claim in question invalid.[65]

C. Recent Critiques of the Doctrine

Since its inception,[66] the doctrine has garnered a tremendous amount of attention and criticism from the bar and the judiciary. The Federal Circuit has often noted the importance and seriousness of the doctrine.[67] Some Federal Circuit judges have gone out of their way to criticize the

(Fed. Cir. 2001) ("Where an applicant knows of information the materiality of which may so readily be determined, he or she cannot intentionally avoid learning of its materiality, even through gross negligence . . . ."). The court in *Brasseler* continued, however, noting that "[t]he mere possibility that material information may exist will not suffice to give rise to a duty to inquire . . . ." *Id.* at 1382.

61. *See* 35 U.S.C. § 282(1) (2006) (indicating that an alleged infringer can plead "unenforceability").

62. *See* GFI, Inc. v. Franklin Corp., 265 F.3d 1268, 1273–74 (Fed. Cir. 2001).

63. *See* Kingsdown Med. Consultants, Ltd. v. Hollister, Inc., 863 F.2d 867, 877 (Fed. Cir. 1988) (en banc).

64. *See* Consol. Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990).

65. *See* 35 U.S.C. § 282(2)–(3) (2006); Amazon.com, Inc. v. Barnesandnoble.com, Inc., 239 F.3d 1343, 1351 (Fed. Cir. 2001) (indicating that validity is determined on a claim-by-claim basis).

66. Many point to the Supreme Court's decision in *Precision Instrument Manufacturing Co. v. Automotive Maintenance Machinery Co.*, 324 U.S. 806 (1945), as the beginning of the inequitable conduct doctrine. Mack, *supra* note 20, at 152. The Supreme Court in *Precision Instrument* grounded inequitable conduct in the doctrine of unclean hands. *Precision Instrument*, 324 U.S. at 815–16.

67. *See Star Scientific*, 537 F.3d at 1366 ("[T]he severity of the penalty has not changed, and thus courts must be vigilant in not permitting the [inequitable conduct] defense to be applied too lightly.").

current use of the doctrine—viewing it as "overplayed"[68] and labeling its habitual assertion in litigation as "an absolute plague."[69]

The doctrine gets as much attention, if not more, from patent practitioners. Almost every patent Continuing Legal Education ("CLE") program includes a discussion of the doctrine.[70] The Practicing Law Institution ("PLI") issues multiple articles a year on recent developments in inequitable conduct law.[71] Even blog posts detailing recent inequitable conduct cases inevitably receive numerous comments from patent attorneys, postulating (and complaining) as to the breadth of the decision's impact.[72] This attention by practitioners is not surprising given that the doctrine focuses on "the person rather than the patent" by reviewing the patent attorney's actions to determine whether they engaged in inequitable conduct.[73]

This extensive attention from the courts and the bar has pushed the inequitable conduct doctrine into the general discussion about patent reform. Since early 2000, many commentators have focused on perceived shortcomings of the United States patent system. Highly publicized reports issued by the Federal Trade Commission ("FTC") in 2003 and the National Research Council ("NRC") in 2004 discussed target areas for reform.[74] Included in these discussions is the inequitable conduct doctrine. The ine-

---

68. Kimberly-Clark Corp. v. Johnson & Johnson, 745 F.2d 1437, 1454 (Fed. Cir. 1984).

69. *See* Burlington Indus. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed. Cir. 1988). This critique has continued in recent case law. *See* Aventis Pharma S.A. v. Amphastar Pharm., Inc., 525 F.3d 1334, 1349 (Fed. Cir. 2008) (Rader, J., dissenting) ("[I]nequitable conduct has taken on a new life as a litigation tactic.").

70. *See, e.g.*, American Intellectual Property Law Association, AIPLA 2008 Spring Meeting Schedule: Friday Schedule (May 16, 2008), *available at* http://www.aipla.org/Content/ContentGroups/Meetings_and_Events1/Spring_Meetings/20086/Program-Friday.pdf; University of Texas Continuing Legal Education, UTCLE 12th Annual Advanced Patent Law Institute, Program for Patent Law – Austin, http://www.utcle.org/ conference_overview.php?conferenceid=763 (last visited Feb. 4, 2009).

71. *See, e.g.*, Roxana H. Yang, *Duty of Disclosure & Inequitable Conduct—Who, What, When, & How?*, *in* ADVANCED PATENT PROSECUTION WORKSHOP 2007: CLAIM DRAFTING & AMENDMENT WRITING, at 557, 562 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 11375, 2007).

72. *See, e.g.*, Posting of Dennis Crouch to Patently-O, What a Mess: Inequitable Conduct Based on Failure to Submit, http://www.patentlyo. com/patent/2007/05/what_a_mess _ine.html (May 21, 2007 22:40 CST) (containing over a 110 comments to a post describing the holding in *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.*, 487 F.3d 897 (Fed. Cir. 2007)).

73. Chisum, *supra* note 9, at 279.

74. FED. TRADE COMM'N, *supra* note 10; NAT'L RESEARCH COUNCIL, *supra* note 10.

quitable conduct doctrine has even garnered Congress's attention. Over the past four years, almost every draft of patent reform legislation contains some amendment to the doctrine.[75] Even the USPTO has proposed a new regulation concerning the applicant's duties regarding information submissions.[76]

From this discourse, two main critiques have emerged. One, supported by the NRC report, is that the doctrine is asserted too frequently by defendants and creates exorbitant litigation costs.[77] The second critique, discussed in the FTC report, focuses on the doctrine's failure to impose additional duties on the applicant, such as a duty to search or at least provide relevancy statements with regards to what is submitted.[78] Each noted problem has generated its own legislative solution, with the latter also prompting a proposed regulation by the USPTO. These two criticisms, the previously proposed legislation, and USPTO responses are discussed in detail below.

1. Creation of Unnecessary Litigation Costs and the Legislative Response

By recent estimates, the inequitable conduct defense is asserted in around one fourth of all patent cases filed.[79] More than one member of the

75. *See, e.g.*, Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007); Patent Reform Act of 2006, S. 3818 § 5, 109th Cong. (2006); Patent Reform Act of 2005, H.R. 2795 § 5, 109th Cong. (2005). The 2009 version of the Patent Reform Act does not modify the inequitable conduct doctrine, but there is still significant pressure to make statutory changes to the doctrine before the Act is adopted. *See supra* note 12.

76. *See* Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808 (July 10, 2006) (to be codified at 37 C.F.R. pt. 1) (proposing to change the IDS requirements to include relevancy statements, in addition to other requirements).

77. *See* NAT'L RESEARCH COUNCIL, *supra* note 10, at 123.

78. *See* FED. TRADE COMM'N, *supra* note 10, at 12–13. The contents of a relevancy statement can vary, but usually includes some statement by the applicant as to how the submitted art is relevant to the patentability of one or more of the application's claims. *See, e.g.*, Mack, *supra* note 20, at 149.

79. *See Id.* at 156 ("Accused infringers, however, continue to plead the defense with regularity. Table 1 illustrates this regularity; from 2000 to 2004, an inequitable conduct adjudication appeared in 16% to 35% of all reported patent opinions."); Katherine Nolan-Stevaux, Note, *Inequitable Conduct Claims in the 21st Century: Combating the Plague*, 20 BERKELEY TECH. L.J. 147, 160–62 (2005) ("[I]t appears that parties frequently allege inequitable conduct where courts find no evidence of it.").

judiciary has viewed this rate as inappropriately high.[80] The NRC report and other commentators concur.[81]

This rate of pleading inequitable conduct is problematic because litigation of inequitable conduct claims is particularly costly. Most of the high cost comes from the subjective element of the doctrine—intent.[82] The circumstantial nature of most intent evidence makes summary judgment particularly difficult. Moreover, the deposition of the prosecuting attorney who handled the application is almost always necessary in the inequitable conduct inquiry.[83] Such depositions are uniquely costly because they are littered with complex attorney-client privilege issues that generate their own legal questions which demand additional attorney and judicial resources to resolve.[84]

Introducing inequitable conduct into the litigation also diverts attention from the heart of the dispute—the validity and infringement of the patent at issue. While inequitable conduct does concern the patent, the actual validity of the patent is irrelevant to the doctrine. Inequitable conduct inquiries turn into satellite litigations where the effort expended has little spillover benefits for other parts of the litigation. The time and energy spent on the defense may detract from the core issues and hamper their complete and correct resolution.[85] For these reasons, many push for reforms to lower the rate of pleading and reduce the cost of litigating inequitable conduct.

---

80. Kimberly-Clark Corp. v. Johnson & Johnson, 745 F.2d 1437, 1454; Burlington Indus., Inc. v. Dayco Corp., 849 F.2d 1418, 1422 (Fed. Cir. 1988).

81. *See* NAT'L RESEARCH COUNCIL, *supra* note 10, at 122 ("Another major complaint is that the defense is asserted too freely."); Nolan-Stevaux, *supra* note 79, at 148 ("The practice of asserting a defense of inequitable conduct, regardless of the merits of the defense in a given case, has reached the breaking point.").

82. See Doug Harvey, Comment, Reinventing the U.S. Patent System: A Discussion of Patent Reform Through an Analysis of the Proposed Patent Reform Act of 2005, 38 TEX. TECH. L. REV. 1133, 1152 (2006) ("Due to its subjective nature, the inequitable conduct defense is time consuming and expensive, and the abuse of the defense adds to the delays and increases the costs of litigation.").

83. Robert C. Faber, *Prosecution Ethics*, *in* ADVANCED PATENT PROSECUTION WORKSHOP 2008: CLAIM DRAFTING & AMENDMENT WRITING, at 13, 27 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 14964, 2008) ("The time and cost of discovery will be increased by the need to investigate possible inequitable conduct and the associated discovery and, ultimately at trial, the cost of presenting the separate inequitable conduct defense.").

84. *See* Lynn C. Tyler, Kingsdown *Fifteen Years Later: What Does It Take to Prove Inequitable Conduct?*, 13 FED. CIR. B.J. 267, 269–70 (2003) (noting that, in extreme cases, inequitable conduct can cause the attorney-client privilege and work product immunity to be lost).

85. *See* Goldman, *supra* note 18, at 89.

The 2005 proposed changes to the inequitable conduct doctrine, contained in Section 5 of H.R. 2795, attempted to address the litigation cost concern.[86] The proposed legislation would have made the determination of inequitable conduct the exclusive province of the USPTO.[87] The doctrine would no longer be a defense to a claim of infringement. Instead, if inequitable conduct were alleged in litigation, the matter would be referred to the USPTO after the litigation ended.[88] The legislation also required a predicate finding that the non-disclosed information rendered one or more asserted patent claim invalid.[89]

The 2006 version of the patent reform legislation, S 3818, proposed modifications to the doctrine that were less dramatic than those in H.R. 2975. S. 3818 did require a predicate finding of invalidity,[90] but kept the doctrine in district court, not proposing the use of the USPTO to adjudicate such disputes.[91]

The changes in H.R. 2975, presumably, were intended to keep litigation costs down. Referral of the matter to the USPTO was one of the NRC report's proposals to "discourag[e] resort to the inequitable conduct defense and therefore reduc[e] its cost."[92] By making a finding of invalidity a prerequisite, costs would be reduced by limiting the instances under which the doctrine is litigated. This also necessarily heightens the materiality standard, making the doctrine tougher to plead. An alleged infringer must claim the undisclosed information renders one or more patent claims invalid, not that the information is simply relevant to the patentability issue.

2. *Lack of an Expanded Duty and the Legislative and USPTO Response*

Another criticism is the narrowness of the current duty to disclose. The critique is that the duty is improperly limited to providing only the infor-

---

86. *See* Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005).

87. Patent Reform Act of 2005, H.R. 2795, 109th Cong. § 136(a), (c) ("No court or Federal department or agency other than the [USPTO], and no other Federal or State governmental entity, may investigate or make a determination or an adjudication with respect to an alleged violation of the duty of candor and good faith . . . .").

88. *Id.* at § 136(c)(4).

89. That is, H.R. 2795 increases the standard of materiality to include only that information that actually results in a patent claim being held unpatentable. *Id.* at §136(d). Also, the examiner must have relied on the information in question when determining patentability. *Id.* at § 136(d)(3)(B).

90. Patent Reform Act of 2006, S. 3818, 109th Cong. § 5 (2006).

91. *See generally id.*

92. NAT'L RESEARCH COUNCIL, *supra* note 10, at 123.

mation already in the applicant's possession.[93] The applicant should do more. Suggestions range from requiring the applicant to search for additional material information and submit it to the USPTO to requiring the applicant to include "relevancy statements" indicating how the information she does submit is relevant to the patentability of the application.[94]

Critics believe that the current doctrine's narrow duty to disclose allows the applicant to simply bury his head in the sand.[95] In order to minimize the scope of his duty to disclose, the applicant affirmatively avoids coming across new information.[96] And to avoid misrepresenting information to the USPTO, the applicant says very little about what he does submit.[97] The USPTO is thus robbed of the additional knowledge a search would turn up and the insight that statements about the information would provide.

Two specific reasons are offered for requiring a search. First, if the applicant searches prior to filing her application, she may find out that her invention is not patentable.[98] Alternatively, she may discover that while patentable, the scope of protection she will get is narrow because the technological field is crowded.[99] If the invention sits in a field of art where

---

93. *See* Thomas Schneck, *The Duty to Search*, 87 J. PAT. & TRADEMARK OFF. SOC'Y 689, 704 (2005) (arguing that there should be a duty to search and submit the results to the USPTO).

94. Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808 (July 10, 2006) (to be codified at 37 C.F.R. pt. 1) (setting forth the proposed modification to 37 C.F.R. § 1.98 (2008) to include "[a]dditional disclosure requirements" under § 1.98(a)(3)); FED. TRADE COMM'N, *supra* note 10, at 12–13 (recommending the inclusion of statements of relevance regarding submitted prior art).

95. Thomas, *supra* note 17, at 315 (noting that, because of potential liability under the inequitable conduct doctrine, "many applicants are discouraged from conducting prior art searches in the first place").

96. *Id.* ("Concerned that the failure to disclose a known reference will lead to the unenforceability of the patent, some applicants prefer to await the examiner's search results rather than consult the prior art themselves."); *see* Scott D. Anderson, Comment, *Inequitable Conduct: Persistent Problems and Recommended Resolutions*, 82 MARQ. L. REV. 845, 852–53 (1999).

97. *See* FED. TRADE COMM'N, *supra* note 10, at 12 (noting the fear that "slight errors in description could fuel claims of mischaracterization and inequitable conduct").

98. *See* Hal Gibson, Note, *In the Wake of* Enzo*: The Impact of the Federal Circuit's Decision on the U.S. Life Science Industry*, 41 SAN DIEGO L. REV. 903, 932 n.176 (2004) ("Many patent applicants (or more accurately, their attorneys) do conduct their own prior art search before filing their patent so as to better craft their own patent claims.").

99. *See* John M. Benassi, et. al., *Claim Construction and Proving Infringement: The Impact of* Phillips, Festo, *and Their Progeny*, *in* PATENT LITIGATION 2008, at 201 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 14977,

there has already been a tremendous amount of technology patented, she will not be able to capture much in a new patent application. As a result of the information discovered in pre-filing search, the applicant may forgo patenting altogether and remove the burden of examining an invalid or worthless application. Or, the patent applicant will tailor the application to contain more realistic claims in light of the prior art, simplifying examination by the USPTO.[100]

Second, more information presented to the USPTO can improve the patent examination.[101] With more information describing the prior art, the USPTO has a better chance of correctly determining the patent's validity. This line of arguments is exhaustively explored below in Section III.C.[102] But, for now, it can simply be said that a duty to search is an information-producing mechanism that would result in a more through and accurate examination.

A duty to provide relevancy statements provides benefits similar to the last reason for a duty to search. Relevancy statements help the USPTO understand the submitted information in the context of patent application.[103] The USPTO does not need to spend as much time digesting the submitted information. Nor does the USPTO have to expend as much energy placing the submitted information in the context of the patentability of the claimed invention. Such statements facilitate a better and more efficient examination.

Recent legislative and USPTO proposals address this concern of an overly narrow duty to disclose. In the 2007 Patent Reform Bill, Congress gives the USPTO the ability to establish an applicant's duty to search and disclose the results of that search when filing a patent application.[104] The 2007 bill no longer focuses on the litigation cost reducing procedures in

---

2008) ("[T]he prior art search could be directed to ensure that the most important claim elements (and those most likely to be copied) are drafted as precisely as possible.").

100. *See* Changes To Practice for Continued Examination Filings, Patent Applications Containing Patentably Indistinct Claims, and Examination of Claims in Patent Applications, 72 Fed. Reg. 46,716, 46,720–21 (Aug. 21, 2007) (to be codified at 37 C.F.R. pt. 1) ("A number of patent applications contain a large number of claims, which makes efficient and effective examination of such applications problematic.").

101. *See* Schneck, *supra* note 93, at 694 (noting that, due to resource constraints, examiners miss relevant prior art, which leads to the issuance of invalid patents).

102. *See infra* Section III.C.

103. *See* Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808, 38,810 (July 10, 2006) (to be codified at 37 C.F.R. pt. 1) (indicating that relevancy statements "are intended to provide meaningful information to the examiner"); FED. TRADE COMM'N, *supra* note 10, at 12 (noting testimony that relevancy statements leads to "better managed" and "quality enhanced" examination).

104. Reform Act of 2007, H.R. 1908, 110th Cong. § 5(a)–(b) (2007).

previous reform bills.[105] Instead, the focus is on expanding the duty governed by inequitable conduct.

The USPTO has proposed changes to the IDS requirements to require that applicants provide additional information, in certain circumstances, about the submitted information.[106] An applicant may be required to pinpoint representative portions of the submitted information, correlate these identified portions with the patent claims, and explain how the submitted information is different from other information already submitted.[107] The new rules would also require the applicant justify why the application is patentable in light of the submitted information depending on the number of submissions and the timing of the IDS's filing.[108]

D. Disconnects in the Current Discourse

Almost every facet of the patent system—Congress, the Federal Circuit, the USPTO, and patent practitioners—is concerned about the state of the inequitable conduct doctrine and lodge specific criticisms against the doctrine. The judiciary and NRC both assert that the doctrine is overasserted and that this results in burdensome litigation costs. The FTC believes that the duty to disclose should be expanded.

This is the first disconnect in the current discourse—the two major critiques of the doctrine push in opposite directions. Concerns about litigation costs suggest weakening the doctrine, but increasing the duty to disclose means the doctrine should be strengthened. The conflict between these two critiques is difficult to resolve. A reduction of litigation costs necessarily means rejecting a duty to search. Giving the doctrine a broader reach makes it easier and more likely to be asserted as a defense to a claim of patent infringement.[109] This magnifies the harm the litigation cost critique is trying to minimize. From the other direction, the removal of the doctrine to the USPTO in order to reduce litigation costs would minimize any impact of a new duty to search. Moving the doctrine to a less favorable forum makes its assertion and enforcement less likely, weakening the substantive boost a new duty is meant to create.

---

105. Some of the proposed amendments arguably address litigation costs. *See, e.g.*, H.R. 1908 § 12(b), (c) (modifying the inequitable conduct doctrine by heightening the standard for intent and providing for less harsh remedies).

106. Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. at 38,809.

107. *Id.* at 38,809–10.

108. *Id.*

109. *See* Cronin, *supra* note 19, at 1346 ("However, as the definition becomes more expansive there becomes more of an incentive for alleged infringers to charge inequitable conduct during litigation proceedings.").

The character of these two criticisms exemplifies another disconnect. Both of these concerns are utilitarian-focused, looking at how the doctrine impacts the patent system's goal of creating an optimal incentive to invent.[110] The traditional rationale for the inequitable conduct doctrine, in contrast, is the maintenance of ethical standards during prosecution.

The doctrine's equitable roots give the doctrine its moral bent. Since the mid-1800's, the judiciary has driven the development of the inequitable conduct doctrine as a creature of equity.[111] The Supreme Court identified the inequitable doctrine as the "equitable maxim that 'he who comes into equity must come with clean hands.'"[112] If a patent was born from fraud or deceit, then its holder cannot ask a court to enforce the patent.[113] The doctrine is seen as "a vehicle for affirmatively enforcing the requirements of conscience and good faith."[114]

In contrast, the alleged problems with the doctrine focus on the doctrine's impact on the optimal procurement and enforcement of patent rights. The litigation-costs argument is part of a larger movement to reduce the costs and uncertainty associated with patent litigation.[115] A reduction in such costs minimizes the likelihood a patent holder can improperly holdup a competitor practicing outside the area of valid patent protection.[116] The argument to broaden disclosure duties is focused on ensuring that only truly patentable inventions receive patent protection.[117] If patents are issued for inventions that are actually unpatentable, these "bad" patents will improperly deter competitors and follow-on innovators.[118] These problems are focused on the utilitarian goal of maintaining

---

110. *See, e.g.*, NAT'L RESEARCH COUNCIL, *supra* note 10, at 7 (concluding that one of the reforms needed, to created effective and efficient enforcement of patent rights, is the modification of subjective litigation elements, such as the inequitable conduct doctrine).

111. *See* Mack, *supra* note 20, at 152; Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 815 (1945).

112. *Precision Instrument*, 324 U.S. at 814.

113. *Id.*

114. *Id.*

115. *See* NAT'L RESEARCH COUNCIL, *supra* note 10, at 7, 123.

116. *See* Joshua D. Sarnoff, *Abolishing the Doctrine of Equivalents and Claiming the Future After* Festo, 19 BERKELEY TECH. L.J. 1157, 1200–01 (2004) ("Even when patents do not convey market power, patentees may exploit uncertainty regarding the scope of patents to deter competition by posing the threat of high-cost infringement litigation.").

117. *See* supra Section II.C.2.

118. *See* Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1516 (2001) ("Certainly the issuance of bad patents has the potential to deter competition that should be lawful in some marginal cases."); Leslie, *supra* note 16, at 113–14. (arguing that "some invalid patents can deter market entry and decrease consumer welfare even without active enforcement").

an optimal incentive to invent—providing protection where it is needed but not giving overprotection that does more harm to innovation than good.

A similar disconnect surfaces when comparing the current view of the inequitable conduct doctrine to the patent reform movement as a whole. One of the focuses of the movement is the optimal balance of patent protection and open competition. That is, providing patent protection where it is needed to prompt invention and innovation, but reigning in patent protection where such protection, on net, is detrimental to society.[119] The inequitable conduct doctrine, in contrast, focuses on the deontological ethics of the patent applicant's actions. The reform movement is results oriented, while the doctrine is focused on the means. This view of the doctrine finds no home in today's patent discourse.

III. FRAMING THE INEQUITABLE CONDUCT DOCTRINE AS A PATENT QUALITY MECHANISM

Scholars have written extensively on the inequitable conduct doctrine.[120] But the scholarship has not engaged in two basic, interrelated exercises that would greatly assist the discourse. First, no one has attempted a comprehensive, theoretical analysis of how the doctrine as a whole affects patent applicants, patent examination, and potential inventors. That is, they have not linked the doctrine to the general push to improve patent quality and reform the patent system. A majority of the scholarship, instead, is piecemeal—focusing on specific parts of the doctrine,[121] particular proposed statutory changes, and individual Federal Circuit cases.[122] Performing a fundamental analysis of the doctrine would provide a framework by which current and future reforms could be tested.

Second, and related, almost all the scholarship has kept the discussion tied to the doctrine's equitable roots, focusing on the doctrine as an ethical

119. *See, e.g.*, Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1614–30 (2003) (discussing how patents have positive or negative impact on different industries based on the nature of investment and discovery within each industry).

120. *See, e.g.*, Cedric A. D'Hue, *Disclosing an Improper Verb Tense: Are Scientists Knaves and Patent Attorneys Jackals Regarding the Effects of Inequitable Conduct?*, 14 U. BALT. INTELL. PROP. L.J. 121 (2006); Goldman, *supra* note 18; Robert A. Migliorini, *Lessons for Avoiding Inequitable Conduct and Prosecution Laches in Patent Prosecution and Litigation*, 46 IDEA 221 (2006).

121. *See, e.g.*, Cronin, *supra* note 19.

122. *See, e.g.*, *supra* note 19.

tool.[123] As just noted, these discussions are of little help when proposed changes need to be considered in the context of broader, utilitarian-justified reforms.[124] Thinking about the doctrine needs to be modernized and framed in the same terms as other targets of patent reform.[125]

This Part revisits the underlying rationale for the doctrine. Instead of focusing on ethics, this Part articulates the various ways in which the doctrine impacts the quality of the application and its examination.[126] The doctrine is well suited to affect quality of the process of issuing a patent given that the doctrine applies to all aspects of prosecution related to patentability. The beauty of placing inequitable conduct in the context of patent quality is that this analysis interjects the doctrine into the current discourse of patent reform. As demonstrated below, the doctrine can be an effective tool in improving patent quality, the system of patent examination, and the incentives generated by the system.

---

123. As previously discussed, a recent article has discussed the inequitable conduct doctrine's impact on patent quality but fails to fully develop the concept. *See* Mack, *supra* note 20, at 166–69.

124. One of the main thrusts of the patent reform movement is to ensure the proper balance between the incentive to invent and the ability to follow-on innovate is maintained. *See* FED. TRADE COMM'N, *supra* note 10, at Exec. Summ., 4–5. Part of this reform is to ensure that the only patents to issue from the USPTO are those that truly meet the patentability standards. *Id.* at 9–10.

125. *See, e.g.*, KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 427 (indicating that the nonobviousness requirement should not be set too low so as to allow patents to issue that "might stifle, rather than promote, the progress of useful arts"); FED. TRADE COMM'N, *supra* note 10, at 15 (noting competition concerns that should be considered when reforming the nonobviousness requirement).

126. Again, this is not to say that the inequitable conduct doctrine's impact on patent quality has never been mentioned. *See, e.g.*, Norton v. Curtiss, 433 F.2d 779, 794 (C.C.P.A. 1970) ("The highest standards of honesty and candor on the part of applicants in presenting such facts to the office are thus necessary elements in a working patent system. We would go so far as to say they are essential."); 37 C.F.R. § 1.56(a) (2008) ("The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability."); Mack, *supra* note 19, at 166–69; Rene D. Tegtmeyer, *The Patent and Trademark Office View of Inequitable Conduct or Attempted Fraud in the Patent and Trademark Office*, 16 AIPLA Q.J. 88, 88 (1988) (quoting former Assistant Commissioner of the USPTO that "[t]he purpose of the duty of disclosure requirement, as the Patent and Trademark Office (PTO) views it, is to improve the quality of examination and the validity of patents by assuring that material information is called to the examiner's attention and considered in the patent examining process"); Thomas, *supra* note 17, at 313–14 (labeling the inequitable conduct doctrine as an "information-gathering technique[]").

Again, none of these articles has provided a detailed theory as to exactly how the doctrine can impact patent quality.

In order to frame the doctrine as a patent quality tool, this Part first defines patent quality and links the quality concerns to the need for information. This Part also discusses the lack of an inherent incentive for applicants and others to provide the USPTO with relevant information during examination. This Part then explains how the inequitable conduct doctrine provides such an incentive. The doctrine improves the quality of the application by increasing the patent attorney knowledge and understanding of the invention and the related technological area. The doctrine also helps ensure that the application and related correspondence are drafted with care. The doctrine operates as an information producer and verifier, giving the USPTO more resources and time to properly examine the application.

A. Patent Quality and Information

Put simply, optimal patent quality is the issuance of patents that meet the patent requirements and the rejection of those that do not. The assurance of a good patent quality is all about information—both access to it and time for the examiners to use it.

1. Patent Quality Problem Defined

The concept of patent quality focuses on the patentability of those patent claims allowed by the USPTO. The patent system assumes that only those patent applications that describe and claim a patentable advance are granted the power to exclude. Those patents that meet the validity requirements—claim useful, novel, and nonobvious inventions that are fully disclosed and enabled—are considered to be of good quality.[127] Patents issued by the USPTO that claim subject matter that does not meet the patentability requirements are known as poor quality, or "bad" patents.[128]

Most agree that the patent system should maintain high patent quality.[129] Granting patents on patentable advances provides incentives for the

127. *See, e.g.*, Lichtman & Lemley, *supra* note 15, at 46–49.

128. *See* Jay P. Kesan & Andres A. Gallo, *Why "Bad" Patents Survive in the Market and How Should We Change? — The Private and Social Costs of Patents*, 55 EMORY L.J. 61, 63 (2006) ("The common criticism from all sides is that the Patent Office grants patent claims that are broader than what is merited by the invention and the prior art, resulting in so-called "bad" or improvidently granted patents."); Lee Petherbridge, *Positive Examination*, 46 IDEA 173, 175 (2006) ("Questionable, or low quality, patents are those patents that should never have issued from the Patent Office because they fail to meet the statutory requirements for patentability.").

129. There is debate, however, as to how much resources should be allocated to ensuring that valid patents are granted by the USPTO. *Compare* Lemley, *supra* note 130, at 1497 (arguing that few resources should be expended in improving examination "[b]ecause so few patents are ever asserted against a competitor, it is much cheaper for society to make detailed validity determinations in those few cases than to invest addi-

creation of beneficial technical advances and facilitates their commercialization.[130] Society benefits when quality patents issue.

In contrast, the issuance of patents of poor quality has deleterious effects. A bad patent, for example, may give its holder exclusive control over a minor technological advance, creating roadblocks to innovation typically allowed under patent law.[131] Since even poor quality patents enjoy a presumption of validity, holders of bad patents have the power to impede the legitimate innovation of others and seek licensing fees for activities that are actually allowable.[132] The bad patent creates in terrorem effects, deterring socially acceptable and beneficial behavior.[133] Those who want to use the patented technology must expend significant resources to determine and, if forced, legally establish, that the patent is invalid.

Many factors contribute to the poor quality of U.S. patents. Some critiques point to the standards for determining patentability, concluding that they are too low and, even if properly applied, result in the issuance of socially detrimental patents.[134] Most, however, view the patent quality problem as an information and resource problem. That is, the USPTO does not

---

tional resources examining patents that will never be heard from again"), *with* Shubha Ghosh & Jay Kesan, *What Do Patents Purchase? In Search of Optimal Ignorance in the Patent Office*, 40 HOUS. L. REV. 1219, 1225–26 (2004) (arguing that changes in the examination process can be a cost-beneficial way of improving patent quality).

130. Mark A. Lemley, *Ex Ante versus Ex Post Justifications for Intellectual Property*, 71 U. CHI. L. REV. 129, 129-30 (2004) (describing patent law's ability to create an ex ante incentive to invent); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 276–78 (1977) (describing an ex post theory of patents where protection assist the development of the patented invention).

131. *See* 3 ROBERT MERGES & JOHN DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 647 (3d ed. 2002); Christopher A. Cotropia, *Patent Law Viewed Through an Evidentiary Lens: The "Suggestion Test" as a Rule of Evidence*, 2006 B.Y.U. L. REV. 1517, 1525 ("Exclusive control over these minor developments would act as roadblocks, creating disincentives to future inventors. Many patents on small technical advances make it extremely difficult and 'expensive to search and to license' these patents in order to produce further innovations.").

132. *See* Lichtman & Lemley, *supra* note 15, at 47–48 (noting that the presumption of validity makes "defendants face an uphill battle persuading the courts to overrule that errant determination").

133. *See* John R. Thomas, *The Responsibility of the Rulemaker: Comparative Approaches to Patent Administrative Reform*, 17 BERKELEY TECH L.J. 727, 731 (2002) (detailing these detrimental effects).

134. The debate surrounding the nonobviousness requirement provides a good example of this type of discussion. *See, e.g.*, John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEX. L. REV. 1 (2007) (discussing the various standards for determining nonobviousness and how they implicate differing policy views on patent law).

have access to adequate information to correctly determine whether a claimed invention is novel and nonobvious.[135] This is particularly problematic in new technological areas, such as software and business methods, where the best information on what has previously been done is not in prior patents, but trade publications, public presentations, product brochures, and computer code.[136]

Even if the USPTO does have access to such information, patent examiners often do not have the time to find and apply it to the patent claims.[137] The number of patent applications is rising exponentially each year while, at the same time, the USPTO faces a significant examiner attrition rate.[138] Examiners are given very little time to perform a complete examination—gain an understanding of the invention, determine the meaning of the patent claims, search the prior art, apply the prior art to the claims, write office actions, and respond to the applicant's arguments multiple times.[139]

Finally, some worry that poorly drafted patents hinder the examiner's ability to understand the claimed subject matter.[140] The harder the applica-

---

135. *See* Lichtman & Lemley, *supra* note 15, at 46 ("Information is a second significant impediment to PTO review.").

136. *See* Thomas, *supra* note 17, at 318–19. Thomas describes the unique information problem as it relates to new technologies:

> For software, business methods, and other postindustrial inventions, the repository of issued patents insufficiently samples the prior art. Examiners who primarily rely upon the patent literature to generate prior art in these fields are quite likely to allow patents to issue based upon information already within the public domain. Even those diligent examiners who consult the nonpatent literature might be limited to a sparse prior art collection.

Id.

137. *See* Lichtman & Lemley, *supra* note 15, at 46 (identifying the resource problem faced by the USPTO to effectively review the growing number of applications); Thomas, *supra* note 17, at 314 ("[T]he average time allocated for an examiner to address one application is understood to be between sixteen and seventeen hours. Given the complexities involved in parsing an application, conducting a prior art search and drafting an Office Action, this period is surprisingly short.").

138. *See* Beth Simone Noveck, *"Peer to Patent": Collective Intelligence, Open Review, and Patent Reform*, 20 HARV. J.L. & TECH. 123, 132 (2006) ("[T]he USPTO still cannot hire quickly enough to keep pace with both the demands of the job and the attrition rate.").

139. Thomas, *supra* note 17, at 314 (noting that examiners are allotted between sixteen to seventeen hours per application).

140. Petherbridge, *supra* note 128, at 181–83, 192 ("[T]he better the Patent Office collects and uses information about the boundaries of the property right, the higher the quality of examination.").

tion is to comprehend, the more difficult it is for the examiner to properly and efficiently examine the application.[141] As the saying goes—garbage in, garbage out.

2. *Disincentives for Those Outside the USPTO to Solve the Quality Problem*

Why is the patent quality problem not self-correcting? Surely patent applicants have an interest in high patent quality. If the USPTO is doing a good job examining patents, a patent holder can readily rely on the USPTO's determination and not expend resources in making its own assessment after issuance. In turn, a patent holder can charge more for a clearly valid patent and valid patents are less likely to get embroiled in costly litigation and, thus, more efficient to enforce. Put simply, the value of a quality patent is higher than a bad one. Why wouldn't patentees want that?

Patent applicants have countervailing strategic reasons to ignore patent quality. As mentioned, even bad patents provide value to the holder because of the costs they create for others.[142] Any attempt to assist in improving patent quality may destroy a bad patent's value altogether by preventing it from ever issuing.[143] An issued, poor quality patent is more valuable than no patent at all.

Even for good patents, it may be in applicants' best interest to keep patent quality information to themselves. Applicants are in the best position to determine the true validity of the patent because of the information asymmetry between the inventor and potential challengers.[144] The inventor and related individuals know the most about the invention and potential prior art in the invention's technical field.[145] Thus, the patentee can make its own determination as to the quality of the patent. While costly, this determination is more difficult, if not impossible, for those without

---

141. *Id.*

142. *See* Leslie, *supra* note 16, at 113–28 (detailing the many ways invalid patents "injure competition").

143. *See* R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of* Festo, 151 U. PA. L. REV. 159, 215 (2002) (arguing that the patentee is incentivized to not provide prior art to the USPTO to "increase[e] the possibility that the PTO will 'miss something' and allow the unwarranted scope").

144. *Id.* at 214 ("Given the asymmetry of information, the incentives for a patentee to fail to produce relevant information are substantial.").

145. *See* Cotropia, *supra* note 22, at 84 ("The information in the specification is produced by the inventor, the lowest cost source for invention-specific information."); Wagner, *supra* note 143, at 213 ("Among the 'parties' to the patent transaction, the patentee is either the best informed or the one who can most easily and cheaply become the best informed about the context of her innovation.").

easy access to information the patentee holds.[146] This information asymmetry gives the patentee the ability to engage in strategic behavior by withholding information and preventing a potential licensee or defendant from knowing the true value of the patent.

Irrespective of information asymmetry and strategic behavior, the cost of improving the quality of examination alone may deter applicants from engaging in self-help. Assisting in the examination process by either doing a pre-filing search for prior art or submitting prior art to the USPTO is a costly endeavor.[147] Some applicants are willing to take the risk of receiving a bad patent given the high costs of ensuring the patent is a good one.

Finally, other applicants may be ignorant of the patent quality situation at the USPTO.[148] An examination for patentability is what an applicant pays for and some may assume that is what they will get.

Third parties have no incentive to assist in the examination process. Mechanisms do exist for third parties to participate in an ongoing examination or to force the reexamination of an issued patent.[149] However, because challenges to validity "exhibit the characteristics of public goods," potential challengers face a collective action problem.[150] A successful challenger cannot prevent others from free-riding on the resulting patent invalidation by practicing the previously exclusive invention.[151] A potential challenger is better off keeping the invalidity information to herself and only using it when she is accused directly of infringement.[152]

Because of these reasons, the patent system cannot rely on applicants or third parties to *sua sponte* assist the patent examination process. Information-forcing rules must be considered.[153] That is, certain patent doc-

146. Wagner, *supra* note 143, at 215 (indicating that an applicant will not produce "the sort of information that might allow the PTO and the public to more usefully evaluate the scope of the patent").

147. Lemley, *supra* note 130, at 1510 (reporting the average cost of a prior art search as between $5000 and $7000).

148. *See, e.g.*, Lough v. Brunswick Corp., 86 F.3d 1113, 1122 (Fed. Cir. 1996) (recognizing that some inventors do not have a sophisticated understanding of the patent law system).

149. 35 U.S.C. § 135 (2006) (interference proceedings); 35 U.S.C. §§ 301–307 (2006) (ex parte reexamination); 35 U.S.C. §§ 311–318 (2006) (inter partes reexamination); *see also* Thomas, *supra* note 17, at 326–28 (detailing these various avenues of third party challenges, including a proposed post-grant opposition system).

150. Thomas, *supra* note 17, at 333.

151. *Id.* at 333–34.

152. *Id.* at 334.

153. *See* Wagner, *supra* note 143, at 216–17, 221 (discussing penalties for underproduction of information and viewing the prosecution history estoppel doctrine as one of these penalties); *cf.* Scott R. Boalick, *Patent Quality and the Dedication Rule*, 11 J. IN-

trines should force the patent applicant to act against their strategic interest. The inequitable conduct doctrine serves in this capacity by incentivizing applicants to produce valuable information and, in turn, improve patent quality.

B. Doctrine's Ability to Improve the Quality of Information before USPTO

The inequitable conduct doctrine is a disclosure doctrine, which, by its inherent nature, creates a flow of information from the applicant to the USPTO. The doctrine does even more by focusing on the production of information relevant to patentability and, in turn, de facto verifying it. Both of these aspects of the doctrine improve patent quality and are discussed below.

1. Produces Relevant Information to the USPTO

At its core, the doctrine is an information producer. The inequitable conduct doctrine requires patent applicants provide the USPTO with information relevant to the patentability of the claimed invention.[154] The doctrine acts as a conduit through which information from the patent attorney, the inventor, and related parties flows to the examiner. This information, coming in the form of patents, periodicals, data, physical specimens, affidavits, and the like, is directly related to patent examiner's primary responsibility—determining the application's patentability.

This information is especially relevant because the doctrine draws it from those who know the most about the invention and its area of technology—the inventor and those directly involved in the patent's prosecution.[155] These are all individuals—the bench scientists, technicians, technology group leaders, in-house patent attorneys, etc.—who were either intimately involved in the invention's creation or in the drafting of the patent application.

Getting information from these individuals gives the examiner access to information that is not contained in the databases readily available to her. Patent examiners have the ability to search world-wide patent databases and some technical article databases. However, they do not have ready access to all technical literature, such as specialized industry publi-

---

TELL. PROP. L. 215, 221 (2004) (arguing that a strong dedication doctrine "improve[s] overall patent quality by creating incentives for good patent drafting at the earliest stages of the patent acquisition process, and long before litigation arises").

154. *See supra* Section II.A.

155. *See supra* note 59 (identifying the various individuals beyond just the inventor who have a duty to disclose under the inequitable conduct doctrine).

cations or dissertations, or the technologies themselves, such as computer code listings or actual devices.[156] The USPTO does not have access to information in the technology areas new to patenting.[157] Patent examiners also must rely on applicants to inform them of potential offers to sale, conference presentations, test data, and product brochures regarding the invention.[158]

The doctrine generates valuable information by placing information production responsibilities on a low-cost provider. Production of information costs the applicant,[159] but the doctrine limits this cost by requiring the applicant to consider only the information already in her possession.[160] More importantly, the cost to the applicant is lower than the cost of the examiner finding the same information. The examiner has some specialized knowledge, but less than the applicant in understanding the particular invention and processing the information already in the applicant's possession.[161] Even if the examiner can gain access to information similar to that which is at the disposal of the applicant, the examiner starts from scratch in evaluating the information's relevance to patentability. For at

156. Empirically, examiners are at a "disadvantage in searching for non-patent prior art and foreign patents." Bhaven N. Sampat, Determinants of Patent Quality: An Empirical Analysis 3 (Sept. 2005) (unpublished manuscript), *available at* http:// siepr.stanford.edu/ programs/SST_Seminars/patentquality_ new.pdf_1.pdf. Notably, the information examiners have access to is growing everyday. *See* MPEP § 901.06(a) (2007) (describing the resources available to patent examiners); The Scientific and Technical Information Center ("STIC"), available at http://www1.uspto.gov/web/ offices/pac/dapp/ sir/ stic/ brochure. html (same); Iain M. Cockburn et al., *Are All Patent Examiners Equal? The Impact of Characteristics on Patent Statistics and Litigation Outcomes*, (Nat'l Bureau of Econ. Research, Working Paper No. 8980, 2002), *available at* http://www.nber.org/ papers/w8980 (describing the STIC). A vast amount of inventor specific material, or hard to find material in a given field, is just not accessible.

157. Peter S. Menell, *A Method For Reforming the Patent System*, 13 MICH. TELECOMM. & TECH. L. REV. 487, 504 (2007) ("Similarly, since this is a new patent field, examiners have relatively little training in this area, there is little or no patent prior art, and time and database constraints severely limit the ability of examiners to search non-patent prior art."); Cockburn, *supra* note 156, at 6 ("In very young technologies, or in areas where the USPTO has just begun to grant patents, there may be very limited patent prior art.").

158. This information is unlikely to be found in any database available at the USPTO. *See, e.g.*, *supra* note 156.

159. *See infra* Section IV.C (detailing the costs of submitting information to the USPTO).

160. *See supra* Section II.A (noting how the current doctrine does not include a duty to search).

161. *See supra* note 145 (explaining how the inventor is in the best position to know the most about her invention).

least some information, the applicant has already filtered out the irrelevant material to force the examiner to repeat the process would be wasteful.

The breadth of relevant information under the doctrine—information that simply creates a prima facie case of invalidity but does not necessarily render the claim invalid—has a second-order information production effect. The exact information produced by an applicant may not be used by the examiner, but that information can mark a path to a different technological area that contains relevant information.[162] The information may also contain or prompt a line of technical thought that could justify a rejection.[163]

By mandating production of this valuable information, the inequitable conduct doctrine addresses some of the causes of the current patent quality problem. The doctrine provides the examiner with more invention-specific information from which sources examiners likely do not have access. The better the information, the better the examination.[164] Furthermore, the burden of producing this information is not born by the examiner, so it increases the amount of time the examiner has to complete the examination.

2. *Verifies Information Provided to the USPTO*

The doctrine also works as an information verifier. The inequitable conduct doctrine fundamentally requires that patent applicants must be truthful in their correspondence with the USPTO.[165] They cannot misrepresent information. Nor can they omit anything relevant to the truthfulness of disclosed information. Because of this duty of truthfulness and full disclosure, an examiner does not have to question the veracity of a statement or response by an applicant. They are self-authenticating.

---

162. *See, e.g.*, *In re* ICON Health & Fitness, Inc., 496 F.3d 1374, 1379–80 (Fed. Cir. 2007) (looking to folding bed art to invalidate an application directed toward a folding treadmill).

163. For example, examiners reject a claim as obvious if they find a reason to combine the prior art. *See* KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 416–17 (2007).

164. *See* Michael Astorino, *Obviously Troublesome: How High Should the Standard Be for Obtaining a Patent*, 89 J. PAT. & TRADEMARK OFF. SOC'Y 239, 250 (2007) ("The better the search the better the prior art rejections."); Nolan-Stevaux, *supra* note 79, at 159–60 ("[I]nequitable conduct [claims in patent law] also function[] as a penalty default to discourage applicants from playing strategic games."); Posting of Dennis Crouch to Patently-O, Evidence Based Prosecution: Non-Patent Art Leads to Rejections, http://www.patentlyo.com/patent/2006/10/evidence_based__3.html (Oct. 29, 2006 22:03 CST) (finding that most rejections are based on non-patent art).

165. *See* Li Second Family Ltd. P'ship v. Toshiba Corp., 231 F.3d 1373, 1378 (Fed. Cir. 2000) ("[A]ffirmative misrepresentations of material facts, failure to disclose material information, or submission of false material information, coupled with an intent to deceive, constitutes inequitable conduct.").

The doctrine's information verification function comes at a low cost. The individuals who make statements—the applicant, patent attorney, and related parties—are the ones who have to stand by their reliability. And since the applicant makes the statements, she is in the best position to attest to their accuracy. In contrast, the patent examiner is in a very poor position to determine veracity. Almost all correspondence is done in writing, removing the option for examiners to look for visual or audible signs of a particular statement's truthfulness.[166] With their heavy workload, examiners do not have the time to independently verify all of an applicant's statements and claims.[167] Nor do examiners have the resources or the training.[168] Verification costs are further minimized by requiring the applicant to attest only for information in her possession.[169] No duty to search for relevant art or other information exists currently, and thus, the applicant is not asked to expend the time and resources to attest to all the information or knowledge in a given area.

The doctrine also works as an external verifier of information. The threat of unenforceability not only assures the examiner that statements made by the applicant are true, it also assures others external to the USPTO that the information is correct.[170] Members of the public who may be looking at the patent as either an educational tool or an indicator of the patent holder's technological direction can rely on the inequitable conduct doctrine to settle any question as to the application's truthfulness. The applicant, as was the case when compared to the examiner, is in a much lower cost position to verify this information than each member of the public.

Problematically, the truth of any given submission is only as good as the subjective belief of the submitter.[171] The intent requirement of the inequitable conduct doctrine requires that the applicant only subjectively be-

166. Examiners do, on occasion, correspond with applicants by phone and in interviews. *See* 37 C.F.R. § 1.133 (2008) (establishing rules regarding examiner interviews).

167. They can make a request for additional information. 37 C.F.R. § 1.105 (2008). But, these are rarely used, most probably because making one uses up scarce examination time.

168. *See, e.g.*, U.S. Patent and Trademark Office, USPTO Patent Training Academy (PTA) (Mar. 6, 2006), http://usptocareers.gov/pdf/PatentTraining Academy1.pdf (listing the areas in which examiners are trained).

169. *See supra* Section II.A.

170. *See* Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 658 (2002) ("At the very least, investors can be assured that firms will not make objectively false statements in the body of the patent; if they do, they will bear both actual and reputational costs.").

171. *See supra* Section II.B.3.

lieve that what is submitted is true.[172] It could turn out that the applicant was, objectively, wrong in her conclusion—the information may actually be incorrect. So, the doctrine's ability to verify information is only as good as the applicant's subjective knowledge. If the information is actually false, a reliant examiner could be lead astray by the erroneous comment. However, while this is certainly possible, the applicant is in the best position to have a correct understanding of how her invention works when she came up with the invention, the result of any tests done on the invention, and so on. Other statements, such as those in affidavits, are not meant to prove anything more than the affirmant's subjective belief. The applicant's subjective believe is, in most instances, the best the system can produce and the inequitable conduct doctrine ensures that is what is communicated.

This verification function improves patent quality. The quality of the information before the examiner is increased because it is much more likely to be true under the doctrine. Moreover, the examiner does not have to waste any of the finite examination time on making truth determinations.

C. Doctrine's Ability to Improve the Quality of the Patent Application

The doctrine also improves the quality the patent application and other correspondence with the USPTO. It does this by increasing the patent attorney's knowledge of the invention and related technology and causing the attorney to exercise more care when drafting the application and correspondence. By improving the quality of these documents—both their technical fidelity and accuracy—the doctrine can improve the quality of examination and the issued patent itself.

1. Increases the Patent Attorney's Knowledge of the Invention and Related Technology

The patent attorney, in the process of complying with the inequitable conduct doctrine, gains a great deal of knowledge about the invention and its technological field. Initially, compliance generates a base of knowledge in the relevant technology. To assess materiality, the patent attorney must read all of the information within her possession to determine its relevance

172. *See* Liquid Dynamics Corp. v. Vaughan Co., 449 F.3d 1209, 1227 (Fed. Cir. 2006) ("Intent [to deceive the USPTO] is a subjective inquiry into whether the inventor knew the information was material and chose not to disclose it.").

to patentability.[173] The doctrine's focus on patentability information forces the attorney to concentrate on information related to the invention. Take the patent at issue in *Monsanto Co. v. Bayer Bioscience N.V.*, which claimed a specific type of genetically-modified corn that is toxic to insects, but not humans.[174] The inequitable conduct doctrine would require the patent attorney who prosecuted the patent to read and analyze the information within her possession discussing the genetic modification of food and safe pesticide products in order to determine what needs to be disclosed. Through the process, she would learn the chemistry and biology behind genetic modification and pesticides. She would also learn the composition of previous pesticides, how they were designed, and their particular uses.[175] The patent attorney digests this type of information not only to gain an understanding of the technological area, but also to comply with a legal doctrine. This added importance means that not only will patent attorneys read the information, but they will do so with care and attention to detail.

In complying with the doctrine, the patent attorney also learns more about the invention itself. The patent attorney must obviously speak to the inventor in order to draft the application and get an understanding of what she can claim as the invention.[176] The inequitable conduct doctrine, however, forces her to dig deeper and analyze all information regarding the invention. She must evaluate all publications, correspondence, and prior uses regarding the invention to see if there is any material information—such as a public use or an offer for sale—she must disclose.[177] The patent attorney must also ensure that all of the statements in the application re-

---

173. The inequitable conduct doctrine inquires as to whether a piece of information meets a threshold level of materiality. *See* Dayco Prods., Inc. v. Total Containment, Inc., 329 F.3d 1358, 1362–63 (Fed. Cir. 2003).

174. *See* Monsanto Co. v. Bayer Bioscience N.V., 514 F.3d 1229, 1237—39 (Fed. Cir. 2008).

175. *See id.* at 1238–39.

176. An application is not complete until the inventor signs an oath declaring, amongst other things, that "[s]tates that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56." 37 C.F.R. § 1.63(b)(3) (2008). The USPTO recently stated that it would reject oaths that "do not expressly acknowledge a duty to disclose information material to patentability." U.S. Patent & Trademark Office, Duty of Disclosure Language Set Forth in Oaths or Declarations Filed in Nonprovisional Patent Applications (Jan. 2, 2008), *available at* http://www.uspto.gov/web/offices/pac/dapp/opla/ preognotice/duty_of_disclosure.pdf.

177. This information would be relevant to patentability in light of the on-sale bar. *See* 35 U.S.C. § 102(b) (2006); Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1376–77 (Fed. Cir. 2001) (discussing the materiality of on-sale information).

garding the invention's operation, prior testing, and the invention's construction are correct.[178]

The doctrine is also structured to funnel information from the inventor and related parties to the patent attorney. The duty to disclose is not imposed only on the patent attorney communicating with the USPTO. The inventor and "[e]very other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor" must also disclose material information.[179] Material information in the hands of any such individual necessarily makes its way to the patent attorney before it is disclosed to the USPTO.[180] The patent attorney is the hub for all communications to and from the USPTO.[181] The doctrine's broad scope thus causes those most knowledgeable of the invention and relevant technology to share their knowledge with the patent attorney to meet their duty to disclose.[182] As a result, the drafter of the application is exposed to even more relevant information.

All this additional knowledge translates into a patent application that is easier to examine. Many patent law doctrines ask the USPTO and courts to view the patent through the lens of one skilled in the relevant technological art.[183] A knowledgeable patent attorney can write to this intended audience because she has gained an understanding of a given science or area of engineering and knows the relevant terminology.[184] This means the

178. This information would be relevant to the disclosure requirements. *See* 35 U.S.C. § 112 ¶ 1 (2006).

179. 37 C.F.R. § 1.56(c) (2008).

180. This is typically done by an over-inclusive request by the patent attorney asking the relevant parties if they know of any information related to the invention's subject matter.

181. *See* 37 C.F.R. §§ 1.33, 1.34 (2008) (noting that patent attorneys act as a representative of the inventor filing for an application).

182. *See supra* note 147 (describing how the inventor has the greatest knowledge of the invention).

183. Patent claims—which define the scope of exclusivity—are interpreted as the terms are understood by one skilled in the art. *See* Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) ("[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application."). "The enablement requirement is satisfied when one skilled in the art, after reading the specification, could practice the claimed invention without undue experimentation." AK Steel Corp. v. Sollac, 344 F.3d 1234, 1244 (Fed. Cir. 2003) (citing *In re* Wands, 858 F.2d 731, 736–37 (Fed. Cir. 1988)).

184. *See* Patricia Wright, *Writing Technical Information*, 14 REV. RES. EDUC. 327, 339–40 (1987) (discussing the knowledge needed to be an effective technical writer).

examiner, who specializes in the invention's technological field,[185] spends less time trying to understand the application and what is claimed and more time determining patentability.

The patent attorney's better understanding of what has been previously accomplished in a technical field also facilitates the drafting of patent claims that avoid subject matter that is not novel or obvious.[186] This streamlines examination because unpatentable subject matter is weeded out prior to filing. The examiner does not waste time rejecting clearly invalid claims.

The patent application also becomes more socially beneficial. A patent is not only meant to incentivize the creation of the invention; it is also meant to educate others and facilitate improvements and design-arounds of the claimed invention.[187] The doctrine causes the patent drafter to better understand the invention and be able to "talk the talk" technically. And the more technically-accurate and accessible the patent, the better it can fulfill these goals. The patent becomes like any other scientific reference material, explaining the subject matter in a way that is comprehensible to its intended audience.[188]

---

185. *See* Am. Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1359 (Fed. Cir. 1984) (indicating that examiners "are assumed to have some expertise in interpreting the references and to be familiar from their work with the level of skill in the art").

186. Patent attorneys routinely try to anticipate rejections by the USPTO when prosecuting patent applications in order to avoid them. *See, e.g.*, Rajiv P. Patel et. al., *Understanding After Final and After Allowance Patent Practice*, *in* ADVANCED PATENT PROSECUTION WORKSHOP 2008: CLAIM DRAFTING & AMENDMENT WRITING, at 805, 836 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 14964, 2008) ("With careful planning and analysis, an applicant can anticipate and address these rejections in one or more different manners -- and in some instances avoid such rejections altogether.").

187. *See* Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 152 (1989) ("[A]fter the expiration of a federal patent, the subject matter of the patent passes to the free use of the public as a matter of federal law."); *see also* United States v. Dubilier Condenser Corp., 289 U.S. 178, 186 (1933) ("An inventor deprives the public of nothing which it enjoyed before his discovery, but gives something of value to the community by adding to the sum of human knowledge."); State Indus., Inc. v. A.O. Smith Corp., 751 F.2d 1226, 1236 (Fed. Cir. 1985) ("One of the benefits of a patent system is its so-called 'negative incentive' to 'design around' a competitor's products, even when they are patented, thus bringing a steady flow of innovations to the marketplace.").

188. *See* Dorothy A. Winsor, *Engineering Writing/Writing Engineering*, 41 COLLEGE COMPOSITION & COMM. 58, 58 (1990) ("We talk, therefore, of language, and particularly written language, as a tool for constructing ideas, of a given field of knowledge being created by the interaction of its practitioners' texts, and of knowledge itself, including scientific knowledge, as rhetorically shaped.").

Gaining a better understanding of the invention also allows the patent attorney to draft claims that give the inventor and her company the necessary "shelf space" so they can effectively commercialize the invention.[189] Patent protection incentivizes invention because it gives the inventor an ability to recoup her research and development costs.[190] Patents do this by giving the patent holder the ability to exclude competitors and control price.[191] The less understanding the patent attorney has of the invention, the less likely she will draft claims that facilitate this purpose of patents and, in turn, are valuable to her client. Patenting is as much a business decision as it is a legal one. By giving the patent attorney more information about the invention and its use prior to filing, the doctrine allows the patent application to better align with the invention's intended commercial use.

2. *Increases the Care Taken in Drafting the Application and Related Correspondence*

The doctrine also prompts the patent attorney to exercise more care in drafting the patent application and correspondence with the USPTO. The inequitable conduct doctrine penalizes applicants for misleading the USPTO with false statements in patent applications or other correspondence.[192] The choice of a single word can make the difference between full disclo-

189. *See* Kitch, *supra* note 130, at 276–77; *see also* Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 871 (1990).

190. Actually, it is the expectation of patent protection that provides the incentive. *See* Christopher A. Cotropia, *"After-Arising" Technologies and Tailoring Patent Scope*, 61 N.Y.U. ANN. SURV. AM. L. 151, 169–71 (2005).

191. *See* Gideon Parchomovsky & Peter Siegelman, *Towards an Integrated Theory of Intellectual Property*, 88 VA. L. REV. 1455, 1466–67 (2002). Parchomovsky and Siegelman state:

> [A]bsent legal protection, competitors would copy such works without incurring the initial costs of producing them . . . . [and, therefore,] [u]nauthorized reproduction would drive down the market price to the cost of copying, original authors and inventors would not be able to recover their expenditures on authorship and R&D, and, as a result, too few inventions and expressive works would be created."

Id. at 1467.

192. *See* Cargill, Inc. v. Canbra Foods, Ltd., 476 F.3d 1359, 1363 (Fed. Cir. 2007) (stating that "an affirmative misrepresentation of material fact" or "submitt[al of] false material information" can be inequitable conduct).

sure and misrepresentation.[193] As a result, patent attorneys are likely to exercise more care when drafting their communications with the USPTO. Patent attorneys ensure that everything discussed relevant to patentability is true and that nothing could be construed as a misrepresentation. This leads to a more accurate and readable public record, multiplying the benefits of a high quality patent application discussed above.

The current intent standard dampens the level of care required by the doctrine, however. The patent attorney must specifically intend to make a false statement or mislead the patent examiner; gross negligence is not enough.[194] However, misrepresentations are still considered material under inequitable conduct. Their appearance in an application or response to an office action will likely prompt at least an allegation of inequitable conduct. This potential exposure at least affects the behavior of some patent attorneys, making them more careful in what they write.[195]

IV. CURRENT INEQUITABLE CONDUCT DOCTRINE RESULTS IN OVERCOMPLIANCE

The inequitable conduct doctrine can only increase patent quality through compliance by patent applicants. The doctrine does this, like most other legal doctrines, by imposing certain legal and extra-legal costs on those who do not comply. In their current form, however, these costs are extremely high and instead of causing compliance, they prompt overcompliance.

193. *See* Purdue Pharma L.P. v. Endo Pharm. Inc., 438 F.3d 1123, 1132 (Fed. Cir. 2006) (finding material the use of the word "discovery" to characterize the invention while it was merely an "insight"—no test had actually been performed).

194. *See* Kingsdown Med. Consultants, Ltd. v. Hollister Inc., 863 F.2d 867, 872–73 (Fed. Cir. 1988) (en banc).

195. *See, e.g.*, Stephen K. Sullivan, *Drafting a Biotechnology Patent Specification*, *in* 16TH ANNUAL ADVANCED PATENT PROSECUTION WORKSHOP: CLAIM DRAFTING & AMENDMENT WRITING, at 135, 145 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 9100, 2006) (instructing that, in light of *Hoffman-La Roche, Inc. v. Promega Corp.*, 323 F.3d 1354, 1363–64 (Fed. Cir. 2003), which found inequitable conduct "where prophetic examples were presented in the past tense, as if they had actually been performed," an attorney should "[b]e careful with word tense"). While it is true that inequitable conduct is likely to be alleged regardless of the patent attorney's actions, being more careful will have an impact on the number of false positives—improper findings of inequitable conduct.

Failure to comply with the doctrine renders the whole patent and, potentially, related patents, unenforceable.[196] A finding of inequitable conduct also exposes the patentholder to antitrust liability and liability for attorney fees.[197] The doctrine imposes specific costs on the patent attorney too, ranging from disciplinary action from the USPTO and the applicable state bar to malpractice liability to irreparable damage to the attorney's reputation.[198] All these costs are high in absolute terms and become even greater when compared to the low costs of overcompliance—simply submitting all information in one's possession to the USPTO, regardless of its materiality. This dramatic cost differential combined with uncertainty inherent in the inequitable conduct doctrine leads to overcompliance. This line of analysis is explored in detail below.

A. Breadth of Remedies Makes Non-Compliance Extremely Costly

Initiating a patent lawsuit exposes the patent holder to a range of liabilities. The patentee may, if unsuccessful, be saddled with the other side's attorney fees under the fee-shifting statute.[199] More significantly, the patentee may lose any of the asserted patent claims if they are found to be invalid. A final judgment of invalidity prevents the patentee from successfully asserting the now invalid claim against other infringers.[200] Thus, by asserting particular patent claims in a given lawsuit, the patentee is putting those claims at risk.[201] Patentees have to weigh the potential benefits of

196. *See* Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1365 (Fed. Cir. 2008) ("[T]he penalty for inequitable conduct is so severe, the loss of the entire patent even where every claim clearly meets every requirement of patentability.").

197. *See* Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 177 (1965) (discussing antitrust liability for asserting a patent procured through inequitable conduct); Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1380 (Fed. Cir. 2001) (concluding that a finding of inequitable conduct results in an "exceptional" case, resulting in an award of attorney fees).

198. *See* Kelly Merkel, *How to Stump a Corporate Lawyer: Means of Effective Legal Risk Management for IP Counsel*, 1 J. LEGAL TECH. RISK MGMT. 1, 3 (2006) ("A finding of inequitable conduct can therefore open the door for suits by the client against the practitioner for breach of fiduciary duty and malpractice, even years after prosecution has ended.").

199. *See* 35 U.S.C. § 285 (2006) (awarding the "prevailing party" attorney fees in "exceptional cases").

200. *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 330–31 (1971) (holding that once the claims of a patent are held invalid, the patent holder is collaterally estopped from enforcing the claim against another party).

201. *See* Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 102–03 (1993) (instructing courts to rule on invalidity regardless of the outcome on infringement).

enforcing their patent—monetary damages and an injunction[202]—with the risk of losing patent claims and paying attorney fees. A patentee may pay for high cost litigation with nothing to show for it—no finding of infringement or remedies because the patent is adjudged unenforceable.[203]

As compared to invalidity, the inequitable conduct doctrine places the patent holder in far less control over the downside of enforcing a patent claim. Invalidity affects only those asserted patent claims.[204] If a patentee does not want to risk the value in a particular claim, she simply does not assert it. Inequitable conduct, in contrast, causes the assertion of a single patent claim to expose the whole patent, and potentially all related patents, to a finding of unenforceability.[205] Sure, she still has control on a broader level as to what patent families are exposed. But her control is not nearly as fine as compared to her ability to cabin the impact of invalidity.

The costs resulting from a finding of inequitable conduct also include liability for attorney fees and exposure to antitrust liability. The patent statutes give courts the ability to award a successful party its attorney fees if the case is "exceptional."[206] A finding of inequitable conduct typically makes the case exceptional[207] and results in a fee award, which can reach

---

202. *See* 35 U.S.C. §§ 283, 284 (2006).

203. *See* AM. INTELLECTUAL PROP. LAW ASS'N, AIPLA REPORT OF THE ECONOMIC SURVEY I-90 (2007) [hereinafter AIPLA REPORT] (reporting that average cost taking a patent infringement case with less than one million dollars at risk through discovery being $461,000).

204. *See* DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1372 (Fed. Cir. 2006) (noting that invalidity is determined on a "claim-by-claim basis").

205. Fox Indus., Inc. v. Structural Pres. Sys., Inc., 922 F.2d 801, 803–804 (Fed. Cir. 1990) (stating that inequitable conduct "may render unenforceable all claims which eventually issue from the same or a related application"); *see also* Consol. Aluminum Corp. v. Foseco Int'l Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990) (finding that the inequitable conduct during prosecution of one patent "permeated the prosecution of the other" patents-in-suit). Under certain circumstances, inequitable conduct will not spread. *See, e.g.*, Baxter Int'l, Inc. v. McGaw, Inc., 149 F.3d 1321, 1331–32 (Fed. Cir. 1998). The court in Baxter stated:

> [W]here the claims are subsequently separated from those tainted by inequitable conduct through a divisional application, and where the issued claims have no relation to the omitted prior art, the patent issued from the divisional application will not also be unenforceable due to inequitable conduct committed in the parent application.

Id. at 1332.

206. 35 U.S.C. § 285 (2006).

207. *See* Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1380 (Fed. Cir. 2001) ("The prevailing party may prove the existence of an exceptional case by showing: inequitable conduct before the PTO . . . .").

well into the seven figure range.[208] The assertion of a patent obtained by inequitable conduct may also be subject to antitrust liability.[209] "If a patentee asserts a patent claim and the defendant can demonstrate the required fraud on the PTO, as well as show that 'the other elements necessary to a [Sherman Act] § 2 case are present,' the defendant-counterclaimant is entitled to treble damages under the antitrust laws."[210]

B. Doctrine's Specific Impact on Patent Attorneys Makes Non-Compliance Even More Costly

A finding of inequitable conduct does not directly result in personal liability for the patent attorney.[211] Nor does such a finding necessarily include a factual holding that the patent attorney was at fault.[212] Inequitable conduct can occur where the attorney disclosed all she knew, but one of the other parties under the duty intentionally failed to come forward with material information.[213]

However, the patent attorney is invariably at the center of any inequitable conduct inquiry. The patent attorney acts as the hub for the information flow from inventor and related parties to the USPTO. She assists in drafting the patent application and correspondence with the examiner. She typically signs all correspondence with the USPTO.[214] Her name also appears on the front of the issued patent.[215] Finally, the patent attorney is the one who best understands the legal obligations set forth by the inequitable conduct doctrine and usually communicates these obligations to the other relevant parties. So any non-disclosure, even if not her fault, has the patent attorney's fingerprints on it. As a result, the patent attorney is usually the first person noticed for deposition on the inequitable conduct issue and almost always mentioned by name in any inequitable conduct decision.[216]

---

208. *See* AIPLA REPORT, *supra* note 203, at 1-93.

209. *See* Dippin' Dots, Inc. v. Mosey, 476 F.3d 1337, 1346–47 (Fed. Cir. 2007).

210. Walker Process Equip., Inc. v. Food Mach. & Chem. Corp., 382 U.S. 172, 176–77 (1965).

211. *See, e.g.*, Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1365 (Fed. Cir. 2008) (explaining that the focus of the doctrine is rendering the patent at issue unenforceable).

212. *See* 37 C.F.R. § 1.56 (a), (c) (2008) (detailing the various individuals beyond the attorney who are under a duty to disclose).

213. *See id.*

214. *See* 37 C.F.R. § 1.34 (2008).

215. *See* 37 C.F.R. § 1.51(c)(v) (2008).

216. *See, e.g.*, McKesson Info. Solutions, Inc. v. Bridge Med., Inc., 487 F.3d 897, 903 (Fed. Cir. 2007) (referring to the prosecuting attorney by first and last name); Golden Hour Data Sys., Inc. v. emsCharts, Inc., No. 2:06 CV 381, 2009 WL 781334, *2 (E.D.

The doctrine truly puts "the person on trial, not the patent," and that person is the patent attorney.[217]

The doctrine can result in personal legal costs for the patent attorney involved. A failure to comply with doctrine can form the basis for a disciplinary action before the USPTO.[218] The patent attorney can also lose her license to practice before the USPTO.[219] The matter may be referred to her state bar, where the patent attorney may be disciplined or even lose her general license to practice law.[220] A judgment of inequitable conduct can also form the basis of a malpractice claim.[221]

The personal costs can also be extra-legal. Allegations of inequitable conduct implicate a patent attorney's professionalism and reputation in the legal community at large and before the USPTO, where she is a repeat player.[222] This reputation and personal liability exposure are so important to patent attorneys that some have even moved to personally intervene in inequitable conduct cases. Recently, in Nisus Corp. v. Perma-Chink Systems, Inc., a patent attorney who prosecuted the patent at issue filed a motion to intervene in the patent infringement litigation and asked the district court to reconsider the conclusion of inequitable conduct.[223] He specifically challenged the court's "characteriz[ation] of his behavior in the court of the prosecution as constituting inequitable conduct."[224]

Tex. Mar. 23, 2009) (identifying both the prosecuting patent agent and supervising attorney by name).

217. Chisum, *supra* note 9, at 279; *see also* Aventis Pharma S.A. v. Amphastar Pharm., Inc., 525 F.3d 1334, 1349–50 (Fed. Cir. 2008) (Rader, J., dissenting) (noting that the "allegation of inequitable conduct opens new avenues of discovery" targeted at the patent attorney, not the patent).

218. See Edwin S. Flores & Sanford E. Warren, Jr., Inequitable Conduct, Fraud, and Your License to Practice Before the United States Patent and Trademark Office, 8 TEX. INTELL. PROP. L.J. 299, 314–15 (2000).

219. *Id.*

220. *Cf. id.*

221. *See* David Hricik, How Things Snowball: The Ethical Responsibilities and Liability Risks Arising from Representing a Single Client in Multiple Patent-Related Representations, 18 GEO. J. LEGAL ETHICS 421, 459 (2005).

222. *See* Migliorini, *supra* note 120, at 260 ("No client is worth the risk to one's personal integrity, reputation, and license to practice before the Bar" by committing inequitable conduct); *see also Aventis*, 525 F.3d at 1349–50 (Rader, J., dissenting) (indicating how allegations of inequitable conduct "impugns the integrity of the patentee, its counsel, and the patent itself").

223. 497 F.3d 1316 (Fed. Cir. 2007).

224. *Id.* at 1318.

C. High Cost of Non-Compliance, Uncertainty in Court Decisions, and Low Cost of Overcompliance Results in Overcompliance

Typically, law shapes behavior by making the costs of non-compliance outweigh any benefits.[225] Law relies on both legal and extra-legal costs to incentivize individual compliance.[226] As a result, rational, risk-neutral individuals do exactly what the legal rule requires to avoid engaging in behavior that is, on balance, detrimental to that individual. Applying this to the inequitable conduct doctrine, the doctrine uses certain legal and extra-legal costs to prompt patent applicants to disclose material information to the USPTO. Rational, risk-neutral patent applicants therefore respond by disclosing material information.[227]

Legal rules almost always have some inherent ambiguity, either because the scope of the rules is uncertain, or because the likelihood of enforcement is not absolute. Individuals may not know ex ante exactly what they must do to comply with a given doctrine. Inequitable conduct is no different. It, like most patent doctrines, has some ambiguities.[228] Determinations of whether a piece of information is material are difficult.[229] Materiality is a multi-step inquiry, involving the determination of each patent claim's meaning, analysis of the content of the information in question, and a judgment as to whether the information is relevant to issues of novelty, nonobviousness, or the disclosure requirements.[230] Whether the nec-

---

225. *See, e.g.*, Roger D. Blair & Thomas F. Cotter, *An Economic Analysis of Damages Rules in Intellectual Property Law*, 39 WM. & MARY L. REV. 1585, 1617–19 (1998) ("In order to deter infringement, we must have a set of rules that renders an infringement unprofitable.").

226. Legal costs are those costs, such as damage awards or injunctions that are imposed directly by the law—the remedial regime. Extra-legal costs are those costs, such as reputation or guilt, that do not derive directly from a statute or legal rule.

227. If an applicant is risk-adverse, they will overcomply even if what is required for exact compliance is clear. If an applicant is risk-seeking, the opposite is true—undercompliance. *See* James Gibson, *Doctrinal Feedback and (Un)reasonable Care*, 94 VA. L. REV. 1641, 1651 (2008) (noting that while speed limits provide bright-line liability rule, "[a] risk-averse driver will drive more slowly, and a risk-seeking driver will drive more quickly").

228. The focus is on the ambiguity of the rule, not its enforcement. The patent holder control its enforcement, opening herself up to such a defense when asserting her patent.

229. *See* Alpa Gandhi, *The Fate of the Rule 56 Materiality Standard in the Inequitable-Conduct Inquiry*, 33 AIPLA Q.J. 125, 127–28 (2005) (describing the uncertainty in the materiality standard).

230. Even the first step of this process has been empirically proven to be incredibly uncertain. Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1097–99 (2001) (finding a 50% reversal rate for claim interpretations).

cessary subjective intent is present is often ambiguous, particularly given that intent is proven in court through circumstantial evidence.[231] An applicant cannot predict with absolute certainty how a court will decide these requirements given their fact-dependency.

Patent attorneys, and others under the duty to disclose, are faced with an array of choices as to how to comply. For example, what type of information should they submit to the USPTO? And under what circumstances should they submit such information? They essentially must make a choice as to whether they err on the side of undercomplying or overcomplying—either of which, depending on the distribution of uncertainty around the legal rule, has a certain probability of avoiding liability.[232] Undercompliance is typically chosen where there are, on net, substantial benefits to undercompliance that outweigh the risk and impact of being found liable.[233] In contrast, an individual chooses to overcomply where the costs of overcompliance are small compared to the costs of being found liable.[234]

As previously discussed, the inequitable conduct doctrine makes a finding of non-compliance extremely costly.[235] The doctrine extracts both legal and extra-legal costs on both the patent holder and the patent attorney. In comparison, the costs associated with overcompliance are minimal. The most common method of overcomplying under the current legal regime is to submit everything of even remote relevance in one's possession to the USPTO.[236] Even if the information is not material to the claimed invention, disclosure absolves any potential violation of the doctrine.[237]

---

231. *See* D. Ward Hobson Jr., Reforming the Patent System: A Closer Look at Proposed Legislation, 3 OKLA. J. L. & TECH. 29 (2006).

232. John E. Calfee & Richard Craswell, *Some Effects of Uncertainty on Compliance with Legal Standards*, 70 VA. L. REV. 965, 971–74 (1984) (demonstrating the different distribution of uncertainty and describing the possible causes of over and undercompliance).

233. *Id.* at 981.

234. *Id.* at 981–82.

235. *See supra* Part IV.

236. *See* Thomas, *supra* note 17, at 315 ("Where the applicant is already well informed of the prior art, the specter of inequitable conduct too often causes applicants to submit virtually every reference of which they are aware.").

237. Moreover, the disclosure of non-material or cumulative references imposes no penalty on the disclosing party. *See* Molins PLC v. Textron, Inc., 48 F.3d 1172, 1184 (Fed. Cir. 1995) (burying a material reference in a voluminous submission of information is not actionable unless there is specific intent to hide the reference).

The common mantra is "when in doubt, disclose."[238] Even Federal Circuit case law, particularly recent case law, gives this advice.[239]

But every quanta of information submitted has its costs. The patent applicant must submit an IDS with the information, which must include a listing of each reference being submitted and identify for each reference, where relevant, the "publisher, author (if any), title, relevant pages of the publication, date, and place of publication."[240] The applicant is also required to submit a legible copy of any reference that is not another U.S. patent or published U.S. patent application.[241] If the applicant needs to disclose a piece of art that is in a foreign language, the applicant must also submit a "concise explanation of the relevance" of the foreign language reference.[242] Depending on the timing of the information's discovery, the applicant may have to pay the fees associated with continuing prosecution to allow the examiner to consider the newly submitted information.[243]

These costs, however, are minuscule compared to losing the enforceability of a valid patent, or possibly a whole family of valid patents. And when viewed from the patent attorney's perspective, overcompliance looks even more inviting. The patent attorney, while getting some satisfaction (and presumably repeat business) from successfully obtaining a patent, obtains no personal gain from the issuance of the patent. In contrast, she has significant concerns that getting caught up in an inequitable conduct claim will damage her livelihood. Added to this is the fact that overcompliance generates more legal fees. The attorney gets to charge her client for the time required to submit the additional information and continue prosecution if necessary. So, even if overcompliance becomes mar-

238. *See* Thomas C. Fiala & Jon E. Wright, *Preparing and Prosecuting a Patent That Holds Up in Litigation*, *in* PATENT LITIGATION 2006, at 515, 547 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 9001, 2006) ("If it is unclear whether information is prior art, whether it is 'material', or whether it is cumulative to information already submitted to the USPTO, the information should be disclosed so that the examiner can make the determination.").

239. *See* Praxair, Inc. v. ATMI, Inc., 543 F.3d 1306, 1313–14 (Fed. Cir. 2008) (stating that an applicant must have a "credible good faith explanation for the withholding"); Critikon, Inc. v. Becton Dickinson Vascular Access, Inc., 120 F.3d 1253, 1257 (Fed. Cir. 1997) (noting that doubts concerning whether the information is material should be resolved in favor of disclosure).

240. 37 C.F.R. § 1.98 (2008).

241. § 1.98(2).

242. § 1.98(3)(i).

243. The costs for filing a continuation in these instances, called a Request for Continued Examination ("RCE"), includes a filing fee and accompanying attorney billable hours to put the filing together. *See* 35 U.S.C. § 132 (2006); 37 C.F.R. § 1.98; 37 C.F.R. § 1.114 (2008).

ginally expensive, patent attorneys may still push clients to overcomply because of their self-interest in such a course of action.

V. OVERCOMPLIANCE CAUSED BY THE INEQUITABLE CONDUCT DOCTRINE REDUCES PATENT QUALITY

Overcompliance puts any improvement in patent quality created by the inequitable conduct doctrine at risk. It overloads the examiner with information that, in most instances, is immaterial. The examiner, with an extremely small amount of time to examine highly technical subject matter, does not process all of the submitted information or ignores it altogether, erasing any quality gains. In fact, the doctrine may end up doing more harm than good. Overcompliance can so stress the examiner as to impair her ability to make a sound decision based on the information she does process. Overcompliance further prices inventors out of the patent system, causing its own set of societal harms. These harms from overcompliance are discussed below.

A. Overcompliance Causes Detrimental Information Overload

The inequitable conduct doctrine is focused on getting quality information before the USPTO. The doctrine requires only material information be submitted. The patent applicant is not required to submit "information which is not material to the patentability of any existing claim."[244] The doctrine places no weight on the quantity of information placed before the patent examiner. In fact, the doctrine invites the applicant to thin her submissions by not requiring the submittal of cumulative information.[245]

However, as established above, the doctrine incentivizes the patent applicant to err on the side of quantity.[246] Applicants make the safe play and overcomply. They disclose all of the information within their possession that is remotely relevant to the claimed subject matter. The doctrine, therefore, causes examiners to receive additional quantities of information that are increasingly immaterial to the task at hand—determining patentability.

The patent examiner, with this additional information generated by overcompliance, can experience information overload. Information overload occurs when a decision-maker cannot naturally process the information in their possession in an allotted time without a high likelihood of

244. 37 C.F.R. § 1.56(a) (2008).
245. *See supra* Section II.B.
246. *See supra* Part IV.

making mistakes.[247] The chances of overload are particularly high when the information is highly technical or complex.[248] Examiners are overworked, with an increasing number of patent applications to examine in an ever-decreasing amount of time.[249] And the information they must process—the application and prior art—is technical by definition. Adding information submitted by the applicant to the mix, particularly large amounts of information from those who overcomply, plays a significant part in overloading the examiner.[250]

Information overload can negate any benefit in patent quality gained by the inequitable conduct doctrine. When overloaded, an individual has difficulty identifying information relevant to the decision-making task at hand.[251] An individual may overlook the most critical information.[252] The overloaded examiner must choose where to allocate her finite examining time. She may have to choose which of the submitted references she will read.[253] In the overload situation, the submitted information becomes increasingly immaterial, meaning the examiner will waste at least some of her time reading non-material information.[254] The bigger the haystack, the more lost a needle becomes.

Information overload can even cause the examiner to become so overwhelmed that she does not even attempt to sift through the applicant's submissions.[255] She ignores them completely. The benefits of the additional, relevant information the doctrine generates are lost in the sea of information.

---

247. Naresh K. Malhotra, Reflections on the Information Overload Paradigm in Consumer Decision Making, 10 J. CONSUMER RES. 436, 437 (1984).

248. *See* S.C. Schneider, *Information Overload: Causes and Consequences*, 7 HUMAN SYS. MGMT. 143, 144 (1987).

249. *See supra* Section III.A.1.

250. *See, e.g.*, Noveck, *supra* note 140, at 148-49 (noting that successful examination reforms need to include mechanism to prevent "overwhelming the patent examiner with information").

251. *See* Paul A. Herbig & Hugh Kramer, *The Effect of Information Overload on the Innovation Choice Process*, 11 J. OF CONSUMER MARKETING 45, 45 (1994).

252. *Id.*

253. *See* Thomas, *supra* note 17, at 315 ("Coupled with the severe time constraints facing the examining corps, this overload of information often allows no more than a cursory review of all but a few references that initially appear the most promising.").

254. The concept that examiners have a definite saturation point is further supported by recent empirical research that found the likelihood of receiving a rejection plateaus at twenty references. *See* Crouch, *supra* note 164 (finding the percentage likelihood hovering around 40% once twenty references is reached).

255. *Id.*

The harm from information overload can go beyond wiping out the doctrine's quality gains. In an attempt to process all of the information, the examiner simplifies her processing strategy.[256] This results in poorer decisions because fidelity is lost across the board—none of the information is properly processed.[257] She loses her ability to identify the relationship between details and her overall perspective on the decision at hand.[258] She becomes stressed, confused, and generally cognitively strained, impairing her ability to think analytically.[259] More becomes less.

Empirical studies indicate that this analysis holds true even if the additional information is as material as that already submitted.[260] That is, the increase in quantity still overwhelms the decision-maker even if the additional information is of high quality. The materiality of the additional information is irrelevant to the information overload scenario. The overwhelming volume of the information degrades the examiner's ability to reach a proper decision.

B. Results in Socially-Wasteful Costs

As previously stated, the costs of overcompliance are small when compared to the costs of being found non-compliant. To the patentee and the attorney, spending a few thousand dollars, even tens of thousands of dollars, and delaying the issuance of the patent is miniscule compared to losing a full family of patents, paying attorney fees, facing exposure to antitrust liability, risking possible bar discipline, and so on. However, this is the private, internal cost-benefit analysis.

The answer to the question of costs is very different when looked at in terms of the big picture. That is, is this spending beneficial to the public? The answer is no, given that overcompliance artificially increases the price of patent procurement, and the extra dollars spent going beyond what is required under the inequitable conduct doctrine add nothing to the quality of the patent examination. In fact, as discussed above, the submission of additional information, particularly immaterial information, actually ham-

256. *See* Naresh K. Malhotra, *Information Load and Consumer Decision Making*, 8 J. CONSUMER RES. 419, 427 (1982) (noting that information overload causes individuals to "adopt simplifying information-processing strategies").

257. *See* Kevin Lane Keller & Richard Staelin, *Effects of Quality and Quantity of Information on Decision Effectiveness*, 14 J. CONSUMER RES. 200, 212 (1987) (concluding that overload "degrade[s] choice accuracy").

258. *See* Schneider, *supra* note 248, at 145.

259. *See* Malhotra, *supra* note 256, at 427.

260. *See* Keller & Staelin, *supra* note 257, at 212.

pers the examination process by creating information overload.[261] Over-compliance is socially wasteful spending.

These additional costs can also create another harm—pricing out potential patentees. The costs of compliance are not significant. In most cases, they may constitute, at most, one percent of the total cost of obtaining a patent.[262] However, price tolerances for patenting can be extremely sensitive, especially for individual inventors or small companies.[263] Each increase in the cost of patenting can deter these would-be inventors from inventing altogether, or, prompt them to choose trade secret protection in lieu of patenting.[264] Both of these options are disadvantageous, possibly robbing society of the next great invention or hiding the details of that invention from the general public.

One option for these individuals, for which compliance is too costly, is to undercomply.[265] But given that the patent attorney has significant individual interests at stake, the attorney is unlikely to play along. In fact, the professional advice to patent attorneys is to "avoid being pressured by clients to compromise [their] ethical duties."[266] Furthermore, the cost of compliance with the doctrine is likely not transparent to the cost-sensitive applicant. The cost is simply included in initial quote for the cost of getting a patent. The small inventor has no practical choice to forgo compliance.

VI. USING THIS FRAMEWORK TO REFORM THE INEQUITABLE CONDUCT DOCTRINE

The benefits of constructing a modern framework for the inequitable conduct doctrine are two-fold. First, the framework identifies ways in which the doctrine can be beneficial and detrimental. From there, reforms can be targeted, attempting to maximize the positive aspects of the doctrine and minimize the negative ones. Second, the framework provides a workable model upon which current concerns and suggested reforms can be vetted. And given that the framework established is utilitarian based, it

---

261. *See supra* Section V.A.

262. *See* AIPLA REPORT, *supra* note 203, at 1-78 (finding the average cost of obtaining a patent between $6,600-$15,000).

263. Patent law has recognized this fact, establishing a separate fee schedule for "small entit[ies]." *See, e.g.*, 37 C.F.R. § 1.16(a) (2008) (setting forth lesser filing fees for small entities).

264. *See, e.g.*, Wagner, *supra* note 143, at 236–37 (recognizing that increasing the costs of prosecution "decreases the incentives produced by the patent system").

265. *See* Calfee & Craswell, *supra* note 232, at 981–82.

266. Migliorini, *supra* note 120, at 260.

is much easier to address recent criticisms, which all have a utilitarian bent.

This Part uses the analysis previously performed to do both of these things. Reforms are initially suggested to remedy the overcompliance currently provoked by the doctrine. The extent of the remedies for violating the doctrine needs to be reduced, a specific intent standard separate from materiality must be maintained, and the submission of immaterial and cumulative information discouraged. The positive aspects of the doctrine should, however, not be lost, and so, the materiality standard must remain broad.

Next, the Article's framework is applied to the two most common criticisms regarding the doctrine. The duties under the doctrine should not be expanded to include a duty to search or provide relevancy statements. Such duties are likely to overload the examiner, price inventors out of the patent system, shift the burdens of examination away from a low cost provider, and destroy the benefits of independent review. Finally, if the reforms proposed in this Part are adopted, a reduction in litigation costs follows. Thus, there is no need for any specific reforms to address this perceived problem.

A. Reducing the Likelihood of Overcompliance

The cost of non-compliance can be reduced, the ambiguity surrounding the doctrine can be minimized, or the costs of overcompliance can be increased. All three options are suggested below.

1. Minimize the Remedy

The current remedy is incredibly severe—truly an "atomic bomb."[267] One way of reducing the amount of over compensation is to minimize the costs associated with non-compliance. It is the high cost of not complying that, in part, drives applicants to overcomply.[268] The question is to what extent should the costs of non-compliance be reduced. How far should the available legal remedies and associated legal and extra-legal costs be reigned in?

A good place to start is to tie the legal remedy with the harm nondisclosure does to patent quality. Failure to disclose material information hampers the examination of those patent claims to which the material is relevant.[269] The remedy should be adjusted accordingly. No longer should

267. Aventis Pharma S.A. v. Amphastar Pharm., Inc., 525 F.3d 1334, 1349 (Fed. Cir. 2008) (Rader, J., dissenting).

268. *See supra* Part IV.

269. *See supra* Part III.

a finding of inequitable conduct render the whole patent, and possibly related patents, unenforceable. The remedy should mimic a finding of invalidity—only those claims to which the undisclosed information is material should be rendered unenforceable. The patent holder can then control her exposure by subjecting only asserted claims to a finding of unenforceability.

The legal remedies could be reduced further, taking the form of a monetary remedy, for example. A finding of inequitable conduct could result in a fine or the damage award for infringement could be reduced. The problem with swinging this far in the other direction is that, by taking the patent out of harms way, the applicant may undercomply. The fine or potential reduction in damages could simply be folded in with the cost of enforcing the patent. And to make monetary damages effective, the amount would have to be adjusted in light of the potential upside—monetary and injunctive remedies—to the patent holder benefiting from successful enforcement. This introduces uncertainty into the remedy regime, which makes it even more difficult to predict the extent to which applicants will comply.[270] Adjusting the monetary remedy is an imperfect way of getting at the patent's value to the patent holder. If that is the goal, the simple solution is to find the asserted claims unenforceable.

A final possible remedy is to give district courts the discretion in determining the remedy.[271] The court can vary the equitable relief accordingly, from finding the whole family of patents unenforceable to denying injunctive relief. Discretion allows the district court to fine-tune the remedy to the facts of a particular case. But *ex ante*, when the applicant is trying to determine how to comply, the applicant has no idea what remedy a judge will choose. This introduces uncertainties of its own, which increases the variation in the levels of compliance. Furthermore, if the extreme remedy is still in play—unenforceability of a group of patents—rational applicants are still likely to overcomply.

2. *Maintain a Specific, Independent Standard for Intent*

The high costs unique to the patent attorney—potential disbarment, malpractice liability, and damage to reputation—may cause overcompliance to continue even if the remedies are reduced. The best way to reduce these attorney-specific costs is not through just changing the costs of non-compliance, but reducing the uncertainty in the doctrine, particularly as it pertains to the attorney. As the target—how to comply with the doc-

270. *Cf.* Calfee & Craswell, *supra* note 232, at 971–72.

271. This change was proposed in the 2007 Patent Reform Act. *See* Patent Reform Act of 2007, H.R. 1908, 110th Cong. § 12(c)(4) (2007).

trine—becomes clearer, it becomes easier for patent applicants, and their attorneys, to tune their response to actual compliance.[272]

The intent requirement in the inequitable conduct doctrine is the best candidate to reduce ambiguity. The materiality requirement is too complex for any reforms to provide much certainty because the standard for materiality *and* the underlying concept of patentability would need to be cleared up.[273] Intent, in contrast, is a familiar doctrine, common across multiple legal fields. The clearer the standard of intent under the inequitable conduct doctrine ex ante, the easier it will be for patent attorneys to feel confident that they will be found in compliance.

The "bleed through" from the materiality finding is responsible for most of the intent doctrine's current ambiguity. The recent conflict at the Federal Circuit over the intent requirement is evidence of this ambiguity.[274] A finding of high materiality—the information was very material to patentability—is used as conclusive circumstantial evidence that the applicant intended to deceive the patent examiner.[275] This type of analysis reduces the inequitable conduct inquiry into nothing more than a determination of materiality. It also makes it difficult for applicants, and their attorneys, to be confident that they are free from liability if they actually believe something is not material or if they unintentionally overlook information in their possession. Even if these facts are true, and they did not intend to deceive the USPTO, inequitable conduct will likely be found because of bleed through.

---

272. *See* Calfee & Craswell, *supra* note 232, at 971 (showing how the distribution of possible responses grows narrower as certainty reduces, minimizes the magnitude of possible overcompliance).

273. For example, the standard for nonobviousness is very unclear after the Supreme Court's recent decision in *KSR*. *See* Tun-Jen Chiang, *A Cost-Benefit Approach to Patent Obviousness*, 82 ST. JOHN'S L. REV. 39, 53–54 (2008).

274. *Compare* Star Scientific, Inc. v. R.J. Reynolds Tobacco Co., 537 F.3d 1357, 1366–67 (Fed. Cir. 2008) (stating that inferences of intent should go in the favor of the applicant and no finding of inequitable conduct), *with* Praxair, Inc. v. ATMI, Inc., 543 F.3d 1306, 1313–14 (Fed. Cir. 2008) (explaining that it's the applicant's burden to rebut an inference of intent with affirmative, credible evidence of good faith).

Judge Linn, in a recent concurrence, called for an en banc review of the intent standard in order to clarify the standard and identify acceptable evidence to prove intent. *See Larson Mfg.*, 2009 WL 691322, at *20.

275. Purdue Pharma L.P. v. Endo Pharm. Inc., 438 F.3d 1123, 1133–35 (Fed. Cir. 2006) ("[A] patentee facing a high level of materiality and clear proof that it knew or should have known of that materiality, can expect to find it difficult to establish 'subjective good faith' sufficient to prevent the drawing of an inference of intent to mislead.") (quoting Critikon, Inc. v. Becton Dickinson Vascular Access, Inc., 120 F.3d 1253, 1257 (Fed. Cir. 1997)).

This ambiguity leads to overcompliance. Applicants second-guess themselves, submitting information even if they personally believe the information is not material.

To resolve this ambiguity and make the lack of intent a true safe haven, a specific intent standard that is distinct from materiality needs to be adopted. The 2007 Patent Reform Act contained such a provision.[276] With such a requirement, patent applicants, and particularly attorneys, can better tailor their conduct to meet the doctrine's requirements. If they do not intend to deceive the USPTO—they truly believe that undisclosed information is not material, for example—they can be pretty sure they will not be found liable.

This solution does not create absolute certainty. Circumstantial evidence is still available to establish intent, and it should be. If the doctrine required direct evidence, it would be near impossible to establish inequitable conduct, resulting in massive undercompliance.[277] However, removing the ability of accused infringers to piggyback an intent finding based on materiality still reduces a significant amount of the ambiguity in the doctrine.[278] The more certain a path towards compliance, the less one overcomplies. Establishing a truly independent intent standard goes a long way in providing that certainty.

3. *Prohibit the Submission of Cumulative and Non-Material Art*

Even with a reduction in costs and a clearer legal standard, the incentive to overcomply likely remains. This incentive does not come solely from fear of the costs of non-compliance. Instead, it is also driven by the fact that overcompliance—submitting all information in the applicant's possession without reviewing for materiality—can still be the cheapest way to comply. Reading and evaluating a reference is the most attorney intensive, and thus expensive, part of submitting information to the USPTO. Thus, even if costs of non-compliance are reduced, applicants may still overcomply because it is the least costly type of compliance. Information overload, therefore, continues.

---

276. *See* H.R. 1908 § 5(c)(3) (2007) ("[S]pecific facts beyond materiality of the information misrepresented or not disclosed must be proven that establish the intent of the person to mislead or deceive the examiner by the actions of that person.").

277. *See* Hoffman-La Roche Inc. v. Lemmon Co., 906 F.2d 684, 688 (Fed. Cir. 1990) ("[I]ntent usually can only be found as a matter of inference from circumstantial evidence.").

278. Adoption of a presumption of no intent and the resolution of multiple inferences in favor of a finding of no intent is a move in the right direction. The Federal Circuit's recent articulation of the intent standard in Star Scientific follows such an approach. *See Star Scientific*, 537 F.3d at 1366–67.

Currently, an applicant who overloads the USPTO with immaterial or cumulative information does not commit inequitable conduct.[279] Even if the large volume of submissions effectively "buries" a particularly material reference, the applicant does not per se commit inequitable conduct.[280] Some district courts have used such activity as circumstantial evidence of intent.[281] But none, yet, have gone any further.

The potential solution is two fold. First, the intentional submission of immaterial or cumulative information should be actionable under the doctrine. This addresses the most egregious overloaders—those who are truly trying to bury the examiner with information they know is irrelevant. This does not, however, address those who are simply grossly negligent in their submission methodology by not reading references, or barely reading them, and then submitting them.

The second part of the solution is to actively enforce existing USPTO disciplinary rules that require applicants to read information before they submit it to the office. Rule 10.18(b)(2) requires patent attorneys to make an "inquiry reasonable under the circumstances" as to why a paper is submitted.[282] The rule requires the patent attorney to represent that "[t]he paper is not being presented for any improper purpose, such as to harass someone or to cause unnecessary delay or needless increase in the cost of prosecution before the [USPTO]."[283] Failure to comply with this rule risks the validity of the patent and sanctions against the attorney.[284] If this rule were actively enforced, it would incentivize applicants to read information before submitting it, with an eye toward not overloading the USPTO. Enforcement of this rule would temper the amount of low-cost overcompliance.[285]

---

279. *See supra* notes 226-227.

280. *See* Molins PLC v. Textron, Inc., 48 F.3d 1172, 1184 (Fed. Cir. 1995) (noting that the court must assume the examiner considered the submitted information).

281. *See, e.g.*, Penn Yan Boats, Inc. v. Sea Lark Boats, Inc., 359 F. Supp. 948, 964–65 (S.D. Fla. 1972).

282. 37 C.F.R. § 10.18(b)(2) (2008).

283. § 10.18(b)(2)(i).

284. 37 C.F.R. § 10.18(c) (2008).

285. The pending IDS rules, which require the filing of an Examination Support Doctrine ("EDS") if more then a particular number of pieces of prior art is filed is another possible avenue of reducing overcompliance. *See* Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. 38,808 (July 10, 2006) (to be codified at 37 C.F.R. pt. 1). The ESD requires the applicant to identify the relevance of the submitted art to the pending claims, and the cost of such a doctrine arguably deters the oversubmission of art. However, this limitation is, in a sense, random, tied to a particular number. The "proper" number of references to submit varies with the technological area and the type of art in the applicant's possession in relationship to the claims.

B. Maintaining an Independent and Broad Materiality Standard

The inequitable conduct doctrine needs to maintain its positive effects on patent quality as well. To do this, the standard for materiality must stay independent of the standard for invalidity. That is, "materiality" need not require that the withheld information actually render a claim invalid.[286]

Requiring the submission of information that establishes only a prima facie case of invalidity, but does not make a conclusive case, broadens the patent quality gains under the doctrine. This standard includes information that is extremely relevant to the patent examination, but still broad enough to create spillover benefits. The more information required to be submitted, the larger the knowledge base of the patent attorney and greater the benefits from this increased knowledge.[287] This broad information base also increases the second-order information production benefits to examination. The examiner gets more information that may lead to additional relevant information or thinking that, in turn, produces a better examination.[288] However, this information base would not be so large and its relevancy not so tenuous as to significantly increase the likelihood of information overload.

In addition, if materiality were limited to claim-invalidating information, the inequitable conduct doctrine would become redundant during litigation. A finding of inequitable conduct may have secondary, legal cost effects on the patent holder. But once the claim is found invalid, the damage to that claim is done—the claim is no longer valid and thus cannot be enforced.[289] The value added by the doctrine is minimized greatly by equating the materiality standard with validity.

C. Avoiding Expansion of the Duties Governed by the Doctrine

Some critics question whether the duties governed by the doctrine should be expanded to include a duty to search and provide relevancy statements about submitted information. The 2007 version of the patent reform legislation contained a provision that gives the USPTO authority to require an applicant to do a search and inform the USPTO as to how the

---

There is no magical number of references where the cost benefit of providing them to the USPTO becomes negative.

286. *See, e.g.*, Patent Reform Act of 2005, H.R. 2795, 109th Cong. § 136(c)(2) (2005).

287. *See supra* Section III.C.1.

288. *See supra* Section III.B.1.

289. 35 U.S.C. § 282 (2006).

application is patentable in light of the search results.[290] The pending IDS rules proposed by the USPTO require relevancy statements in certain circumstances—again asking the applicant to link the submitted information to the application's claims.[291]

Expanding the applicant's duties to include either of these—searching or relevancy statements—would dramatically increase the cost of compliance. To perform a search in-house or request a search from an outside firm costs between $2,000 to $3,500.[292] Relevancy statements, which require the applicant to identify the relevant portions of the submitted information and distinguish the disclosed invention, are even more costly, ranging from $12,250 to $20,000.[293] These costs become more significant when compared to the typical cost of patent prosecution; they dwarf the cost of preparing and filing a typical patent application, which ranges from $6,600 to $15,000.[294] The ambiguous nature of these duties—how many databases to search, whether the search needs to be updated if new information is discovered during prosecution, whether new searches are required if the claims are amended—magnify these costs.[295] When the tendency to overcomply because of the legal and extra-legal costs exacted by the inequitable conduct doctrine is added, the costs of expanded duties become even higher.

These high costs could temper the current environment of overcompliance by making excessive disclosure cost-prohibitive.[296] This can reduce the problem of information overload. The additional duties can also magnify the patent quality effects of the inequitable conduct doctrine. The patent attorney would be exposed to more relevant information, making

290. *See* Patent Reform Act of 2007, H.R. 1908, 110th Cong. § 11 (2007). The 2009 version of the legislation does not modify the inequitable conduct doctrine. *See* Patent Reform Act of 2009, S. 515, 111th Cong. (2009).

291. *See* Changes To Information Disclosure Statement Requirements and Other Related Matters, 71 Fed. Reg. at 38,808.

292. AIPLA REPORT, *supra* note 203, at 1-82.

293. *Id.* at 1-83 (describing the costs for a validity opinion). Relevancy statements, like those proposed in § 11 or 71 Fed. Reg. 38,808 are essentially requests for a validity opinion. That is, they ask the applicant to explain to the USPTO why the application patentable over the discovered information.

294. *Id.* at 1-78.

295. *See* Tafas v. Dudas, 511 F. Supp. 2d 652, 667–68 (E.D. Va. 2007) (noting the ambiguities inherent in such duties possibly rise to the level of being unconstitutionally vague). The Federal Circuit affirmed-in-part, vacated-in-part, and remanded the district court's decision in *Tafas*, but specifically did not address the potentially vagueness of the rules. Tafas v. Doll, 559 F.3d 1345, 1364-65 (Fed. Cir. 2009).

296. *See* Calfee & Craswell, *supra* note 232, at 981–82.

her think more about the patentability of the application, and increasing the amount of quality information before the examiner.

These gains are unlikely to be realized, however. First, even normal compliance with these additional duties is likely to overload the examiner. While these duties do provide a plethora of new information on the examiner, there is no mechanism to give her additional time to process it. The new information does not only come in the form of new references, but analysis by the patent applicant if relevancy statements are also required.

The high costs of compliance will likely not cause the applicant to undercomply with the doctrine. The patent attorney has a personal interest in complying that goes beyond a single client's interest in getting a patent at a low cost. Again, patent attorneys are advised to not "be[] pressured by clients to comprise [their] ethical duties."[297] This means that applicants will be forced to pay the high fees to comply or forgo patenting altogether. By essentially doubling the cost of obtaining a patent, the expansion of duties may price potential inventors out of the system altogether, which either deters the formal invention process or pushes it outside the patent system and into the realm of trade secret.[298]

Finally, making the applicant essentially perform the examiner's job—searching and textually analyzing patentability based on the search—is socially inefficient. Having applicants evaluate and produce information already in their possession makes sense because they are the lowest cost provider even if they are not good at analyzing patentability.[299] But, having an applicant conduct searches, something in which she is not necessarily an expert, is a poor use of resources. Searching, and in particular searching the invention's field of technology, is the examiner's profession. If more searching is required, the examiner is the one to do it.

Maintaining the independence and second-review benefits of examination is also a goal.[300] An examiner is unlikely to do more than verify the applicant's patentability analysis under these new expanded duties. New examiners will not have the opportunity to gain search skills in a patent system where searching is done by the applicant, and independent review becomes even more of a fallacy.

---

297. *See supra* note 245.

298. *See supra* note 243.

299. *See supra* Section III.B.1.

300. *See, e.g.*, Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U. L. REV. 1619, 1627–37 (2007) (describing the benefits and disadvantages of decentralized decision making).

D. Reducing Litigation Costs as a Result of the Proposed Reforms

A final concern regarding the doctrine that needs to be addressed is litigation costs. Critics assert that the doctrine is alleged too often and too costly to litigate.[301] The reforms already mentioned, while not eliminating the litigation costs entirely, greatly reduce them. Thus, no additional reform is needed to address this problem.

Most of the reforms aimed at reducing overcompliance also make the inequitable conduct defense less attractive to assert. The breadth of remedies would be reduced, with only individual claims being exposed to unenforceability. Specific, independent evidence of intent would be required to prove inequitable conduct. Both of these changes weaken the doctrine, making it harder to prove and the rewards less tantalizing. This would decrease the rate of assertion.

Declining to expand the duties under the doctrine would also keep litigation costs down. The more theories of liability under the doctrine, the more opportunities for an alleged infringer to assert the defense of inequitable conduct. As the duties under the doctrine increase, the easier it becomes for a defendant to find at least one plausible theory of inequitable conduct. The defendant is also able to keep the claim alive longer during litigation. By keeping the duty focused on information within the applicant's possession, the doctrine does not open up new doors through which the defense can be alleged.

Some of the reforms could increase litigation costs. If materiality were tied to the question of validity, the doctrine would no longer be an independent litigation tool. It would become infrequently litigated because of the need to prove invalidity as a predicate. So maintaining the distinction between materiality and validity does forgo one option for saving litigation costs. The addition of a theory of inequitable conduct based on intentional submission of immaterial or cumulative information will likely spark some additional allegations of inequitable conduct. As the liability theories expand, so does the room for the doctrine's assertion.

On net, however, these reforms would constrict the scope of the doctrine, thus litigation costs overall will decrease. In addition, this concern may not sit within the broader utilitarian goal of patent law. Gains in patent quality caused by the suggested reforms would likely outweigh the negative impact from the already high cost of litigating the doctrine. The breadth of positive impact is so much greater—affecting every patent and

301. *See supra* Section II.C.2.

patent examination—than the small percentage of patents that are actually litigated.[302]

VII. CONCLUSION

One of the most pressing questions in the U.S. patent system is how responsibilities should be shared between the inventor and the USPTO when examining a patent application. The inventor wants to externalize costs by burdening the USPTO with the majority of the work and the USPTO, similarly, wants the inventor to internalize as much of the costs as possible. The inequitable conduct doctrine, which governs the inventor's duties during patent examination, sits at the center of this tension. The doctrine addresses when the applicant needs to assist in examination by providing information to the USPTO. The question has always been how much information needs to be provided.

This Article exposes the complexity of this problem by constructing a conceptual framework by which to measure the inequitable conduct doctrine's impact on the patent system. The doctrine can have a very positive impact on the system, by improving patent quality, but can also have tremendous negative impacts, by hindering examination and denying access to the incentive to invent. Knowing how the doctrine impacts the utilitarian goals of the patent system is crucial when determining how to tune the inequitable conduct doctrine. But understanding these dynamics tells even more about the patent application process and how examiners, applicants, and potential inventors are impacted by shifts in the cost-sharing of patent examination. This fundamental understanding, and the specific reforms it suggests, can help not only improve the inequitable conduct doctrine, but also the entire patent system.

302. *See* Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP. 75, 75 (2005) (noting that only 1.5 % of issued patents are ever asserted and only 0.1% go to trial).