

EXERCISING A DUTY OF CLARITY: *NAUTILUS, INC. v. BIOSIG INSTRUMENTS, INC.*

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While there has long been a requirement in patent law to define patent scope,¹ the Supreme Court in *Nautilus, Inc. v. Biosig Instruments, Inc.*² interpreted § 112 of the Patent Act³ to require that “claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with *reasonable certainty*.”⁴ In doing so, the Supreme Court added its voice to a number of authorities asking for clearer claiming in patent examination.⁵ The Court rejected the previous test applied by the Federal Circuit that a claim has indeterminate scope “only when it is ‘not amenable to construction’ or ‘insolubly ambiguous.’”⁶ To arrive at this new “reasonable certainty” test, the Court balanced the limitations of written language in capturing the scope of an invention with the public notice⁷ demands of a patent.⁸

In *Nautilus*, the Supreme Court addressed how much imprecision § 112 ¶ 2 tolerates.⁹ But the Court did more than just clarify the test applied in litigation. The Court also observed that “patent applicants face powerful incentives to inject ambiguity into their claims.”¹⁰ Signaling a need for

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1. This requirement dates back to the 1836 Patent Act, which requires that the patent applicant “shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery.” Patent Act of Jul. 4, 1836 c. 357 § 6, 5 Stat. 117, 119.

2. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

3. 35 U.S.C. § 112 ¶ 2 (2006).

4. *Nautilus*, 134 S. Ct. at 2129 (emphasis added).

5. *See infra* Section I.E.

6. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 898 (Fed. Cir. 2013), *vacated*, 134 S. Ct. 2120 (2014).

7. “Public notice” refers to the ability of the public to clearly understand the scope of the patent such that enterprising inventors can continue to develop and invent beyond the patent’s scope without fear of infringement. *See* Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179, 187 (2007). Public notice also aids an accused infringer in determining whether or not he actually infringes.

8. *Nautilus*, 134 S. Ct. at 2128.

9. *See id.* at 2128–29.

10. *Id.*

clearer claiming during prosecution and discouraging ambiguous claiming,¹¹ the Court insisted that “[e]liminating that temptation is in order, and ‘the patent drafter is in the best position to resolve the ambiguity in patent claims.’”¹² In doing so, the Court sent a message to the United States Patent and Trademark Office (“PTO”) and patent prosecutors, calling for the elimination of unnecessary ambiguity in patent prosecution.¹³ With *Nautilus*, the Supreme Court joined a chorus of voices, both within the government and without, demanding clearer patent claims.¹⁴

This Note contends that the Supreme Court is calling for substantially improved claim clarity at the outset of a patent’s lifecycle, effectively imposing what might be called a “duty of clarity” upon those seeking patent protection and on the PTO. This duty of clarity is somewhat different from the codified duty of candor required of a patent applicant.¹⁵ Instead this is a joint duty owed by both the patent applicant and the patent examiner to ensure that the claims in the patent are clear enough to reasonably apprise the public of the scope of the patent.

Part I reviews the history of claim indefiniteness jurisprudence and the public notice doctrine, by examining the policy behind the public notice function in patents. Part I culminates in a summary of the Federal Circuit’s “insolubly ambiguous” test, and recent efforts by Congress, the White House, and the PTO to increase claim clarity, thus laying the foundation for the Supreme Court’s decision in *Nautilus*. Part II summarizes the *Nautilus* decision and the Court’s more exacting test for indefiniteness. Part III develops the concept of the duty of clarity by explaining the motivations for this duty, defining the duty, and examining how the Supreme Court’s *Nautilus* decision encourages a duty of clarity. Part III concludes by analyzing whether the duty of clarity is best enforced through litigation or changes to patent prosecution. Part IV critiques suggestions for improving the duty of clarity through various changes to patent prosecution, including the use of glossaries, structured forms in prosecution, hyperlinked applications, stricter application of § 112 in examination and litigation, special rules for software, and recording

11. *Id.* at 2129.

12. *Id.* (quoting *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008)) (internal alterations omitted).

13. *See id.*

14. *See infra* Section I.E.

15. 37 C.F.R. § 1.56 (2014) requires that patent applicants “disclose to the Office all information known to that individual to be material to patentability.”

interviews. Part IV concludes by suggesting an additional approach to improve clear claiming by taking advantage of technological advances that allow crowdsource-assisted examination.

I. FOUNDATIONAL BACKGROUND

Patent laws bestow limited monopolies on inventors in the form of intellectual property (“IP”) rights.¹⁶ “[L]ike any property right, its boundaries should be clear.”¹⁷ In so stating, the Supreme Court quickly summarized the main reason for the definiteness requirement, and the foundation of the public notice doctrine today. This Part reviews the historical development of claim indefiniteness and the closely related concept of public notice from the original 1790 Patent Act¹⁸ to the present incarnation of the Patent Act, along with key legislative developments and judicial decisions that shaped these doctrines. This historical development came to a head with the relatively recent and apparently forgiving “insolubly ambiguous” test for indefiniteness introduced by the Federal Circuit in 2001.¹⁹ Running counter to this test, congressional, presidential, and PTO actions in the past few years evinced a need for more clarity in patent claims.²⁰ The doctrinal history, the insolubly ambiguous test, and recent congressional and executive actions form an important backdrop for understanding the Supreme Court’s *Nautilus* decision.

A. ORIGINS OF THE INDEFINITENESS DOCTRINE IN THE 1790 PATENT ACT AND 1793 PATENT ACT

When Congress first enacted the Patent Act in 1790, it embraced the concept of clear patent boundaries by requiring that the written description “contain a description . . . of the thing or things . . . invented or discovered . . . so particular . . . as . . . to distinguish the invention or discovery from other things before known and used.”²¹ This requirement for clear identification of an invention was different from modern requirements for claiming. First, the requirement focused on clearly distinguishing the invention from prior art, rather than clarifying areas

16. *Nautilus*, 134 S. Ct. at 2124.

17. *Id.* (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730 (2002)).

18. Patent Act of 1790, ch. 7, 1 Stat. 109.

19. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001), *abrogated by* *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

20. *See infra* Section I.E.

21. Patent Act of 1790 ch. 7 § 2, 1 Stat. 109, 110.

outside the patent's scope free for further invention.²² Therefore this language, although similar to the language in today's § 112, really formed part of today's novelty and obviousness requirements. Second, early patents did not typically have formal claims as are used today, but rather had a description of the invention.²³ Early nineteenth-century patents frequently included statements that "claimed" rights to the disclosed technology, although such claims were often not illuminating.²⁴

In 1793, only three years after the original Patent Act, Congress amended the patent system to replace the examination process with a patent registration system, leaving the question of patentability to the courts.²⁵ As the courts started reviewing disputed patents, it soon became clear that many patents contained only vague descriptions of inventions, failing to meet the requirement to distinguish the invention from all previous things known before.²⁶ Since many inventions involved incremental improvements where patentees described a full machine without expressly identifying the improvement, courts struggled to identify the inventive aspect of the patent.²⁷ Although the statute only required a patentee to distinguish the invention from what came before,²⁸ courts attempted to define patent scope in their analysis, extending the requirement to form the foundation of the public notice doctrine.²⁹ The Court in *Evans v. Eaton* observed: "How is any man to inform himself what it is that is patented, so that he may avoid the danger of infringement?"³⁰

22. See, e.g., *Whittemore v. Cutter*, 29 F. Cas. 1123, 1123–24 (C.C.D. Mass. 1813) (trying to resolve the scope of the invention as a whole machine or just an improvement, with the concern being not that the invention is invalid for indefiniteness, but that the invention would be invalid if claiming the whole machine because of prior art); see also William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 MICH. L. REV. 755, 760 (1948).

23. Woodward, *supra* note 22, at 758.

24. See John M. Golden, *Construing Patent Claims According to their "Interpretive Community": A Call for an Attorney-Plus-Artisan Perspective*, 21 HARV. J.L. & TECH. 321, 350 (2008).

25. Patent Act of 1793, ch. 11, 1 Stat. 318.

26. See *Evans v. Eaton*, 20 U.S. 356, 366 (1822) (deciding that the inventor is only entitled to that which is new, but finding it difficult to resolve which improvements are new from the prior art).

27. See Woodward, *supra* note 22, at 760.

28. Patent Act of 1793, ch. 11, § 3, 1 Stat. 318, 321.

29. See *Evans*, 20 U.S. at 391 ("[O]f what use is the specification, unless it be to define, with precision, the extent and nature of the improvement?").

30. *Id.*

With many patents being invalidated by court review, the Superintendent of the Patent Office Thomas P. Jones wrote an article in 1828 warning prospective patentees that courts were vacating many patents due to the failure to identify the new elements claimed in a patent.³¹ In response to this concern, many patentees started formally claiming their inventions in the lead-up to the 1836 Patent Act.³² Despite better efforts to more precisely claim inventions, a proliferation of poorly written registered patents persisted in the patent marketplace.³³ Since so many patents could not hold up under judicial review, they effectively devalued the whole patent marketplace.³⁴

B. THE 1836 PATENT ACT: CODIFICATION AND INTRODUCTION OF PUBLIC NOTICE

Congress passed the 1836 Patent Act in part as a response to the concern that the average patent failed to meet statutory requirements.³⁵ The 1836 Patent Act restored the public's confidence in issued patents largely by reinstating the examination process.³⁶ At the same time, the 1836 Patent Act also codified much of the previous forty-plus years of judicially made patent law, including encouraging the use of more formal claiming.³⁷ The 1836 Patent Act clarified the 1793 Patent Act's requirement to define the invention, adding that the patentee "shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery."³⁸ The 1836 Patent Act also discarded language that previously limited the reason for defining the invention "to distinguish the invention or discovery from other things before known and used."³⁹ By dropping this limiting language, the 1836

31. See Thomas P. Jones, *Information to Persons Applying for Patents, or Transacting Other Business at the Patent Office*, 6 FRANKLIN J. & AM. MECHANICS' MAG. 332, 334 (1828).

32. See Karl B. Lutz, *Evolution of the Claims of U.S. Patents*, 20 J. PAT. OFF. SOC'Y 134, 139-40 (1938).

33. See Andrew P. Morriss & Craig Allen Nard, *Institutional Choice & Interest Groups in the Development of American Patent Law: 1790-1865*, 19 SUP. CT. ECON. REV. 143, 237-38 (2011).

34. *Id.*

35. *Id.*

36. *Id.*

37. See Lutz, *supra* note 32, at 143.

38. Patent Act of 1836, ch. 357 § 6, 5 Stat. 117.

39. Patent Act of 1790 ch. 7 § 2, 1 Stat. 110.

Patent Act included the public notice function discussed in *Evans*, incorporating that judicially made patent law.⁴⁰

However, the approach to claiming an invention after the 1836 Patent Act still largely differed from the modern approach used today.⁴¹ At the time, most patentees used “central claiming” where the entire specification formed the basis of the invention, and courts assessed infringement against the entire patent, not just against any specific claims to scope made in the patent.⁴² This approach contrasts with the “peripheral claiming” approach used today, where the “name of the game is the claim,” such that the claims alone define the scope of the invention with the specification only used to provide additional meaning.⁴³ Despite the eventual shift to peripheral claiming, commentators continue to debate whether central claiming or peripheral claiming better defines an invention.⁴⁴

Between the 1836 Patent Act and the 1870 Patent Act, the importance of providing public notice of patent scope gained greater recognition. The Supreme Court later adopted the view of the 1853 four-justice dissent in *Winans v. Denmead*, where Justice Campbell emphasized the importance of proper patent scope, noting that patents should not be used to “obstruct invention, and to deter from legitimate operations of skill and ingenuity.”⁴⁵ This view voiced the concern that other inventors would be discouraged from inventing and advancing technology within an area of ambiguous patent scope, for fear that all of their efforts would be usurped by an opportunistic patent holder who could have never claimed such advances if forced to claim more clearly.⁴⁶ The Supreme Court eventually agreed with this dissent and emphasized the public notice function soon after the 1870 Patent Act.⁴⁷

40. See Morriss & Nard, *supra* note 33.

41. See Lutz, *supra* note 32, at 147 (noting that before 1870 “claims rarely, if ever, received consideration on the question of infringement”).

42. See Woodward, *supra* note 22, at 760.

43. See *In re Hiniker Co.*, 150 F.3d 1362, 1369 (Fed. Cir. 1998) (quoting Giles Sutherland Rich, *Extent of Protection and Interpretation of Claims—American Perspectives*, 21 INT’L REV. INDUS. PROP. & COPYRIGHT L. 497, 499 (1990) for its use of the phrase “the name of the game is the claim.”).

44. See Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743 (2009).

45. *Winans v. Denmead*, 56 U.S. 330, 347 (1853) (Campbell, J., dissenting).

46. See *id.*

47. See *Merrill v. Yeomans*, 94 U.S. 568, 573 (1876).

C. FORMALIZING CLAIMING AND ESTABLISHING PUBLIC NOTICE

The 1870 Patent Act took formal claiming even further, formalizing the requirement that applicants “particularly point out and distinctly *claim* the part, improvement, or combination which he claims as his invention or discovery.”⁴⁸ In a major shift, the 1870 Patent Act placed the focus on the claims alone in a move to “peripheral claiming,”⁴⁹ instead of examining the entire specification to determine what the invention actually claimed.⁵⁰ The Supreme Court formally recognized the public notice function as well in two decisions soon after the 1870 Patent Act.⁵¹ With minor deviations,⁵² the Court has continued to include the importance of the public notice function in its patent law decisions.⁵³

The 1952 Patent Act updated the language from the 1870 Patent Act from “part, improvement, or combination” to “subject matter,” but kept the same principles of indefiniteness, requiring that “the specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”⁵⁴ Any failure to distinctly claim the subject matter renders invalid “the patent or any claim in suit.”⁵⁵ The 1952 Patent Act language is that used by the Supreme Court in its *Nautilus* decision, as unchanged in the 2006 edition of the United States Code.⁵⁶

48. Patent Act of 1870, ch. 230, § 26, 16 Stat. 198, 201 (emphasis added).

49. See J. Jonas Anderson & Peter S. Menell, *Informal Deference: A Historical, Empirical, and Normative Analysis of Patent Claim Construction*, 108 NW. U. L. REV. 1, 13–14 (2014).

50. See Lutz, *supra* note 32, at 147 (noting that prior to the 1870 Patent Act, analysis of patent scope considered the specification as well as the claims).

51. See *Merrill*, 94 U.S. at 573; *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 278 (1877) (“When the terms of a claim in a patent are clear and distinct (as they always should be), the patentee, in a suit brought upon the patent, is bound by it.”).

52. See, e.g., *Carnegie Steel Co v. Cambria Iron Co*, 185 U.S. 403, 430 (1902) (starting with the specification rather than the claims to define the invention, focusing on the purpose of the invention described in the specification).

53. E.g., *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931) (“The statute requires the patentee . . . to inform the public during the life of the patent of the limits of the monopoly asserted, so that it may be known which features may be safely used or manufactured without a license and which may not.”); *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938) (“The statute seeks to guard against unreasonable advantages to the patentee and disadvantages to others arising from uncertainty as to their rights.”).

54. 35 U.S.C. § 112 ¶ 2 (2006).

55. 35 U.S.C. § 282 ¶ 2(3) (2006).

56. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2125 n.1 (2014).

D. THE FEDERAL CIRCUIT'S INSOLUBLY AMBIGUOUS STANDARD

The Federal Circuit first introduced its insolubly ambiguous⁵⁷ standard in 2001, in *Exxon Research & Engineering Co. v. United States*.⁵⁸ Under this standard, “[i]f the meaning of the claim is discernible, even though the task may be formidable and the conclusion may be one over which reasonable persons will disagree . . . the claim [is] sufficiently clear to avoid invalidity on indefiniteness grounds.”⁵⁹ A claim under the insolubly ambiguous standard is definite when “amenable to construction” and only indefinite if “no narrowing construction can properly be adopted.”⁶⁰ With this standard, the Federal Circuit reasoned that it was “protect[ing] the inventive contribution of patentees, even when the drafting of their patents has been less than ideal.”⁶¹ The Federal Circuit largely relied on the long-running canon of claim construction that claims should be construed to preserve their validity in developing this standard.⁶² However, courts typically applied this canon in claim construction to narrow scope in order to avoid invalidating prior art.⁶³ Yet the Federal Circuit appears to

57. The origins of the actual phrase “insolubly ambiguous” are not precisely clear, although it could be the Federal Circuit pulled the phrase from the Supreme Court’s jurisprudence on *Miranda* warnings, where the Court has said that “every post-arrest silence is insolubly ambiguous” in indicating innocence or guilt, such that the silence cannot be used against the arrestee. *Doyle v. Ohio*, 426 U.S. 610, 617 (1976).

58. *Exxon Research & Eng’g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001), *abrogated by* *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

59. *Id.*

60. *Id.*

61. *Id.*

62. *Id.* (citing *Modine Mfg. Co. v. USITC*, 75 F.3d 1545, 1557 (Fed. Cir. 1996) (rejecting indefiniteness argument after construing claims; stating that “when claims are amenable to more than one construction, they should when reasonably possible be interpreted to preserve their validity”); *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1581 (Fed. Cir. 1996) (choosing the narrower of two equally plausible claim constructions in order to avoid invalidating the claim)). *Modine* in turn cites to *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 n.11 (Fed. Cir. 1984), regarding this canon of claim construction, while *ACS Hospital Systems* claims Supreme Court support for this canon of construction from *Klein v. Russell*, 86 U.S. 433, 467–68 (1873) and *Turrill v. Mich. S. & N. Ind. R.R. Co.*, 68 U.S. 491, 510 (1863). This canon also has more modern roots in circuit court caselaw before the formation of the Federal Circuit. *See* *Photo Elec. Corp. v. England*, 581 F.2d 772, 776 (9th Cir. 1978) (“The starting point is the rule that patent claims should be construed liberally to uphold the patent’s validity rather than to destroy the inventor’s right to protect the substance of his invention.”).

63. *Klein v. Russell*, 86 U.S. 433, 467 (1873) (applying the canon to avoid invalidity for lack of utility); *Turrill v. Mich. S. & N. Ind. R.R. Co.*, 68 U.S. 491, 509–10 (1863) (applying the canon to avoid prior art).

have misused this canon as the foundation for its insolubly ambiguous test by using the canon more broadly to construe otherwise ambiguous claim language.⁶⁴ The Federal Circuit applied the insolubly ambiguous standard to dozens of cases over the next fourteen years, providing further elucidation to this test.

Curiously, many applications of this supposedly relaxed standard have resulted in the Federal Circuit finding the claims at issue indefinite. The Federal Circuit first applied the new standard in a new case in *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, where it noted that “[t]he standard of indefiniteness is somewhat high,” but nevertheless found the patent in suit indefinite because “[o]ne [could not] logically determine whether an accused product comes within the bounds of a claim of unascertainable scope.”⁶⁵ Soon thereafter in *Honeywell International, Inc. v. International Trade Commission*, the Federal Circuit focused on the “amenable to construction” requirement, finding a claim indefinite because it was impossible to narrow the construction among several possible options, as the specification and prosecution history provided insufficient guidance to narrow the construction.⁶⁶ Similarly, in *Novo Industries, L.P. v. Micro Molds Corp.*, the Federal Circuit found a claim indefinite because there was an error in the term and the court could not determine the proper correction to make, leaving the term insolubly ambiguous and not amenable to construction.⁶⁷ In *Datamize, LLC v. Plumtree Software, Inc.*, the Federal Circuit again applied the insolubly ambiguous standard and again found a claim indefinite because the term “aesthetically pleasing” was too subjective, lacking an objective standard of measurement that would have allowed a proper construction.⁶⁸ The Federal Circuit in *Halliburton Energy Services, Inc. v. M-I LLC* noted that claims are “indefinite only where a person of ordinary skill in the art could not determine the bounds of the claims,” yet still found the claims at issue indefinite.⁶⁹ In *Halliburton*, the court somewhat limited the insolubly

64. See *infra* Section III.A.

65. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1342 (Fed. Cir. 2003).

66. *Honeywell Int’l, Inc. v. Int’l Trade Comm’n*, 341 F.3d 1332, 1338–40 (Fed. Cir. 2003).

67. *Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d 1348, 1358 (Fed. Cir. 2003).

68. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1356 (Fed. Cir. 2005), *abrogated by* *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014).

69. *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008).

ambiguous standard by noting that “[e]ven if a claim term’s definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.”⁷⁰

That is not to say that the Federal Circuit always invalidated claims under this “high” standard. In its first application of the standard reversing a district court’s finding of indefiniteness, the Federal Circuit extensively considered arguments on the banking term “surrender value protected investment,” eventually finding the term definite because “the term was in use and had a discernible meaning to at least some persons practicing in the field.”⁷¹ In *SmithKline Beecham Corp. v. Apotex Corp.*, the Federal Circuit found a claim for a chemical structure “definitive,” easily satisfying the insolubly ambiguous test because the claim covered a “definite chemical structure.”⁷² In *Xerox Corp. v. 3Com Corp.*, the Federal Circuit reasoned that even when the patent term “descriptions are not rigorously precise, they [can] provide adequate guidance.”⁷³ A claim term can even take on different meanings in different parts of a claim as long as the meaning in each use is readily apparent from the context.⁷⁴

Following much dispute over this standard,⁷⁵ the Supreme Court granted certiorari to review *Biosig Instruments v. Nautilus* to resolve whether insolubly ambiguous should be the proper standard or whether

70. *Id.* at 1251.

71. *Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1376 (Fed. Cir. 2004).

72. *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1340–41 (Fed. Cir. 2005).

73. *Xerox Corp. v. 3Com Corp.*, 458 F.3d 1310, 1323 (Fed. Cir. 2006) (finding the claims not indefinite).

74. *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1376 (Fed. Cir. 2008).

75. See, e.g., Dennis Crouch, *Is “Insolubly Ambiguous” the Correct Standard for Indefiniteness?*, PATENTLY-O (Sept. 21, 2013), <http://patentlyo.com/patent/2013/09/isinsolublyambiguous-the-correct-standard-for-indefiniteness.html>; FTC, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition*, 94–103 (Mar. 2011), <http://www.ftc.gov/reports/evolving-ip-marketplacealigning-patent-notice-remedies-competition>; David A. Loewenstein & Clyde Shuman, *United States: The Federal Circuit’s “Insolubly Ambiguous” Standard of Indefiniteness*, MONDAQ BUS. BRIEFING (Nov. 26, 2008), <http://www.mondaq.com/unitedstates/x/70266/Patent/The+Federal+Circuits+Insolubly+Ambiguous+Standard+Of+Indefiniteness>; Eric Yeager, *Claim Whose Undefined Terms Are Reasonably Discernable Is Not Invalid*, 67 PAT. TRADEMARK & COPYRIGHT J. (BNA) 427 (2004).

another test should be applied.⁷⁶ *Nautilus* raised the issue of just how much imprecision §112 ¶ 2 tolerates.⁷⁷ Following the Supreme Court’s oral arguments in *Nautilus*, but preceding the Supreme Court’s opinion in *Nautilus*, the Federal Circuit issued one final decision under the insolubly ambiguous standard in *In re Packard*.⁷⁸ A concurring opinion by Judge Plager in *In re Packard* backed off the insolubly ambiguous test somewhat, perhaps sensing the change in the air.⁷⁹ Judge Plager acknowledged the lack of foundation for this standard and the dispute surrounding this standard.⁸⁰ Judge Plager proposed using a test closer to that later required by *Nautilus* in which an “ambiguous term . . . is a term that offers to one of skill in the art more than one reasonable meaning.”⁸¹

E. INCREASED EXECUTIVE, ADMINISTRATIVE, AND CONGRESSIONAL FOCUS ON CLEARER CLAIMING

Like the Supreme Court, the President, the PTO, and Congress through the Leahy-Smith America Invents Act of 2011 (“AIA”)⁸² have also been pushing for greater clarity in patent claiming, with increasing volume over time. On June 4, 2013, almost a year before the *Nautilus* decision, the President issued an executive action to the PTO, instructing the PTO to tighten up functional claiming.⁸³ The President specifically spoke to claim clarity:

The AIA made important improvements to the examination process and overall patent quality, but stakeholders remain concerned about patents with overly broad claims—particularly in the context of software. The PTO will provide new targeted

76. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 896 (2014) (granting certiorari).

77. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

78. *In re Packard*, 751 F.3d 1307, 1311 (Fed. Cir. 2014) (deciding that the court did not need to determine whether or not the PTO had to apply the insolubly ambiguous standard in patent examination, because in this case after the PTO rejected a claim as ambiguous the applicant did not make a sufficient response to overcome the rejection).

79. *Id.* at 1317–18 (Plager, J., concurring).

80. *Id.* (Plager, J., concurring) (noting that when the “insolubly ambiguous” phrase was introduced in *Exxon* there was no prior use of that phrase, that the Federal Circuit continued to use both “insolubly ambiguous” and older tests for indefiniteness in cases that followed, and that the phrase has “generated considerable controversy.”).

81. *Id.* at 1320 (Plager, J., concurring).

82. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

83. The White House: Office of the Press Secretary, *FACT SHEET: White House Task Force on High-Tech Patent Issues* (June 4, 2013), <http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues>.

training to its examiners on scrutiny of functional claims and will, over the next six months develop strategies to improve claim clarity, such as by use of glossaries in patent specifications to assist examiners in the software field.⁸⁴

Although this statement focused more on functional claiming and software claims, it easily applies to all types of claims. With this executive action the President asked the PTO to step up its efforts to improve claim clarity, and effectively requested a duty of clarity on behalf of the PTO to help ensure patentees drafted clear claims.

The PTO responded to the President's order by indicating it will improve the review of patents for claim clarity through examiner training, by highlighting Patent Trial and Appeal Board ("PTAB") decisions examining functional claims, by initiating a glossary pilot program, by reaching out to the patent community for suggestions, and by looking inward to get feedback from its own examiners.⁸⁵ The Ninth Edition of the PTO's Manual of Patent Examining Procedure ("MPEP"), released in March 2014, has extensive language on enforcing the § 112 ¶ 2⁸⁶ requirement for claim definiteness.⁸⁷ Where an examiner rejects claim language as indefinite, "the applicant [must] respond by explaining why the language is definite or by amending the claim, thus making the record clear regarding the claim boundaries prior to issuance."⁸⁸ When arguing before the Federal Circuit, the PTO has highlighted the need for strong review of ambiguous claims during examination, arguing that "the patent system works best when claim ambiguity is resolved during examination, rather than to await litigation to determine the actual scope of a claim."⁸⁹

The PTO actually started pushing for greater claim clarity prior to the President's June 4, 2013 executive order, although the order undoubtedly increased the pressure on the PTO to show results. On January 3, 2013, the PTO requested comments on improving claim clarity in advance of a

84. *Id.* (emphasis added).

85. USPTO, *USPTO-led Executive Actions on High Tech Patent Issues*, http://www.uspto.gov/patents/init_events/executive_actions.jsp (last visited Dec. 23, 2014).

86. *See also* § 112(b) of the AIA.

87. MPEP § 2173 (9th ed., Mar. 2014).

88. *Id.*

89. *In re Packard*, 751 F.3d 1307, 1323 (Fed. Cir. 2014) (Plager, J., concurring).

roundtable on the subject,⁹⁰ receiving extensive commentary in response.⁹¹ The PTO also revised the MPEP prior to the President's executive order to increase the duty of clarity in examination.⁹² In the Eighth Edition, Revision Nine of the MPEP, the PTO introduced a more restrictive examination of claim definiteness, also present in the Ninth Edition.⁹³ Interestingly, in setting forth the reasonable certainty test in *Nautilus*, the Supreme Court did not use *Nautilus Inc.*'s requested test to find indefinite any "claim whose scope is . . . susceptible of more than one reasonable interpretation."⁹⁴ Yet the MPEP requires just such an analysis, rejecting a claim where there is more than one reasonable interpretation of scope.⁹⁵ The PTO changed this instruction only recently in Revision Nine of the

90. Request for Comments and Notice of Roundtable Events for Partnership for Enhancement of Quality of Software Related Patents, 78 Fed. Reg. 2, 292–93 (Jan. 3, 2013).

91. *Comments re: Partnership for Enhancement of Quality of Software-Related Patents*, USPTO, http://www.uspto.gov/patents/law/comments/comments_software_partnership.jsp (last visited Dec. 23, 2014). The ACM US Public Policy Council advocated for using software tools to aid § 112 examination and for more training on § 112 standards. ACM US Public Policy Council, *Public Comment on the Request for Comments and Notice of Roundtable Events for Partnership for Enhancement of Quality of Software-Related Patents*, Docket No. PTO-P-2-12-0052, USPTO, http://www.uspto.gov/patents/law/comments/swa_acm_us_public_policy_council_20130415.pdf. The Application Developer's Alliance asked for more rigor from examiners and applicants, which is the "duty of clarity" suggested by this note, in part through more structured examination and standardized dictionaries. Application Developers Alliance, *Comments of Application Developers Alliance*, USPTO, http://www.uspto.gov/patents/law/comments/sw-a_appalliance_20130415.pdf. BSA The Software Alliance asked for use of glossaries, indication whether a term has a lay or technical meaning, and a default dictionary designated by the applicant. BSA The Software Alliance, *Comments Submitted by BSA The Software Alliance*, USPTO, http://www.uspto.gov/patents/law/comments/sw-a_softwarealliance_20130415.pdf. Those arguing against additional efforts to improve claiming focused on the additional burden and costs that would be associated with examination. *See, e.g.*, Intellectual Property Owners Association, *IPO Response to the USPTO's "Request for Comments . . . for Partnership for Enhancement of Quality of Software Related Patents"*, USPTO http://www.uspto.gov/patents/law/comments/sw-a_ipo_20130415.pdf.

92. *See* MPEP § 2173 (8th ed., Rev. 9, Aug. 2012).

93. *Id.*; MPEP § 2173.02(I) (9th ed., Mar. 2014).

94. Brief for Petitioner at 2, *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014) (No. 13-369), 2014 WL 768314, at *2.

95. MPEP § 2173.02(I) (9th ed., Mar., 2014) ("if the language of a claim, given its broadest reasonable interpretation, is such that a person of ordinary skill in the relevant art would read it with more than one reasonable interpretation, then a rejection under 35 U.S.C. § 112(b) or pre-AIA 35 U.S.C. 112, second paragraph is appropriate.")

Eighth Edition of the MPEP, issued in August 2012.⁹⁶ In the previous version, Revision Eight of the Eighth Edition of the MPEP, issued in July 2010,⁹⁷ the corresponding language limited the ability of examiners to reject under § 112 ¶ 2 only where the “metes and bounds” of the claim could not be interpreted to avoid infringement.⁹⁸

The prior language under Revision Eight of the Eighth Edition of the MPEP focused on the ability of the person of ordinary skill in the art (“POSITA”) to avoid infringement. Yet this focus in practice did not provide good grounds for rejecting on the basis of § 112 ¶ 2.⁹⁹ In some art units, examiners rarely applied an ambiguousness rejection at all.¹⁰⁰ After all, a patent applicant could argue that a POSITA could avoid infringement by considering all possible variants of scope, and then know how to avoid infringement by avoiding the collective scope of all of them. Yet actual patent scope is not definite just because clear boundaries can be drawn around the broadest possible scope. Such boundaries only indicate that the uncertainty in scope is bounded, such that a POSITA could understand how to avoid infringement while still not knowing the actual scope of the patent with any certainty. By focusing on the ability of the public to avoid infringement, the old MPEP test, like the Federal Circuit’s insolubly ambiguous test,¹⁰¹ deviated from the statutory language requiring

96. MPEP § 2173.02(I) (8th ed., Rev. 9, Aug., 2012) (“if the language of a claim, given its broadest reasonable interpretation, is such that a person of ordinary skill in the relevant art would read it with more than one reasonable interpretation, then a rejection under 35 U.S.C. 112, second paragraph is appropriate.”).

97. See USPTO, <http://www.uspto.gov/web/offices/pac/mpep/old/index.htm> for MPEP archive indicating dates of versions of the MPEP.

98. MPEP § 2173.02(I) (8th ed., Rev. 8, Jul. 2010) states “[i]f the language of a claim is such that a person of ordinary skill in the art could not interpret the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35 U.S.C. § 112, second paragraph, would be appropriate.” This definition aligns more closely to the old “insolubly ambiguous” standard.

99. See Kate S. Gaudry & Joseph J. Mallon, *Appeals and RCEs – the Frequency and Success of Challenges to Specific Rejection Types*, INTELLECTUAL PROP. TODAY, 27–28 (Nov. 2011) (examining appeals of patent application rejections from 2007–2009 out of the Biotechnology and Organic Chemistry Patent Technology Center, finding that only fourteen percent of indefiniteness rejections were upheld on appeal, compared to sixty-one percent of obviousness rejections upheld on appeal, thirty-seven percent of enablement rejections upheld on appeal, and thirty percent of written description rejections upheld on appeal).

100. See Arti Rai, *Let’s Tame Software Patent Claims: Lessons From Bioinformatics*, WIRED (Nov. 20, 2012, 6:30 AM) <http://www.wired.com/2012/11/software-patents-bioinformatics/>.

101. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 898 (Fed. Cir. 2013), *vacated*, 134 S. Ct. 2120 (2014).

the patent to “particularly point[] out and distinctly claim[] the subject matter.”¹⁰² The ability to avoid infringement is not the same as ensuring the claims are definite. Just as the Supreme Court’s decision in *Nautilus* identified an improper balance in the weighing of competing interests in claim clarity requirements, the newest versions of the MPEP properly put the focus back on the patent applicant to make definite claims, improving the duty of clarity.

II. SUMMARY OF *NAUTILUS*

This Part reviews the factual background of *Nautilus*, the procedural history in the lower courts, and the Supreme Court’s analysis and conclusions.

A. FACTUAL BACKGROUND

The patent at issue in *Nautilus*, U.S. Patent No. 5,337,753 (“the ‘753 patent”), issued in 1994 and assigned to Biosig Instruments, Inc. (“Biosig”), concerned a heart rate monitor for use during exercise.¹⁰³ The ‘753 patent claimed an improvement on measuring the electrocardiograph (“ECG”) signals accompanying each heartbeat by filtering out electromyogram (“EMG”) signals given off by an exerciser’s skeletal muscles.¹⁰⁴ EMG signals are produced when the exerciser uses his muscles, by moving an arm or gripping an exercise monitor, for example.¹⁰⁵ These EMG signals can “mask” ECG signals, interfering with their detection.¹⁰⁶ The ‘753 patent filters out EMG signals by noting a key difference between EMG and ECG signals received in the left and right hands.¹⁰⁷ ECG signals detected in the left hand have the opposite polarity from ECG signals in the right hand, but EMG signals have the same polarity in both hands.¹⁰⁸ The ‘753 patent works by subtracting the equalized EMG signals detected in each hand from the overall signal, removing the EMG interference.¹⁰⁹

The ‘753 patent measures signals by using a cylindrical bar that a user grips with both hands such that each hand comes in contact with a pair of

102. 35 U.S.C. § 112, ¶ 2.

103. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2125 (2014).

104. *Id.*

105. *Id.*

106. *Id.*

107. *Id.*

108. *Id.*

109. *Id.*

electrodes, a “live” electrode and a “common” electrode.¹¹⁰ Claim 1 of the ‘753 patent¹¹¹ states the critical claim element at issue, describing the live electrode and common electrode mounted on the cylindrical bar “in spaced relationship with each other.”¹¹² Claim 1 also includes an additional element that requires each of the user’s hands “contact” one live electrode and common electrode pair.¹¹³ Claim 1 further requires that the two EMG signals detected are of substantially equal magnitude and phase.”¹¹⁴

During the 1990s Biosig allegedly disclosed the patented technology to StairMaster Sports Medical Products, Inc. (“StairMaster”).¹¹⁵ Biosig alleged that StairMaster, without obtaining a license, sold machines

110. *Id.* at 2126.

111. U.S. Patent No. 5,337,753 claim 1:

A heart rate monitor for use by a user in association with exercise apparatus and/or exercise procedures, comprising;

an elongate member;

electronic circuitry including a difference amplifier having a first input terminal of a first polarity and a second input terminal of a second polarity opposite to said first polarity;

said elongate member comprising a first half and a second half;

a first live electrode and a first common electrode mounted on said first half *in spaced relationship with each other*;

a second live electrode and a second common electrode mounted on said second half *in spaced relationship with each other*, . . .

wherein, said elongate member is held by said user with one hand of the user on said first half contacting said first live electrode and said first common electrode, and with the other hand of the user on said second half contacting said second live electrode and said second common electrode;

whereby, a first electromyogram signal will be detected between said first live electrode and said first common electrode, and a second electromyogram signal, of substantially equal magnitude and phase to said first electromyogram signal will be detected between said second live electrode and said second common electrode. . . .

(emphasis added identifying areas of dispute).

112. *Id.*

113. U.S. Patent No. 5,337,753 col. 5 l. 42–47 (filed Jun. 9, 1992).

114. *Nautilus*, 134 S. Ct. at 2126.

115. *Id.*

incorporating the patented technology, and continued to do so after Nautilus, Inc. (“Nautilus”) acquired the StairMaster brand.¹¹⁶

B. PROCEDURAL BACKGROUND

In 2004, Biosig brought a patent infringement suit against Nautilus in the Southern District of New York.¹¹⁷ In response, Nautilus twice asked the PTO to *ex parte* reexamine the ‘753 patent.¹¹⁸ Biosig and Nautilus voluntarily dismissed without prejudice their claims and counterclaims during the reexamination.¹¹⁹ During reexamination, in order to avoid a rejection over prior art, Biosig submitted a declaration by the ‘753 patent’s inventor that the patent sufficiently informed a person skilled in the art how to configure the detecting electrodes “to produce equal EMG [signals] from the left and right hands.”¹²⁰ The inventor claimed the placement of electrodes varied across different exercise machines, but could be achieved with a process of “trial and error.”¹²¹ In 2010 the PTO confirmed the patentability of the ‘753 patent’s claims.¹²²

Biosig then reinstated the patent suit in 2010 and the district court conducted a *Markman* hearing¹²³ in 2011 to construe the patent claims.¹²⁴ In response to competing constructions of “in spaced relationship with each other,” the district court construed this term to mean “there is a defined relationship between the live electrode and the common electrode on one side of the cylindrical bar and the same or a different defined relationship between the live electrode and the common electrode on the other side of the cylindrical bar.”¹²⁵ Nautilus moved for summary judgment, arguing the term was indefinite as construed under § 112 ¶ 2.¹²⁶ The district court granted the motion, because the term “did not tell [the

116. *Id.*

117. *Id.*

118. *Biosig Instruments, Inc. v. Nautilus, Inc.*, 715 F.3d 891, 896 (Fed. Cir. 2013), *vacated*, 134 S. Ct. 2120 (2014).

119. *Id.*

120. *Nautilus*, 134 S. Ct. at 2126.

121. *Id.*

122. *Id.* at 2127.

123. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996) (deciding that claim construction was exclusively in the province of the court, and did not require a jury; creating the pretrial *Markman* hearing structure to resolve the meaning of claim terms as a matter of law).

124. *Nautilus*, 134 S. Ct. at 2127; *Biosig Instruments*, 715 F.3d at 896.

125. *Nautilus*, 134 S. Ct. at 2127.

126. *Id.*

court] or anyone what precisely the space should be.”¹²⁷ The Federal Circuit reversed and remanded, finding that a term is indefinite “only when it is ‘not amenable to construction’ or [is] ‘insolubly ambiguous.’”¹²⁸ The Federal Circuit found that the term survived this indefiniteness test because “the claims provide inherent parameters sufficient for a skilled artisan to understand the bounds of ‘spaced relationship[,]” and “a skilled artisan could apply a test and determine the ‘spaced relationship’ as pertaining to the function of substantially removing EMG signals.”¹²⁹ The Supreme Court granted certiorari and decided the case in 2014, vacating the Federal Circuit’s decision and remanding the case.¹³⁰

C. THE SUPREME COURT’S ANALYSIS

The Court first noted that the parties agreed on several requirements of § 112, ¶ 2.¹³¹ In particular the parties agreed that: (1) “definiteness is to be evaluated from the perspective of someone skilled in the relevant art,” (2) “claims are to be read in light of the patent’s specification and prosecution history,” and (3) “[d]efiniteness is measured from the viewpoint of a person skilled in [the] art *at the time the patent was filed*.”¹³² The Court highlighted that the key dispute lay in the parties’ “articulations of just how much imprecision § 112, ¶ 2 tolerates.”¹³³ Nautilus asserted that “a patent is invalid when a claim is ‘ambiguous, such that readers could reasonably interpret the claim’s scope differently.’”¹³⁴ Biosig and the Solicitor General in their briefs only required that a “patent provide reasonable notice of the scope of the claimed invention.”¹³⁵

The Supreme Court reasoned that § 112 requires a “delicate balance.”¹³⁶ Due to inherent limitations of language, the statute must allow for some amount of uncertainty in the effort to precisely capture the scope

127. *Id.*

128. *Biosig Instruments*, 715 F.3d at 898.

129. *Id.* at 900–01 (referring to the possible size of a person’s hand as an “inherent parameter.”).

130. *Nautilus*, 134 S. Ct. at 2128.

131. *Id.*

132. *Id.* (emphasis in original).

133. *Id.*

134. *Id.* (quoting Brief for Petitioner at 37, *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014) (No. 13-369), 2014 WL 768314, at *37).

135. *Id.* (citing Brief for Respondent at 18, *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014) (No. 13-369), 2014 WL 1260426, at *18).

136. *Nautilus*, 134 S. Ct. at 2128.

of the invention.¹³⁷ Without such allowances, reasonable efforts to properly define invention scope would frequently fail, and dampen incentives for innovation.¹³⁸ At the same time, “a patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them.”¹³⁹ Without such precision, there would be “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.”¹⁴⁰ Further, the Supreme Court noted with concern that “the patent system fosters ‘an incentive to be as vague and ambiguous as you can with your claims’ and ‘defer clarity at all costs.’”¹⁴¹ The Court expressed that “[e]liminating that temptation is in order.”¹⁴²

The Federal Circuit’s insolubly ambiguous test permitted too much uncertainty under the Supreme Court’s reasoning.¹⁴³ Although the Federal Circuit’s test as applied in practice came closer to the statutory requirement than the language would suggest, the Court still found this test inadequate, as it was not “probative of the essential inquiry.”¹⁴⁴ Rejecting the Federal Circuit’s test, the Court instituted its own test that “claims, viewed in light of the specification and the prosecution history, inform those skilled in the art about the scope of the invention with *reasonable certainty*.”¹⁴⁵ Although the reasonable certainty test differed from the Federal Circuit’s test, Nautilus’s proposed test, and the test advocated by Biosig and the Solicitor General, it arguably comes closest to Nautilus’s requested test. Nautilus’s proposed test is close to reasonable certainty in that a claim with more than one reasonable interpretation might not achieve reasonable certainty.¹⁴⁶

137. *Id.*

138. *See id.*

139. *Id.* at 2129 (citing *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) (quoting *McClain v. Ortmyer*, 141 U.S. 419 (1891))) (internal quotations and indications of alteration omitted).

140. *Id.* (quoting *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942)).

141. *Id.* at 2129 (quoting testimony from Federal Trade Commission, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies With Competition* 85 (2011)).

142. *Id.*

143. *See id.* at 2130.

144. *Id.* (internal quotations omitted).

145. *Id.* at 2129 (emphasis added).

146. *See id.* at 2128 (quoting Brief for Petitioner at 37, *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120 (2014) (No. 13-369), 2014 WL 768314, at *37).

Yet the Court chose an affirmative reasonable certainty standard for confirming the definiteness of a claim instead of *Nautilus's* negative “more than one reasonable interpretation” standard for striking a claim as indefinite, leaving open the question of what would suffice for finding a claim indefinite under this standard. Rather than settling this question, the Court instead noted that it is a court of review and not one of first impression, and therefore remanded the case back to the Federal Circuit to apply the new reasonable certainty test while noting that this new test is less “amorphous” than the Federal Circuit’s previous test.¹⁴⁷

III. THE DUTY OF CLARITY

The Supreme Court’s decision in *Nautilus* added judicial momentum to the efforts of the President, the PTO, and Congress to improve the clarity of patent claims. All three branches of the government have effectively called for a better and more honest effort from patent applicants themselves. This insistence on patent applicants intentionally writing more precise claims and tighter patent examination of those claims is the “duty of clarity.” This Part discusses why a duty of clarity is so important in patent law, what exactly it means to have a duty of clarity, and how the *Nautilus* decision advances this duty.

A. WHY A DUTY OF CLARITY

There are many reasons that society benefits from greater clarity in patent claiming. Clearer claiming benefits patentees by increasing their ability to extract license fees and by making the patents more marketable. In contrast, while patentees can also benefit from vague claims,¹⁴⁸ those advantages are typically unjust. Clearer claiming also favors other inventors advancing the art around the patentee’s invention and the greater patent community.

In some ways, patentees benefit from ambiguous claims. The Supreme Court commented that patent prosecutors have been incentivized to be vague and ambiguous in their claims.¹⁴⁹ Patentees benefit from fuzzy

147. See *Nautilus*, 134 S. Ct. at 2131.

148. See Ismael Arinas, *How Vague Can Your Patent Be? Vagueness Strategies in U.S. Patents*, 2012 HERMES J. LANG. & COMM. BUS. 48, 55–56 (2012) (distinguishing vague claims as acceptable from ambiguous claiming); Irving Kayton & Paul L. Gardner, *Crafting and Drafting Winning Patents: An Overview*, 85 J. PAT. & TRADEMARK OFF. SOC’Y 473, 483 (2003) (advocating that “the practitioner says, asserts, and does no more than is absolutely required by statute and case law”).

149. See *Nautilus*, 134 S. Ct. at 2129.

boundaries in their patents, and patent prosecutors face no penalties for such efforts.¹⁵⁰ Unclear boundaries allow a patentee to claim infringement by others that fall within the broader interpretation of the uncertain scope, yet still avoid later asserted prior art if necessary by arguing a narrower interpretation of the uncertain scope. This practice can be particularly troublesome where ambiguous language is used during prosecution to avoid prior art. While the patent applicant and patent examiner may agree on the outer limits of the patent scope obtained through prosecution, ambiguous language in the prosecution history may fail to serve the public notice requirements of § 112(b). Yet when a patent applicant inadequately documents the agreed-to scope through ambiguous language, this does not justify the use of vague claiming, as it is really just a failure to properly document the patent bargain.

Later efforts to remove ambiguity after issuance can also be problematic.¹⁵¹ A patentee can correct an ambiguous claim by seeking a reissue of the patent under 35 U.S.C. § 251, often to clean up a patent in preparation for litigation.¹⁵² That reissuance process can, with the patentee's permission, even happen concurrently with litigation.¹⁵³ A reissued patent may, however, invoke the doctrine of intervening rights under 35 U.S.C. § 252.¹⁵⁴ Under this doctrine, if the scope of a new or amended claim is not substantially identical to previously existing claims on reissue, then there are "absolute intervening rights" such that there can be no acts of infringement of the new or amended patent claims patent prior to the date of reissue.¹⁵⁵ Further, there are also "equitable intervening rights" such that there can also be no infringement where there is substantial preparation of products that infringe only under the reissued claims.¹⁵⁶ One might think that when a claim is amended from an

150. See Willis B. Rice & William L. Grossman, *Reissued Patents and Intervening Rights*, 43 YALE L.J. 766 (1934).

151. See *Slimfold Mfg. Co. v. Kinkead Indus., Inc.*, 810 F.2d 1113, 1117 (Fed. Cir. 1987) (finding a claim substantially identical even after adding a missing antecedent basis to a claim to make it definite under § 112 ¶ 2, such that intervening rights did not apply).

152. Curtis B. Hamre et al., *Reissue and Reexamination*, 29 IDEA 311, 312 (1989) ("through use of the reissue procedure, a patentee can 'clean up' language in patent claims which, with hindsight, might be considered a problem during litigation.").

153. See *id.* ("the PTO will not stay its reexamination of a patent that is in litigation unless trial has commenced.").

154. 3 PAT. L. FUNDAMENTALS § 10:21 (2d ed. 2015).

155. 35 U.S.C. § 252 (2012); *BIC Leisure Prods., Inc. v. Windsurfing Int'l, Inc.*, 1 F.3d 1214, 1220 (Fed. Cir. 1993).

156. *BIC Leisure Prods.*, 1 F.3d at 1220.

ambiguous claim to become a clear claim, the claims would not be substantially identical. After all, the prior claim was ambiguous, and the amended claim is not. However, the Federal Circuit has found that claims can be substantially identical when a patentee corrects claims that were ambiguous under § 112 ¶ 2 with a narrowing amendment.¹⁵⁷ Since any removal of ambiguity could be considered narrowing of the broadest possible interpretation, there are typically no intervening rights for correcting ambiguous claims.¹⁵⁸ These reissuance rules further incentivize ambiguous claiming in prosecution, because the patentee can later fix the ambiguity with no intervening rights penalty. In fact, this encourages patentees to claim broadly with ambiguity, so as to be able to narrow the patent later to avoid prior art, while maintaining a scope that includes potential infringers, all without giving up intervening rights.

However, using vague claim language is not without risk for the patentee.¹⁵⁹ The problem for the patentee can arise later when a patentee actually asserts the patent in litigation. Once a patentee enters litigation, a claim may be invalidated because of ambiguous scope under § 112 ¶ 2, causing the patentee to lose the claim in its entirety. If the patentee had written clear patent claims in the first place, the patentee would not face this uncertainty in litigation and have this extra burden to defend his patent in litigation. Possibly ambiguous patents also make litigation outcome more uncertain, and given new fee shifting rules,¹⁶⁰ uncertain patent assertion can be riskier.

157. *Slimfold*, 810 F.2d at 1117 (finding a claim substantially identical when a missing antecedent basis was added to a claim to make it definite under § 112 ¶ 2, such that intervening rights did not apply); *see also* *Mendenhall v. Astec Indus., Inc.*, No. CIV-1-86-229, 1988 WL 188449, at *51 (E.D. Tenn. Oct. 31, 1988) (“The defense of intervening rights is unavailable when claims of a reissue patent are narrowed, rather than broadened”), *aff’d*, 887 F.2d 1094 (Fed. Cir. 1989).

158. *See Slimfold*, 810 F.2d at 1117. *But see* *Wayne-Gossard Corp. v. Sondra, Inc.*, 434 F. Supp. 1340, 1352 (E.D. Pa. 1977) (applying intervening rights to narrowing reissued patents), *aff’d sub nom. Wayne-Gossard Corp. v. Sondra Mfg. Co.*, 579 F.2d 41 (3d Cir. 1978).

159. *See Hamre et al.*, *supra* note 152, at 311–12 (1989). Since a reissuance must be “through error without any deceptive intention,” an effort to be intentionally vague in the initial prosecution might become problematic in reissuance.

160. *See Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014) (relaxing the standard for a case to be considered “exceptional” for fee-shifting purposes under 35 U.S.C. § 285); Hannah Jiam, *Fee-Shifting and Octane Fitness: An Empirical Approach Toward Understanding “Exceptional,”* 30 BERKELEY TECH. L.J. 611 (2015).

A patent with ambiguous scope also has an indeterminate value because uncertainty in the ability to successfully assert the patent in litigation creates high-risk litigation outcomes.¹⁶¹ Since a vague patent is worthless if invalidated as ambiguous, and of full value if valid, the uncertainty means the patent is valued somewhere between these extremes. This results in the undervaluing of valid patents based on ambiguous claims. More certainty is also important to a patent owner seeking market compensation for his intellectual property.¹⁶² This typically occurs with a corporate patent owner seeking funding, making purchases with equity, or offering its IP for sale.¹⁶³ Patent owners with ambiguous patents are able to extract less value in all of these activities. Therefore, to improve the monetization of patents, patentees can benefit from more clarity in prosecution.

Clearer claiming also improves the process of patent prosecution, because where a claim is more clear and determinate, it is easier for the patent examiner to examine the claim and identify potential prior art. Where claims are instead ambiguous, the examiner must first resolve the ambiguous scope, in order to properly identify prior art. Or worse, where the examiner fails to resolve the ambiguous scope, the examiner may waste prosecution time searching for prior art that is outside the actual scope of the claims. By making clear claims, patent prosecutors speed up the prosecution process for the examiners and can reduce the cost of prosecution for clients.¹⁶⁴

161. See Kelly Casey Mullally, *Legal (Un)certainty, Legal Process, and Patent Law*, 43 LOY. L.A.L. REV. 1109, 1113 (2010).

162. See Craig Allen Nard, *Certainty, Fence Building, and the Useful Arts*, 74 IND. L.J. 759, 759 (1999) (“The prospect of certainty in the patentee’s property interest has several benefits, one of which is to create a sense of security which permits the patentee to secure risk capital from investors, which in turn facilitates the commercialization of the claimed invention.”).

163. See *id.*

164. Examiners face substantial time pressure to complete their examinations. See John R. Thomas, *Collusion & Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305, 314 (2001); see also Milton Weissman, *Testimony Before the Senate Judiciary Committee, Subcommittee on Patents, Trademarks, and Copyrights, Relating to S. 1321 (Hart Bill)*, 55 J. PAT. OFF. SOC’Y. 604, 606-07 (1973), which quotes a 1918 Assistant Commissioner’s speech addressed to examiners:

[I]f you have to choose between making a less thorough examination and a general and material delay in getting the applications through, it is probably more to the public interest that the prosecution be prompt . . . [and] . . . if your examination is not sufficiently thorough, this is directly the fault of Congress.

Clear claiming certainly benefits other inventors, allowing advancement of the art around the patentee's invention.¹⁶⁵ The main advantage of clearer claims is that other inventors know the boundaries around which they can further the art without concern for infringing the patent.¹⁶⁶ These firm boundaries encourage investors to spend on research to develop commercial products outside of the patents' boundaries.¹⁶⁷ Without clear claiming, investors and inventors may be wary of developing products within the ambiguous boundaries of a patent, for fear that their efforts will only benefit the patent owner, and not themselves.¹⁶⁸

The greater patent community also benefits from clearer claiming. When many patents are ambiguous and others are not, it fouls the whole patent marketplace because it makes patents more difficult to value.¹⁶⁹ This echoes the concerns of Thomas P. Jones in 1828 about too many invalid patents harming the value of all patents;¹⁷⁰ only now, the problem is too many ambiguous patents harming the value of all patents. Because patents can be difficult to read and interpret, they can also be difficult to value, leading many to estimate the value of patents, particularly when

Id.; see also Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW U. L. REV. 1495, 1500 (2001) (noting that patent examiners average only eighteen hours of total examination time on each patent).

165. See, e.g., Christopher A. Cotropia, *Patent Claim Interpretation Methodologies and Their Claim Scope Paradigms*, 47 WM. & MARY L. REV. 49, 69–70 (2005).

166. See *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942) (noting that without clear boundaries there would be “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims”).

167. James Bessen et al., *The Private and Social Costs of Patent Trolls*, 34 REGULATION 26, 26 (2011–2012) (finding the net transfer of wealth from patent infringing defendants to patent plaintiffs represents a loss to social welfare, and the “fuzzy” boundaries enable the rise of NPE business models. “To the extent that . . . NPEs opportunistically assert ‘fuzzy patents’ against real technology firms, they can decrease the incentives for these firms to innovate.”).

168. See *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014) (“Otherwise there would be ‘[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims.’” (quoting *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942))).

169. See Malcolm T. “Ty” Meeks & Charles A. Eldering, *Patent Valuation: Aren't We Forgetting Something? Making the Case for Claims Analysis in Patent Valuation by Proposing A Patent Valuation Method and A Patent-Specific Discount Rate Using the CAPM*, 9 NW. J. TECH. & INTELL. PROP. 194, 196 (2010) (noting that there is no agreed-upon method for patent valuation, but arguing that a proper valuation should include an analysis of the claims).

170. See Thomas P. Jones, *Information to Persons Applying for Patents, or Transacting Other Business at the Patent Office*, 6 FRANKLIN J. & AM. MECHANICS' MAG. 332, 334 (1828).

valuing large portfolios with time constraints.¹⁷¹ Ambiguous patents make the valuation process even more difficult, leading to even more estimating. To account for the uncertainty in potentially ambiguous patents, patents must be discounted to account for the risk of invalidity.¹⁷² When many patents are ambiguous, there is uncertainty added to any sale of a large portfolio of patents, decreasing the value of the entire portfolio.¹⁷³

Clearer claiming can also facilitate licensing discussions. Where there is clearer scope, there is less uncertainty whether or not a product infringes a patent, which can encourage parties to license patents instead of litigating. Where there is ambiguous scope, the patentee is likely to interpret scope broadly to maximize the value of his patent while a potential licensee is likely to interpret scope narrowly to argue no infringement. Ambiguous claims fuel disputes, and naturally lead to litigation requiring a third party to resolve the disputed interpretation of scope.¹⁷⁴ When claims are more precise, there is less room for disputed scope and a more certain adjudicated outcome, such that parties are more likely to avoid litigation.¹⁷⁵ Greater claim clarity shortens the time to

171. See Meeks & Eldering, *supra* note 169.

172. See *Crossing the Finish Line on Patent Reform: What Can and Should Be Done: Hearing Before the Subcomm. on Intellectual Property, Competition, and the Internet of the H. Comm. on the Judiciary*, 112th Cong. 40 (2011) (statement of Chief Judge Paul R. Michel (Ret.)):

After delays, the next most harmful dynamic is extended uncertainty over the validity of issued patents. If patents were to suffer under a cloud of possible invalidation for years on end, how could their value not diminish? What then happens to their power to induce investments by risk capital managers and even large company CEOs?

173. See Michael Risch, *Patent Portfolios As Securities*, 63 DUKE L.J. 89, 146 (2013) (noting that newer patents with more uncertain value skew lower in value).

174. *Abusive Patent Litigation: The Impact on American Innovation and Jobs, and Potential Solutions: Hearing before the H. Subcomm. on Courts, Intellectual Property, and the Internet of the H. Comm. on the Judiciary*, 113th Cong. 114 (Mar. 14, 2013) (statement of Electronic Frontier Foundation) (“Software patents are an attractive tool for patent trolls because they are notoriously difficult to interpret—giving unscrupulous patent owners the ability to claim that their patent covers a wide range of technology”); Julie Samuels, *Finally: This Is How to Fix the ‘Patent Fix’ We’re All In*, WIRED (Apr. 2, 2013, 9:30 AM) <http://archive.wired.com/opinion/2013/04/this-is-how-to-fix-the-patent-fix-were-in/> (noting that “[b]ecause software patents are so hard to understand, parties facing claims of infringement cannot make realistic predictions about their chances to succeed in court.”).

175. See Peter S. Menell et al., PATENT CASE MANAGEMENT JUDICIAL GUIDE 2D ED., § 2.1.3.4 (2012) (“One argument in favor of early, separate claim construction is that it may facilitate settlement. . . . A court’s rulings on claim scope can materially assist

settlement in litigation by diminishing the importance of the *Markman* hearing and increasing the possibility of an earlier summary judgment decision, greatly decreasing the cost of litigation. Those who extort settlement licenses using ambiguous patents may disfavor this change, as the threat of expensive litigation is one of their preferred tactics to get a party to buy a license, but such tactics are decried.¹⁷⁶

Although the patent statute requires clear claiming, efforts must be made to enforce the statute in the face of countervailing motivations to claim ambiguously.¹⁷⁷ The Supreme Court through its *Nautilus* decision added its support to addressing this concern.

B. THE SUPREME COURT'S DECISION ADVANCES A DUTY OF CLARITY

In *Nautilus*, the Court expounded at some length about how a stronger check on ambiguity is needed because patent prosecutors intentionally make ambiguous claims.¹⁷⁸ The Court referenced testimony that the “patent system fosters ‘an incentive to be as vague and ambiguous as you can with your claims’ and ‘defer clarity at all costs.’”¹⁷⁹ The Court sought to “[e]liminat[e] that temptation”¹⁸⁰ by attacking ambiguous claiming in both litigation and prosecution. First, the Court strengthened the test applied in litigation to invalidate ambiguous claims.¹⁸¹ Second, the Court’s opinion pushes for clearer claiming during patent prosecution.¹⁸²

First and more obviously, the Court’s new reasonable certainty test is more restrictive as it permits less ambiguity than the insolubly ambiguous test, which was “more amorphous than the statutory definiteness requirement allows.”¹⁸³ Patent applicants considering this new test may be more wary of drafting intentionally ambiguous claims, for fear that their patents will be later invalidated as ambiguous. As the Court noted, this

the parties in recalibrating their assessment of exposure and allow each side to take a fresh look at its case.”).

176. EFF Statement, *supra* note 174 (“Software patents are an attractive tool for patent trolls because they are notoriously difficult to interpret—giving unscrupulous patent owners the ability to claim that their patent covers a wide range of technology”).

177. *See Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2129 (2014).

178. *Id.*

179. *Id.*

180. *Id.*

181. *See id.* (advancing the new “reasonable certainty” test).

182. *See id.* (commenting on the need to eliminate the temptation to claim ambiguously).

183. *See id.* at 2131.

test is not a newly created judicial requirement, but one that is demanded by statute,¹⁸⁴ and therefore applies equally to past patents as well as future patents. Any further tightening of the indefiniteness requirement would also be backwards-looking in applying to past patents. Patent applicants observing the enthusiasm of the Supreme Court to eliminate the temptation to write ambiguous claims should be more wary of drafting ambiguous patent claims that may fail some stricter future test.¹⁸⁵ At the least, patent applicants may want to backstop any ambiguous claims with more clear versions to protect against this risk.

Second, the Court further recognized that its decision must change the behavior of patent applicants who are “in the best position to resolve the ambiguity in . . . patent claims.”¹⁸⁶ This language in the Court’s opinion was particularly illuminating, as it was not an instruction to the Federal Circuit or to any district court. The federal courts are rarely in a position to do anything differently to carry out this observation by the Supreme Court, as the federal courts do not generally oversee the drafting of patents.¹⁸⁷ Therefore, this statement can be read as request for patent applicants and the PTO to recognize the importance of clearer claiming, asking for a “duty of clarity” on their part. The Court further noted that the “definiteness requirement . . . mandates clarity.”¹⁸⁸ Once more, the federal courts can only review patented claims to determine if they are clear instead of indefinite, but can do very little to directly ensure that claims are clear in the first place. A mandate for clarity indicates that

184. *See id.* at 2130 (noting that the “insolubly ambiguous” standard “lack[s] the precision § 112 ¶ 2 demands”).

185. Despite this possible concern, the Supreme Court is not likely to challenge the Federal Circuit’s application of this test, as the Supreme Court seemed more concerned with the Federal Circuit’s articulation of the test than its actual application. *See id.* at 2130. That said, the Federal Circuit itself may take *Nautilus* as a signal to be more critical of ambiguous claims.

186. *Nautilus*, 134 S. Ct. at 2129.

187. The Federal Circuit does review appeals from the PTAB, providing some guidance to patent drafting in those cases, but those cases represent a very small percentage of the patent applications each year. *See* United States Court of Appeals for the Federal Circuit, *U.S. Court of Appeals for the Federal Circuit—Appeals Filed, Terminated, and Pending During the Twelve-Month Period Ended September 30, 2013*, <http://www.cafc.uscourts.gov/images/stories/the-court/statistics/FY13/appeals%20filed%20term%20pend%209.30.13.pdf> (illustrating that the Federal Circuit reviews just over one hundred PTAB decisions in a typical year); *see also* United States Court of Appeals for the Federal Circuit, *U.S. Patent Statistics Chart Calendar Years 1963–2013*, http://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm (last visited Feb. 7, 2015) (illustrating that the patent office receives over half-a-million applications per year).

188. *Nautilus*, 134 S. Ct. at 2129.

claims should be clear from the start, from the point of drafting, by emphasizing a duty of clarity. The Supreme Court is not the first voice to ask for a duty of clarity, as observed earlier in congressional and presidential actions,¹⁸⁹ or even the first court to do so.¹⁹⁰ However, the support of the Court should give the duty of clarity greater momentum.

This “duty of clarity” falls squarely on the parties involved in the prosecution of patents, in particular on the patent applicants and the patent examiners. For the patent applicants, the duty of clarity requires the applicant to draft unambiguous claims, or at least not draft intentionally ambiguous claims. For the patent examiner, the duty of clarity requires examination of the patent claims under the § 112(b) standard, applying the guidance of MPEP § 2173 to determine if claims are ambiguous.

C. HOW TO ACHIEVE A DUTY OF CLARITY

While there are strong reasons to require a duty of clarity and several ways to “[e]liminat[e] that temptation”¹⁹¹ of ambiguous claiming, some approaches may be more effective than others. In addition to simply invalidating a claim for indefiniteness, there are two possible models to further the duty of clarity that reflect the Supreme Court’s opinion: (1) litigation-based enforcement, and (2) prosecution-based restrictions.

1. *Inequitable Conduct—Litigation Approach*

One possible model for the duty of clarity uses a deterrent akin to inequitable conduct for violation of the duty of disclosure. Inequitable conduct is a judge-made doctrine that originates in the concept of unclean hands.¹⁹² It developed as a defense for accused patent infringers and an effort to penalize patent applicants that intentionally deceived the patent office in order to obtain a patent.¹⁹³ Inequitable conduct requires that “information material to patentability was withheld from the PTO, or material misinformation was provided to the PTO, with the intent to

189. *See supra* Section I.E.

190. *See* EOS GmbH Electro Optical Sys. v. DTM Corp., No. SACV 00-1230 DOC (MLGx), 2004 WL 5683723, at *20 (C.D. Cal. Jan. 12, 2004) (noting that the patentee is his own lexicographer, and with that “substantial power comes the duty of clarity”).

191. *Nautilus*, 134 S. Ct. at 2129.

192. *Therasense, Inc. v. Becton, Dickinson & Co.*, 649 F.3d 1276, 1285 (Fed. Cir. 2011).

193. *See id.* at 1287.

deceive or mislead the patent examiner into granting the patent.”¹⁹⁴ For inequitable conduct to apply, the accused infringer must show that the patentee acted with the specific intent to deceive the PTO,¹⁹⁵ that the deception was “but-for” material to obtaining the patent,¹⁹⁶ and prove this with clear and convincing evidence.¹⁹⁷ Inequitable conduct is extremely difficult to prove.¹⁹⁸

While inequitable conduct could extend to the intentional efforts by a patent applicant to draft ambiguous claims or create ambiguous prosecution history, this would be problematic in practice. Inequitable conduct is already difficult to prove, typically requiring the alleged patent infringer to identify material prior art known to the patentee along with evidence that the patentee intentionally withheld that prior art from the PTO.¹⁹⁹ In the case of ambiguous claiming, it is even more difficult to distinguish a faulty effort to claim broadly from an intentional effort to claim ambiguously. There is simply too much room for disagreement over whether the applicant knew the language was ambiguous to prove that an applicant intentionally drafted ambiguous language. Further, inequitable conduct results in a severe punishment on the practitioner and the patent owner, and the courts have shown an unwillingness to apply this doctrine in all but the most egregious cases.²⁰⁰ The recent AIA legislation also suggests inequitable conduct is disfavored, as it provides supplemental examination as a means to avoid inequitable conduct.²⁰¹

In addition, one reaction to the inequitable conduct doctrine has been over-disclosure by patentees to bury material prior art, or innocent disclosure of anything that is possibly material.²⁰² This reaction has hurt

194. *Outside the Box Innovations, LLC v. Travel Caddy, Inc.*, 695 F.3d 1285, 1290 (Fed. Cir. 2012).

195. *Therasense*, 649 F.3d at 1287.

196. *See id.* at 1291 (indicating that for a failure to disclose to be material, the disclosure, if made, would have prevented the patent from being issued).

197. *Id.* at 1290.

198. *See* Gideon Mark & T. Leigh Anenson, *Inequitable Conduct and Walker Process Claims After Therasense and the America Invents Act*, 16 U. PA. J. BUS. L. 361, 384 (2014).

199. *See, e.g.*, *Aventis Pharma S.A. v. Amphastar Pharms., Inc.*, 525 F.3d 1334, 1337 (Fed. Cir. 2008) (exemplifying the difficulty of proving inequitable conduct, as the Federal Circuit affirmed the district court’s finding of inequitable conduct only after remand on the question of the intent to deceive).

200. Mark & Anenson, *supra* note 198, at 385–86.

201. John M. Golden, *Patent Law’s Falstaff: Inequitable Conduct, the Federal Circuit, and Therasense*, 7 WASH. J.L. TECH & ARTS 353, 377 (2012).

202. *See* Robert Brendan Taylor, *Burying*, 19 MICH. TELECOMM. & TECH. L. REV. 99, 112 (2012).

the PTO's ability to review large volumes of disclosed art, and may actually hinder the PTO from looking at the most relevant prior art.²⁰³ Creating an inequitable conduct equivalent for ambiguous claiming could have similar negative effects. An applicant wishing to avoid ambiguity could overload a claim with glossary and reference material in order to protect against inequitable conduct on the basis of ambiguous claiming. While an overabundance of details could help the examiner in understanding the scope of the claim, it could also hinder such efforts. Since examiners have limited time to review applications, this could interfere with the time spent searching for prior art. Further, too much additional detail could create opportunities for contradictory statements on scope that actually make the patent more ambiguous. While the patent system is better off when encouraging clear claiming, it is likely harmed by over-disclosure.²⁰⁴

2. *Stricter Examination—Prosecution Approach*

An alternate model imposes the duty of clarity on prosecution practice by rejecting or objecting to ambiguous claims. Many commentators have called for more claim clarity enforcement by the patent office.²⁰⁵ Fortunately, both patent applicants and the PTO are well positioned to handle this approach.²⁰⁶

203. *See id.* at 114–15.

204. *See id.*

205. *See, e.g.*, Peter Menell, *It's Time to Make Vague Software Patents More Clear*, WIRED (Feb. 2, 2013, 4:10 PM) <http://www.wired.com/2013/02/its-time-to-make-vague-software-patents-more-clear/> (“advocated putting more onus on the patent applicants to clarify the boundaries of their claimed inventions at the outset of the process.”); Colleen Chien & Aashish Karkhanis, *Software Patents and Functional Claiming*, http://www.uspto.gov/patents/init_events/software_ak_cc_sw.pdf (quoting Mark Lemley: “Why don’t we more forcefully apply the disclosure law (35 USC 112(b) and 35 USC 112(f)) to rebalance the patent bargain without changing the patent statute?”); Mark Lemley, *Let's Go Back to Patenting the 'Solution,' Not the 'Problem'*, WIRED (Oct. 31, 2012, 6:30 AM) <http://www.wired.com/2012/10/mark-lemley-functional-claiming/> (calling for more precise functional claiming, arguing “[i]f someone invents a program, s/he can own that program and ones like it, but not every program that might achieve the same end.”).

206. Rai, *supra* note 100 (presenting a study finding heavier use of § 112 in the bioinformatics PTO unit compared to rare use in the software art unit. “Unlike many other patentability requirements, both written description and definiteness are relatively easy-to-implement mechanisms for limiting broad claiming and improving notice. They provide overworked and under-resourced patent examiners the right tools to do their job.”).

For applicants, previously ambiguous claims can be simply rewritten to be more precise. One of the largest concerns of prosecutors intentionally making ambiguous claims is that they want to anticipate future variations that should be covered by the patent, and ambiguous claims allow these variations to be captured.²⁰⁷ Yet there is already a separate concept, the doctrine of equivalents, which is supposed to capture such variations, such that there is no reason to use ambiguous claiming to achieve this objective.²⁰⁸ If an applicant wants to claim broadly, but is unsure about prior art, the applicant can write both specific broad claims, and more narrow claims, and does not need to resort to ambiguous claiming. Where ranges are applicable to a patent, a patent applicant does not need to use ambiguous language to capture such ranges, but can claim with numeric values at the extreme edges enabled by the invention, and narrow those ranges during prosecution as necessary. The patent applicant might even benefit from this approach by getting to issuance faster, since the examiner will have a clearer understanding of patent scope, and a clearer case can be made for prior art falling within or outside of that scope.

For the prosecution approach to work, the main pressure must come from the PTO. Patent examination is largely a non-adversarial process between the PTO and the applicant, with the PTO both advancing and judging arguments against the applicant.²⁰⁹ However, when the PTO pushes back on patent applicants to require clearer claiming, those applicants may become more proactive in claiming more clearly from the start, so as to avoid unnecessary exchanges with the patent office that risk time and possible scope disclaimer.²¹⁰ The latest revisions of the MPEP have given patent examiners more authority to reject claims for indefiniteness, and it is a matter of the examiners taking advantage of that authority to do so. Fortunately, examining a claim for ambiguity is well within the skills and time constraints facing patent examiners. Claims are

207. See Arinas, *supra* note 148, at 55–56; Kayton & Gardner, *supra* note 148, at 483 (advocating that “the practitioner says, asserts, and does no more than is absolutely required by statute and case law” to protect the breadth of claiming).

208. See 4 MOY’S WALKER ON PATENTS § 13:61 (4th ed. 2013) (“the Doctrine of Equivalents exists mainly as a response to the inherent limitations of language in fashioning the patent claim”).

209. See Dennis Crouch, *Pre-Issuance Submissions*, PATENTLY-O (Sept. 15, 2012), <http://patentlyo.com/patent/2012/09/pre-issuance-submissions.html>.

210. See OECD, INTELLECTUAL ASSETS AND INNOVATION: THE SME DIMENSION, OECD STUDIES ON SMES AND ENTREPRENEURSHIP 162 (OECD Publishing 2011).

viewed for indefiniteness by a POSITA at the time the patent was filed.²¹¹ Since examiners are skilled in their area of examination, and since examiners evaluate claims fairly close to the time of filing, they are capable of evaluating claims for indefiniteness with minimal reference to outside sources. Effectively, an examiner can make a determination of indefiniteness simply by carefully reading the claims, which the examiner already does in order to evaluate the patent for prior art, patentability, and other rejections. Therefore, there is a minimal extra burden on the examiner in reviewing claims for indefiniteness.²¹² Examiners must learn to write § 112(b) rejections supported by the reasoning provided in the MPEP, but once properly trained, such rejections will have common language that the examiner can reuse for speedy prosecution.

While inequitable conduct is a poor mechanism for enforcing the duty of clarity due to the difficult enforcement and unintended effects, stricter application of § 112(b) in prosecution is an excellent way to improve clearer claiming. Both patent applicants and examiners have the tools and capability to make claims clearer. Importantly, patent examiners can do this with a relatively low extra cost of time. Further, once claim scope is more clearly defined, additional prosecution should be even easier because it will be clearer what prior art is within or outside of that claim scope.

D. THE REASONABLY CERTAIN STANDARD ALMOST CERTAINLY APPLIES UNDER THE AIA

One might ask whether the Supreme Court's test from *Nautilus* applies to patents under the AIA,²¹³ since the Court applied § 112 ¶ 2 of the 2006 version of the Patent Act in the case, and not § 112(b) of the AIA, which only applies to applications filed after September 16, 2012.²¹⁴ While § 112 ¶ 2 states that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention,"²¹⁵ the § 112(b) language does not differ significantly with respect to clarity of the claims, requiring that "[t]he specification shall conclude with one or more claims

211. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2128 (2014).

212. Rai, *supra* note 100 ("Unlike many other patentability requirements, both written description and definiteness are relatively easy-to-implement mechanisms for limiting broad claiming and improving notice. They provide overworked and under-resourced patent examiners the right tools to do their job.")

213. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

214. See *Nautilus*, 134 S. Ct. at 2124 n.1.

215. 35 U.S.C. § 112 ¶ 2 (2006).

particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.”²¹⁶ The Court itself noted that these differences were “minor” but did not specifically address whether the reasonable certainty test applied to the AIA.²¹⁷ Because the critical language covering the requirement for claim clarity is the same under the AIA as under previous patent law, the Supreme Court’s reasonable certainty test should apply under the AIA.

IV. IMPLEMENTING THE DUTY OF CLARITY

Many scholars and patent practitioners have commented on the need for greater clarity in patent claiming, recognizing that a duty of clarity benefits the patent community.²¹⁸ In addition, commentators also have advanced various proposals to support the duty of clarity. These proposals effectively split the duty two ways. Some of the proposals center on improving prosecution by changing the examination process as implemented by the examiners, focusing on the examiner’s duty of clarity. Other proposals put more burdens on patent applicants, focusing on the applicant’s duty of clarity. While both these approaches are meritorious and worthy of pursuit, this Note also advances a third approach where the duty of clarity is also borne by the greater patent community.

A. EXAMINER’S DUTY OF CLARITY

One of the more obvious solutions to increase clarity in claiming is to change the examination process applied by the examiners. After all, the patent examiners are the gatekeepers of patent issuance. Many advocates for clearer claiming have focused on software patents as the source of ambiguous patents causing the most problems in litigation.²¹⁹ While studies of software patent prosecution are illuminating, the approaches suggested in these studies can be applied more broadly.

Some commentators have suggested that there should be special rules for the examination of software patents.²²⁰ The main argument is that

216. 35 U.S.C. § 112(b) (2012).

217. *See Nautilus*, 134 S. Ct. at 2124 n.1.

218. *See supra* Section III.C.2.

219. *See, e.g.*, JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS AND LAWYERS PUT INNOVATORS AT RISK 92–93 (2008) (addressing the ambiguity in patent claims for patents in a variety of industries, but singling out software patents as especially problematic).

220. *See, e.g.*, Julie Samuels, *supra* note 174; BESSEN & MEURER, *supra* note 219, at 201.

software patents are too inherently abstract to allow for precise claiming.²²¹ However, efforts to make special patent laws for a particular industry have been ineffective, despite actual differences in application to those industries.²²² The closest success along these lines might be in judicial decisions that apply to all patents, but have a disproportionate effect on software patents. These decisions have affected examination of software patents in particular. For example, software patents are more likely to have algorithms in the claims that are further defined by reference to the specification as functional claims.

Other commentators have not advocated for special rules for software, but do focus on software patent prosecution to look for improvements. Professor Arti Rai, for example, observes that written description and definiteness standards are properly applied in other PTO examining art units, and the failure is the application of these standards within the software-examining art units.²²³ Rai suggests that the software-examining art unit should vigorously adopt the definiteness standards of the Bioinformatics unit and that the source of the problem is institutional learning delay within the PTO.²²⁴ Professor Andrew Chin attempts to answer the concerns of Bessen and Meurer that software patents are too abstract²²⁵ by asking the patent system to “harness cognitive abstraction skills to promote innovation rather than allow their abuse to evade otherwise generally applicable requirements for patentability.”²²⁶

Both Rai and Chin identify a key for clarity in claiming the need to have properly trained examiners. As previously noted in Section III.C.2, *supra*, the MPEP has recently been revised to greatly empower examiners to reject on the basis of § 112 ¶ 2 (or § 112(b)). These revisions, however, are only effective if the examiners are current in their training and knowledge of the MPEP, and this only happens when the PTO makes sure its examiners are current on this section. Fortunately, *Nautilus* is likely to aid this training. Supreme Court decisions that change tests often

221. See BESSEN & MEURER, *supra* note 219, at 201.

222. See John R. Allison & Mark A. Lemley, *The Growing Complexity of the United States Patent System*, 82 B.U. L. REV. 77, 78–81 (2002). Such an approach may also be in contravention of various patent law treaties such as TRIPS.

223. Rai, *supra* note 100.

224. *Id.*

225. BESSEN & MEURER, *supra* note 219, at 201.

226. Andrew Chin, *On Abstraction and Equivalence in Software Patent Doctrine: A Response to Bessen, Meurer and Klemens*, 16 J. INTELL. PROP. L. 197, 227 (2009) (identifying the abstract software patent problem as one of training and skillset, not a problem with the patents themselves).

prompt changes in the MPEP and further prompt the PTO to notify and train their examiners on application of that area of examination.²²⁷ The PTO is making affirmative efforts to improve training of its examiners.²²⁸ This should continue, with the PTO paying particular attention to training on § 112. Although § 112 has received less attention than §§ 101–103 in examination, disputes in many issued patents can be traced to ambiguous language, resulting in unnecessary litigation. Also, because § 112 problems cannot be challenged in reexamination, and can be abused by carefully timed fixes in reissuance, the examiner should have a more pressing duty to properly examine claims for clarity.

B. APPLICANT'S DUTY OF CLARITY

In addition to a stricter application of the indefiniteness standard by the examiner, there are changes in the application process that affect the applicant's duty of clarity by using more structure in applications.²²⁹ This type of change puts more pressure on patent applicants to fulfill the structured requirements, and aid the examiner in evaluating an application for clarity.

Professor Peter Menell suggests that patent applications should use structured forms for claims that include a checkbox for each claim to indicate whether or not it is a functional claim to be evaluated under § 112(f).²³⁰ It is important to distinguish functional claims from non-functional claims because functional claims require supporting structure in the specification disclosing how to implement that function, and the scope of the functional claim is limited to that disclosure.²³¹ If a functional claim

227. See, e.g., *Supreme Court Decision in Bilski v. Kappos*, USPTO http://www.uspto.gov/patents/law/exam/bilski_guidance_28jun2010.pdf (providing interim guidance to patent examiners following *Bilski v. Kappos*); *2012 Interim Procedure For Subject Matter Eligibility Analysis of Process Claims Involving Laws of Nature*, USPTO, http://www.uspto.gov/patents/law/exam/2012_interim_guidance.pdf (providing interim guidance in view of *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*).

228. See USPTO Training Academy, *35 U.S.C. § 112(b) and (d)*, <http://www.uspto.gov/video/cbt/35USC112b-d/> (last visited Feb. 8, 2015) (providing USPTO online training specifically on § 112(b) and (d) using Adobe Presenter); see also USPTO, *Patent Examiner Technical Training Program (PETTP)*, <http://www.uspto.gov/patents/pettp.jsp> (last visited Feb. 8, 2015) (demonstrating how the patent office is reaching out to technical experts to better train examiners).

229. See Menell, *supra* note 205.

230. See *id.*; 35 U.S.C. § 112(f) corresponds to 35 U.S.C. § 112 ¶ 6 for patent applications before the AIA was enacted. Prior to September 16, 2011, § 112(f) was referred to as § 112 ¶ 6. The America Invents Act changed the designations.

231. See *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113–14 (Fed. Cir. 2002).

lacks supporting structure, it is invalid for indefiniteness.²³² Yet whether or not a patent claim invokes § 112(f) is often a matter of debate in litigation. It is such a difficult issue to resolve that the Federal Circuit often disagrees with a district court's finding.²³³ Courts are aided by the appearance of certain terms in a claim, which raise a "rebuttable presumption" that the claim is functional.²³⁴ However, patent prosecutors, knowing this, may choose to obscure whether a claim is functional or not by intentionally choosing language that does not raise this rebuttable presumption. A time-pressured examiner may not realize that the claim is functional, and may fail to check for supporting structure to make sure the claim is definite. Alternately, a time-pressured examiner may think a claim is functional when the applicant does not intend it to be, and may waste valuable time looking for supporting structure only to have the applicant amend the claim to avoid any functional claiming. If patent applicants are required to indicate whether a claim is functional or not, this change would greatly advance clearer claiming. First, it saves the patent examiner time and informs the examiner whether to evaluate the claim on its own for definiteness, or whether to treat the claim as functional and use supporting structure to determine definiteness. Second, it eliminates later unnecessary disputes in evaluating a patent claim because intent is clearly indicated.

In further support of clarity in functional claims, Menell advocates for hyperlinking functional claim elements to their supporting structure in the specification, and identifying the supporting structure.²³⁵ Such an approach eliminates ambiguity in identifying the supporting structure of functional claims, speeds the work of the examiner who no longer needs to hunt through the entire application for support, and makes the claim scope clearer to those reading them after issuance.

Undoubtedly, the structured form and hyperlink to supporting structure for functional claims puts more burdens on the patent applicant, as part of the applicant's duty of clarity. But the applicant should know whether or not a claim is functional, making the checking of a box a trivial burden. And the patent applicant should also be able to identify the

232. *Id.* at 1114.

233. *See, e.g.,* *TriMed, Inc. v. Stryker Corp.*, 514 F.3d 1256, 1260 (Fed. Cir. 2008); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369–70 (Fed. Cir. 2002); *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1354 (Fed. Cir. 2013), *cert. denied*, 134 S. Ct. 900 (2014).

234. *See CCS Fitness*, 288 F.3d at 1369–70.

235. Menell, *supra* note 205.

supporting structure quickly and save the examiner time by sharing this information. If the patent applicant cannot identify where the supporting structure is, that aids the patent applicant by indicating that supporting structure needs to be provided, or the claim should be amended. This extra structure also removes the debate over whether there is a supporting structure for a claim when reviewing prosecution history. A person reviewing this history will no longer wonder whether the examiner took that support as limiting support for a functional claim or as an enabling embodiment for a non-functional claim where the examiner considered the claim definite on its own. One objection to this approach could be that a patent applicant might not check the box even when a claim is really functional. But in such a case, the applicant would be bound by this choice and the claim would have to stand as definite all on its own.

Along similar lines, Menell also advocates for applicants indicating any limiting embodiments in the application, again with specific structure identifying the limiting embodiments for a claim.²³⁶ This designation would be useful in clarifying scope as it can be a question in litigation whether embodiments are limiting,²³⁷ with the default rule that embodiments are not limiting.²³⁸ In general, an application does not limit claim scope by using example embodiments, and most applicants would prefer to write claims that are not limited by the embodiments because this grants the broadest possible scope. But in order to avoid prior art or satisfy an enablement requirement, a patent applicant may use embodiments during prosecution to limit the claim's scope. Such limitation is not always clear in the prosecution history, though, leading to later ambiguity when evaluating the claims. If an examiner could simply require an applicant to indicate limitations to disclosed embodiments through formal structure, this later ambiguity could be avoided.

Menell also suggests that patent applicants could provide a glossary to explain otherwise ambiguous terms.²³⁹ The examiner can then accept or reject claims based on indefiniteness while considering these glossary terms. An examiner could also request additional glossary terms for otherwise ambiguous language, where the applicant would need to pull the definitions from the original specification or existing published sources at

236. *Id.*

237. *See* Golight, Inc. v. Wal-Mart Stores, Inc., 355 F.3d 1327, 1331 (Fed. Cir. 2004) (finding that disclosure of a single embodiment was not limiting in that case).

238. *See id.*

239. Menell, *supra* note 205.

the time of the application priority date in order to preserve the priority date of the application. While this technique is more work for the patent applicant, it should be straightforward if the applicant has a clear understanding of the terms used in the claims. If this work is not straightforward because the applicant himself cannot advance clear definitions, this likely indicates the very ambiguity problem against which § 112(b) guards. The PTO has started experiments with glossaries in a pilot program, using the incentive of faster prosecution to encourage participation.²⁴⁰ However, commentators have suggested that faster prosecution may not be worth what the applicant gives up by restricting the scope of the application with glossary terms.²⁴¹ Even in advising against the optional use of glossaries, these commentators affirm their very importance by noting that they clarify claims, and the applicant is better off if the applicant can continue to use claims of more uncertain scope.²⁴² These comments and perspectives only serve to highlight the value of glossaries in clarifying claims, and suggest that glossaries should be required, not optional.

Finally, both the patent applicant and the patent examiner will have a heightened duty of clarity if interviews between them are recorded.²⁴³ Many interviews between applicants and examiners are initiated to resolve questions of uncertain scope related to prior art.²⁴⁴ Since these interviews can result in the examiner reconsidering a position and allowing a claim based on a reduction in scope, this information is very important to

240. Glossary Pilot Program, 79 Fed. Reg. 59, 17137–39 (Mar. 27, 2014); USPTO, *Glossary Initiative*, http://www.uspto.gov/patents/init_events/glossary_initiative.jsp (last visited Feb. 8, 2015). The PTO has since extended the term of the Glossary Pilot Program to June 2, 2015 to gather more data.

241. Ryan Davis, *USPTO Extends Glossary Program For Speedier Patent Apps*, LAW360 (Dec. 11, 2014, 2:46 PM) <http://www.law360.com/ip/articles/603691/uspto-extends-glossary-program-for-speedier-patent-apps> (“the program presents a tough choice for applicants, since getting a patent faster will come at a cost of reducing the protection it provides”).

242. *Id.* (“I don’t think there’s any doubt that it will clarify the claims, but the question is whether people want to go this extra step, since it limits the scope of the claims as well as clarifies them,” William Rowland of Buchanan Ingersoll & Rooney PC told Law360 in June. ‘Clearly, it’s a two-edged sword.’”).

243. Menell, *supra* note 205.

244. Richard Neifeld, *Analysis of the New Patent Laws Enacted November 29, 1999*, 82 J. PAT. & TRADEMARK OFF. SOC’Y 181, 200 (2000) (“practitioners acknowledge that personal interviews with the examiners are effective in clarifying and rapidly resolving issues”).

determining the scope of the application.²⁴⁵ Indeed, the substance of the interview is recorded in writing as “a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant.”²⁴⁶ However, the oral interviews are not currently recorded, and examiners may fail to make or correct any submission by the applicant of any or all of the discussion, due to faulty memory or busy schedules.²⁴⁷ Most of these applicant-examiner interviews could be recorded easily with the informed consent of the parties. Such informed consent is easily achieved, as it could be a job requirement for the examiner, and a requirement for the applicant to get the interview. Further, once recorded, the interview could be stored both as an audio file and could be computer-transcribed to a text file to become part of the prosecution history.

The biggest obstacle to recording these discussions is not technological, but instead an apparent resistance on the part of the PTO and patent examiners.²⁴⁸ The PTO has said that interviews are productive for narrowing issues in prosecution and they should not be discouraged,²⁴⁹ yet recordings create technical obstacles to interviews and burden the examiners.²⁵⁰ The PTO is also concerned that intermediate positions in interviews should not be part of the record, and that statements may be taken out of context.²⁵¹ Although unsaid, examiners may be concerned about recordings being used against them by patent applicants in prosecution, or by superiors conducting a review of their work. The technical concerns raised in 1998 may be easily addressed today, and recordings would be highly beneficial for clarity, yet recordings still appear

245. 1 MOY'S WALKER ON PATENTS, *supra* note 208, at § 3:37 (“it is fair to say that there is a lingering impression that the interview process can, on occasion, be used by the patent applicant to conceal damaging concessions made to obtain the patent's issuance”).

246. 37 C.F.R. § 1.133 (2014).

247. *See* 1 MOY'S WALKER ON PATENTS, *supra* note 208, at § 3:37:

[T]he completeness of the interview record typically leaves much to be desired. As a general practice the agency does not require that the remarks made at the interview be transcribed or otherwise preserved verbatim. The summaries of the interview, by both the applicant and the examiner, are moreover usually quite brief, often spanning only a few broadly worded sentences.

248. *Statement of the Patent & Trademark Office Society to the United States Patent & Trademark Office on Procedures for Recording Patent Prosecution File Histories*, 80 J. PAT. & TRADEMARK OFF. SOC'Y 369, 372–74 (1998).

249. *Id.* at 372–73.

250. *Id.* at 373.

251. *Id.* at 373–74.

to be thwarted only by internal resistance within the PTO.²⁵² Therefore this improvement is an ideal candidate for implementation by the President, the head of the PTO, or even by a refinement in the law by Congress requiring more transparency.

Recording interviews burdens both the examiner and the patent applicant with a greater duty of clarity. Since the examiner is “on the record” in a recorded interview, he must be more cognizant of his conversation and arguments, and may want to prepare more thoroughly as he will have no later opportunity to change his words. That is not to say that an examiner cannot later correct an earlier mistake or misstatement, but that the examiner is stuck with that earlier mistake or misstatement on a permanent record. For the same reasons, the patent applicant must be very careful about what is said during an interview, as the applicant cannot undo what was said, but only correct misstatements to make the record clear. Most importantly, the applicant can no longer say something contradictory in an interview to the rest of the prosecution and avoid such statements becoming part of the prosecution history. This forces the applicant to be clearer in prosecution by taking away one of the patent applicant’s current best tools for getting ambiguous claims allowed by only clarifying those claims orally.

C. THE PATENT COMMUNITY CAN IMPROVE CLARITY

A final technique that can improve claim clarity is to involve the greater patent community in prosecution. Patent examiners face great time pressures to properly examine patent applications within tight time constraints. This makes it nearly impossible for a patent examiner to identify and review the best prior art that could challenge an application. Similarly, a patent examiner may lack sufficient time to recognize ambiguous terms within an application because a patent examiner may only consider one interpretation of a term, missing reasonable interpretations by others.

The President issued an executive order on February 20, 2014 that, among other actions, required the patent office to investigate the use of

252. 1 MOY’S WALKER ON PATENTS, *supra* note 208, at § 3:37 (“The [PTO] has not responded favorably to [requests for interview transcriptions] to date, however. The reasons have apparently been matters of expense and administrative inconvenience as well as, perhaps, the recognition that a more rigorous practice would require examiners to be additionally trained.”).

crowdsourcing to aid examiners in finding relevant prior art.²⁵³ The patent office has started this process with roundtable discussions.²⁵⁴ This initiative recognizes that today's technology allows the PTO to open up the examination process to more external participation, while still leaving the actual examination in the hands of the examiners.

The patent office could also further involve the greater patent community by enlisting their aid in identifying ambiguous terms in an application. A single examiner is vulnerable to tunnel vision and could easily miss multiple reasonable meanings for a term by just focusing on a single meaning that is reasonable to him. In doing so, an examiner would be applying the very insolubly ambiguous standard the Supreme Court rejected, by finding a term clear because the examiner has successfully identified a single reasonable meaning. A larger group, on the other hand, is much better equipped to identify multiple meanings associated with a term, and identify ambiguous terms as a crowd better than any one individual. The use of "crowdsourcing" to solve problems is especially powerful where more than one perspective enhances a solution.²⁵⁵ Identifying ambiguous terms is precisely such a case where the crowd is more powerful than the individual.²⁵⁶

253. The White House: Office of the Press Secretary, *FACT SHEET - Executive Actions: Answering the President's Call to Strengthen Our Patent System and Foster Innovation* (Feb. 20, 2014), <http://www.whitehouse.gov/the-press-office/2014/02/20/fact-sheet-executive-actions-answering-president-s-call-strengthen-our-p>.

Crowdsourcing Prior Art — To help ensure that U.S. patents are of the highest quality, the USPTO is announcing a new initiative focused on expanding ways for companies, experts, and the general public to help patent examiners, holders, and applicants find relevant 'prior art'—that is, the technical information patent examiners need to make a determination of whether an invention is truly novel.

254. USPTO, *Roundtable on the Use of Crowdsourcing and Third-Party Preissuance Submissions to Identify Relevant Prior Art*, http://www.uspto.gov/patents/init_events/crowdsourcing_roundtable_04-2014.jsp (last visited Feb. 8, 2015); USPTO, *Roundtable on USPTO Use of Crowdsourcing to Identify Relevant Prior Art*, http://www.uspto.gov/patents/init_events/crowdsourcing_roundtable_20141202.jsp (last visited Feb. 8, 2015).

255. Gary Sloper, *Why Creative Crowdsourcing Is Good For Business*, FORBES (Apr. 17, 2014, 2:05 PM), <http://www.forbes.com/sites/centurylink/2014/04/17/why-creative-crowdsourcing-is-good-for-business/> ("the crowdsourced workers help solve problems, add value, and obtain specialized expertise"); see also United States Department of Labor's IdeaScale website, <http://dolregs.ideascale.com> (last visited Feb. 28, 2015) (illustrating another administrative agency using crowdsourcing for considering ideas).

256. Kevin Casey, *10 Crowdsourcing Success Stories*, INFORMATIONWEEK (Mar. 4, 2011, 6:06 PM) http://www.informationweek.com/10-crowdsourcing-success-stories/d/d-id/1096464?page_number=9 (discussing use of crowdsourcing to identify

One problem in using crowds to supply solutions to a problem is that the volume of solutions proposed by the crowd can be overwhelming. However, the crowd can be used to solve this problem as well by using two simple steps: identification of ambiguous terms, and prioritization of arguments. First, individuals in the crowd may identify terms in the application that they consider ambiguous. Each person identifying an ambiguous term should also supply an explanation of why the term is ambiguous. Second, the crowd reviews the various ambiguous terms identified along with the explanations, and votes for the “best” identifications. The voting process can be single vote, ranked voting, or even multiple votes where each voter can vote for no more than half of the available options.²⁵⁷ The submission and voting process can be sequential, with no votes allowed until the submission window closes, or can be more fluid, allowing people to vote and change their votes as entries come in until the voting period closes.²⁵⁸

After this crowdsourced process, the examiner is left with a list of prioritized arguments stating why the terms are ambiguous. Since an examiner is time pressured and may lack the sufficient time to investigate all possible arguments, the prioritized list allows the examiner to simply start with the highest ranked argument, and also apply the next best arguments as time permits.²⁵⁹ In the end, it is still an examination of an application by an examiner interacting with the applicant. The crowd does not replace the examiner in this application process, but merely acts as a supplemental research tool.

Although this Note advocates for crowdsourcing of indefiniteness arguments by the greater patent community, this technique could also be implemented within a single art unit at the patent office. There can be crowdsourcing within an art unit where all the examiners within that art

bugs in applications). This is similar to using crowdsourcing to identify a problem in a patent application, such as ambiguity.

257. See William V. Gehrlein and Peter C. Fishburn, *Constant Scoring Rules For Choosing One Among Many Alternatives*, 15 *QUALITY AND QUANTITY* 2, 203–10 (April 1981) (finding voters should be allowed to vote for no more than half the options to obtain optimal majority selections).

258. Several websites such as www.digg.com and www.reddit.com use the latter approach to identify content with the greatest community interest on an ongoing basis. One website providing this model is *Ideastorm*, <http://www.ideastorm.com/>, which takes submissions of ideas and then allows the community to vote on the best ideas, allocating a limited amount of points to each idea.

259. Although not otherwise discussed in this Note, the same crowdsourcing technique could also be applied to streamline submissions of prior art to the patent examiner.

unit could take a small amount of time to review claims in each other's applications and identify potentially ambiguous claims using the above-described technique. This could be particularly useful in cases where the public cannot review the patent application claims, such as when claims are subject to a secrecy order²⁶⁰ or where a patent applicant has requested non-publication²⁶¹ of the application. In such cases, the greater patent community is not privy to the application until issuance, yet crowdsourcing within the PTO itself could improve the quality of the applications issued.

There are several techniques available to improve the duty of clarity in patent prosecution. Some of these techniques require greater diligence by the examiner and ongoing training by the PTO. Other techniques shift the burden and create a duty of clarity on the part of the patent applicant by using structured applications that remove ambiguities, using glossaries to clarify terms, and/or recording interviews to fill in a current gap in the prosecution history. Clearer claiming can also be achieved by looking beyond the patent office to enlist the aid of the greater patent community. This last approach heeds the call of many advocates for the PTO to take advantage of technological solutions to improve patent examination.²⁶²

V. CONCLUSION

In *Nautilus*, the Supreme Court corrected the test for indefiniteness, replacing the Federal Circuit's insolubly ambiguous test with a reasonable certainty test.²⁶³ In doing so, the Court acknowledged that the Federal Circuit's application in practice may actually come closer to reasonable certainty, but that the test still needed correction to be "at least 'probative of the essential inquiry.'"²⁶⁴ Therefore, while the new reasonable certainty

260. 35 U.S.C. § 181 (2012) allows for the government to keep an invention secret while continuing prosecution up to the point of issuance.

261. 35 U.S.C. § 122(b)(2)(B) allows an applicant to request that the patent application not be published under the condition that the invention will not be the subject of a foreign application.

262. See *Crossing the Finish Line on Patent Reform: What Can and Should Be Done: Hearing Before the Subcomm. on Intellectual Property, Competition, and the Internet of the H. Comm. On the Judiciary*, 112th Cong. 8 (2011) (testimony of David Simon) ("[E]xamination of patents do not take advantage of technology to actually affirmatively do that examination.").

263. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2124 (2014).

264. *Id.* at 2130 (quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997)).

test is certainly stricter than the “insolubly ambiguous” standard on its face, in application, the difference may be minor.

However, the Supreme Court also sent a strong message in its disparagement of ambiguous claiming practices during patent prosecution.²⁶⁵ The Court stated that “[e]liminat[ion] of that temptation is in order, and the patent drafter is in the best position to resolve the ambiguity in patent claims.”²⁶⁶ In sending this message, the Court joined recent efforts by the President, Congress, and the PTO to improve the clarity of claiming during patent examination by placing more requirements on the patent applicants and examiners. This Note captures this mandate to claim clearly as the duty of clarity.²⁶⁷ In addition to the public notice benefits, clearer claiming also enhances the value of patents for all patent holders and reduces costs in the patent process. While litigation-based review of patents and patent examination could help improve clarity, deterrents such as inequitable conduct work poorly in this regard. Also, because a patent applicant can fix ambiguous claims with narrowing amendments at any time through a reissuance without giving up intervening rights, litigation threatening invalidity for indefiniteness is unlikely to change efforts to claim clearly during initial examination.

Instead, the duty of clarity is best achieved by changes to the patent examination process. Some of these changes place additional clarity burdens on the examiners such as stricter application of § 112(b), training, and recoding of interviews. Other changes place clarity burdens on the applicant, such as the use of glossaries, more structure in applications, and recording of interviews. Despite these extra burdens, there are also benefits to patent applicants and examiners in speedier examination where there are clearer claims, in addition to the benefits of clearer claims post-issuance. The patent examination process can also benefit from using crowdsourced aid to identify ambiguous claims, taking advantage of technological solutions that were not available even ten years ago. The capabilities are there for a duty of clarity, and the advantages of clearer claiming mandate that we adopt them.

265. *Id.* at 2129.

266. *Id.* (internal quotations, alterations, and citations omitted).

267. *See id.* (“The definiteness requirement . . . *mandates* clarity” (emphasis added)).