March 2004

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PATENT QUALITY AND THE DEDICATION RULE

Scott R. Boalick*

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Can the dedication rule improve patent quality? Under the dedication rule, subject matter that is described in a patent but not claimed is dedicated to the public. This has real and serious consequences for the patent owner. By failing to claim subject matter that was described in the patent, the dedication rule operates to narrow the scope of protection provided by the patent and denies the patent owner coverage that might otherwise have been obtained. In particular, the patent owner will not be able to exclude others from making, using, or selling the dedicated subject matter, even though the adverse consequences of the dedication rule might have been avoided in the first instance by careful patent drafting and prosecution before the United States Patent and Trademark Office ("PTO").

Surprisingly, with its roots firmly implanted in the process of patent drafting and procurement, the literature has focused on the dedication rule almost exclusively in the context of limiting the scope of patent claims during litigation.

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2 Some exceptions exist. For example, the patent owner may be able to obtain coverage by obtaining a broadening reissue patent within two years of issuance of the original patent or by filing a continuation patent application while the original patent application is pending before the United States Patent and Trademark Office ("PTO"). See infra Parts III, VIII (discussing exceptions to the dedication rule).
4 The term "patent prosecution" refers to the administrative proceedings before the PTO during the patent acquisition process. See infra Part III.
5 The PTO is responsible for registering trademarks in addition to granting and issuing patents. 35 U.S.C. § 2(a)(1) (2000). This Article refers to the PTO exclusively in its role of granting and issuing patents.
6 Subject matter becomes dedicated precisely because of the activities taking place during patent drafting and prosecution.
long after issuance of the patent. This traditional view of the dedication rule is narrow and considers the rule merely as one of several limitations on the judicially created doctrine of equivalents.8 The doctrine of equivalents allows a finding of patent infringement if there is an “equivalence” between the accused product or process and the elements of the patented invention.9 Under the traditional view, the dedication rule applies only if the patent is litigated, if there is not an exact

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8 See sources cited supra note 7 (discussing the dedication rule as one limitation on the doctrine of equivalents). See Michel, supra note 7, at 125-26 (giving a concise discussion of other limits on the doctrine of equivalents).

correspondence between the accused product or process and the patent claims, and if the “equivalent” element in the accused product or process is described but not claimed in the patent. Analyzed in this context, the dedication rule only impacts a small number of patents.

Recently, the quality of issued patents has become an important and increasingly visible issue, as recognized by Congress, the PTO, commentators, and the press. Poor patent quality is a problem for several reasons, including the uncertainty as to patent scope and validity, which leads to


Recently, hearings have been held on the topic of patent quality. *Patent Quality Improvement: Hearing Before the House Subcomm. on Courts, the Internet, and Intellectual Property, Comm. on the Judiciary, 108th Cong. (2003).*


13 See sources cited infra note 213 (noting the increasing importance of patent quality issue).

14 The problem of patent quality has been covered by industry press and the popular press. See sources cited infra note 214.


increased costs borne by society for litigation, licensing fees extracted under threat of litigation, and erosion of public confidence in the patent system. Many solutions to the problem of patent quality have been proposed, and most involve institutional reform at the PTO. These solutions, for the most part, overlook the potential of existing patent law and doctrines to improve patent quality by creating incentives for the patent owner during the patent acquisition process. One notable exception to this trend is Professor Polk Wagner, who argues in favor of just such a re-evaluation for the well-established doctrine of prosecution history estoppel and for a shift in emphasis from *ex post* to *ex ante* analysis to improve patent quality.

Seen in this light, the dedication rule has the potential to have a much wider impact on patent quality because of the incentives it creates during the patent drafting and acquisition process. Beyond the statutory requirements for obtaining a patent, a strong dedication rule provides the patent holder with incentives for clear and precise patent drafting and prosecution. Failure to clearly and precisely claim what is described results in a loss of rights by operation of the dedication rule. The increased clarity and precision flowing from a strong dedication rule will result in higher patent quality, which lowers the cost to society through increased predictability in the patent system.

Recently, in *Johnson & Johnston Associates, Inc. v. R.E. Service Co.* ("Johnson"), the *en banc* United States Court of Appeals for the Federal Circuit affirmed a strong version of the dedication rule. However, the court passed over an opportunity to articulate the broader policy behind the dedication rule as providing incentives for better patent quality, and instead, engaged in the traditional analysis of the

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19 *See infra* Part IV (discussing proposals for reform).


21 *See infra* Part II (discussing requirements of a valid patent).

22 285 F.3d 1046 (Fed. Cir. 2002) (en banc) (per curiam).

23 As used in this Article, a strong dedication rule refers to one that clearly and significantly restricts the scope of the patent and will be applied with certainty when the conditions precedent to the application of the rule are met.

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dedication rule as one of several limitations on the doctrine of equivalents.\textsuperscript{24} Moreover, the fragmented nature of the Johnson court, with a per curiam majority opinion,\textsuperscript{25} four concurring opinions,\textsuperscript{26} and one dissenting opinion,\textsuperscript{27} leaves room for further strengthening of the dedication rule. This Article argues that the traditional understanding of the dedication rule is incomplete.\textsuperscript{28} A strong dedication rule will improve overall patent quality by creating incentives for good patent drafting at the earliest stages of the patent acquisition process, and long before litigation arises. Rules that impact patent quality early in the acquisition process are important because the costs incurred by the patentee during patent acquisition are significantly less than the costs of patent litigation borne by an accused infringer.\textsuperscript{29} A relatively small increase in initial investment by the patent owner has the potential to save much larger costs from being borne by society at a later time when the patent is litigated.\textsuperscript{30} Rules that impact the patent drafting and prosecution, therefore, are likely to be more cost effective for society than rules that impact conduct only during patent

\textsuperscript{24} See infra Part VI (discussing the Johnson decision).

\textsuperscript{25} Johnson, 285 F.3d at 1048-55. The en banc panel in Johnson consisted of a total of thirteen judges, with Senior Judge Archer sitting in addition to the twelve active circuit judges. A senior judge may participate in a rehearing en banc if that judge also participated in the original hearing and disposition of the case. Fed. Cir. R. 35 practice notes.

\textsuperscript{26} A concurring opinion by Judge Clevenger was joined by Judges Lourie, Schall, Gajarsa, and Dyk. Johnson, 285 F.3d at 1055 (Clevenger, J., concurring). A concurring opinion by Judge Rader was joined by Chief Judge Mayer. Id at 1056 (Rader, J., concurring). A concurring opinion by Judge Dyk was joined by Judge Linn. Id at 1059 (Dyk, J., concurring). A final concurring opinion was written by Judge Lourie. Id at 1063 (Lourie, J., concurring). Judges Michel, Bryson, Prost, and Senior Judge Archer did not join any of the concurring opinions.

\textsuperscript{27} Judge Newman was the lone dissenter. Id at 1064 (Newman, J., dissenting).

\textsuperscript{28} This Article does not argue that the traditional view of the dedication rule is illogical or unsound. This Article argues, however, that an exclusive focus on the traditional view misses the bigger picture of the dedication rule as an opportunity to improve the problem of poor patent quality.

\textsuperscript{29} Rules such as the dedication rule may be used in conjunction with other proposed PTO reform measures to improve patent quality. The motivation for having a strong dedication rule is to create an incentive for the patentee to improve the quality of the product, i.e. the patent application, being submitted to the PTO in the first instance and to ensure that the product is appropriately amended during patent prosecution.

\textsuperscript{30} This comparison does not account for the potential damages, which may be recovered by the patent holder, or costs to the accused infringer of a permanent injunction. Instead, the point to be made here is that, from a societal perspective, it is better to impose additional, relatively lower costs, on the patent holder during the patent drafting and prosecution process in order to improve patent quality than to impose the much higher costs of defending against a charge of patent infringement of a poor quality patent on an accused infringer and ultimately, on society at large. The potential for an award of damages to a patent holder for litigation involving a poor quality patent further amplifies the disparity in costs.
The Article concludes that a strong dedication rule will have just that impact.

This Article also argues that the Johnson decision leaves open an opportunity to further improve patent quality by additional clarification of the dedication rule and that a legislative solution is more appropriate in light of arguable conflict with Supreme Court precedent and the policy choices to be made. In particular, the Article concludes that the requirements for a disclosure that will trigger application of the dedication rule must be clarified. The Article argues that only a disclosure meeting the statutory requirements for patenting should trigger the dedication rule. The dedication rule should be clarified to explain that a finding of dedication in one patent does not have any impact on whether dedication should be found in a different patent. Additionally, the dedication rule should be clarified to remove any doubt that a finding of dedication in a particular patent may not be rebutted by the patent holder, except through the existing statutory mechanisms of reissue. The Article argues that other methods of recapturing dedicated subject matter, including continuing applications, involve different patents and should not have an impact on the finding of dedication in the original patent.

The Article proceeds in seven parts. Part I introduces basic patent law theory and concepts, including the composition of the patent document and the requirements for a valid patent. Part III discusses the patent acquisition process, including drafting and prosecution before the PTO. Part IV introduces the patent quality debate, noting the adverse affects of poor patent quality and other proposed solutions to the problem. Part V describes the dedication rule, including the traditional view of the rule and the case law development leading up to the Johnson decision. Part VI discusses the Johnson decision in depth, including the traditional analysis that led to the result in Johnson and the impact of Johnson on the state of the dedication rule. Part VII discusses the role of the dedication rule in improving patent quality and concludes that a strong dedication rule will have a positive effect on patent quality. Part VIII points out areas for further improvement in strengthening the dedication rule by eliminating current ambiguity in the application of the rule.

31 By improving patent quality, certainty will be increased and society will not have to bear the cost of defending a lawsuit involving a poor quality patent with uncertain scope and validity. The patentee is also in a better position because, even though the initial cost was incrementally higher, the issued patent will be a better quality, stronger patent, which should lead to less costly enforcement with higher revenues for the patentee.
II. PATENT LAW BACKGROUND

A. OVERVIEW

A patent\(^2\) is a grant from the federal government to the patentee\(^3\) of the right to exclude\(^4\) others from making, using, offering to sell, or selling the patented invention within the United States during the term of the patent.\(^5\) The grant presently lasts twenty years from the date the patent is filed.\(^6\) After expiration of the patent term, the invention enters the public domain.\(^7\)

The federal patent power is enumerated by the Constitution, giving Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."\(^8\) Congress has created a framework of laws to

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\(^2\) There are three types of patents that may be obtained: utility patents, plant patents, and design patents. See IRAH H. DONNER, PATENT PROSECUTION: PRACTICE & PROCEDURE BEFORE THE U.S. PATENT OFFICE, at 4 (2d ed. 1999) (providing information concerning the three types of patents). This Article is only concerned with utility patents.

\(^3\) The term "patentee" includes the original patentee to whom the patent was issued and also successors in title to the original patentee. 35 U.S.C. § 100(d) (2000).

\(^4\) 35 U.S.C. § 154 (2000). Patent infringement is the violation of the patentee's right to exclude. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT, § 1.1(a), at 7 (6th ed. 2003). The acts that constitute patent infringement are defined by 35 U.S.C. § 271 (2000). It is important to note that a patent is a negative right; there is no affirmative right granted to make, use, or sell anything. Id. § 1.1(b), at 8-9. Thus, it is possible for an inventor to practice his own patented invention and yet infringe a different patent.

\(^5\) 35 U.S.C. § 154(a)(1) (2000). If the invention is a process, the patentee may exclude others from using, offering to sell, selling, or importing products made by the patented process. Id. See also ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT, § 1.1(a), at 4-5 (6th ed. 2003) (comparing common law rights with federally granted patent rights); DONALD S. CHISUM, 6 CHISUM ON PATENTS § 19.02, at 19-9 (1997). The patentee also may exclude others from importing the patented invention into the United States. 35 U.S.C. § 271(a) (2000). In addition, the patentee is granted other rights, including the right to exclude others from actively inducing infringement of the patent, 35 U.S.C. § 271(b), and from contributing to infringement of the patent by offering to sell, selling, or importing components or a patented invention that is specially adapted for use in an infringement of the patent, 35 U.S.C. § 271(c).


\(^8\) U.S. CONST. art. I, § 8, cl. 8. The power to promote the useful arts enables Congress to control the issuance of patents to inventors, while the power to promote the progress of science enables Congress to control the issuance of copyrights to authors. HARMON, supra note 34, § 1.2, at 11.
regulate the patent system.\textsuperscript{39} The current statutory implementation is the 1952 Patent Act.\textsuperscript{40}

Patents have the attributes of personal property.\textsuperscript{41} For example, patent applications, patents, or any interest in an application or patent may be assigned, granted, or conveyed.\textsuperscript{42} Patents are subject to eminent domain.\textsuperscript{43} Also, the claims\textsuperscript{44} of the patent, which define the scope of patent protection,\textsuperscript{45} have been analogized to the metes and bounds in a deed defining the area of land conveyed.\textsuperscript{46}

In addition, patents have attributes of a social contract formed between the inventor and the public.\textsuperscript{47} The inventor obtains exclusionary rights\textsuperscript{48} for a limited time in return for disclosure of the invention to the public.\textsuperscript{49} One commentator has noted that, as an extension of the contract analogy, the PTO acts as the agent of the public during formation of the contract.\textsuperscript{50} This "disclosure ‘bargain’" is at the core of patent policy.\textsuperscript{51} A common justification for the patent system is that innovation will be encouraged by rewarding the inventor with exclusionary


\textsuperscript{42} Id. Section 261 also provides that an assignment, grant, or conveyance is void against a subsequent purchaser or mortgagee for value, unless it is recorded with the PTO. Id.

\textsuperscript{43} In re Enter, 756 F.2d 852, 225 U.S.P.Q. (BNA) 1 (Fed. Cir. 1985).

\textsuperscript{44} See infra Part II.B (discussing patent claims).

\textsuperscript{45} Johnson, 285 F.3d at 1048-55.

\textsuperscript{46} In re Vamco Mach. & Tool, Inc., 752 F.2d 1564, 1577 n.5, 224 U.S.P.Q. (BNA) 617 (Fed. Cir. 1985).

\textsuperscript{47} ERNEST BAINBRIDGE LIPSCOMB III, WALKER ON PATENTS, § 1:6 at 38-41 (3d ed. 1984).

\textsuperscript{48} See supra notes 34-37 and accompanying text (discussing the right granted to an inventor).

\textsuperscript{49} 35 U.S.C. §§ 111-113 (2000). See infra Part II.B (providing a more detailed discussion of the disclosure required by the patent statute). The contract analogy is imperfect, however. See HARMON, supra note 34, § 1.1(a), at 6 (discussing problems with the contract analogy). For example, patent infringement is viewed as a tort, not a breach of contract action; the accused infringer is not a party to the contract; and once a patent is issued, all purported exchanges of promises have been fully performed. Id.

\textsuperscript{50} John R. Thomas, The Question Concerning Patent Law and Pioneer Inventions, 10 HIGH TECH L.J. 35, 40 (1995). As an agent of the public, the PTO, through the patent acquisition process, provides an initial assurance that only those inventions which fulfill the statutory requirements are patented. Id. at 40. That assurance is not incontestable, however. Id. at 40.

rights, and the public will benefit by the ability to make, use, and sell the patented invention after the patent term expires. Disclosure allows competitors to use the patented invention after the patent expires, and it enables others to improve on the patented invention during the term of the patent by "designing around" the patent. Absent an obligation of disclosure, the patentee might keep the invention secret, thus extending the patent term by secrecy after the patent expires.

Patent rights are not self-enforcing. The patentee must bring a civil action in order to obtain a remedy for patent infringement. Remedies for patent infringement include injunctive relief, damages, including treble damages, and attorney fees.

B. PATENT REQUIREMENTS

To receive patent protection, an invention must be new, useful, and nonobvious. Only certain subject matter is eligible for patenting. Specifically,

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54 Burk & Lemley, supra note 51, at 1161. The improvement may produce a noninfringing variant of the patented invention, or it may produce a better version that is separately patentable, although still infringing. Id.
55 Id. at 1161 n.26.
56 Furthermore, 35 U.S.C. § 286 also imposes a time limitation for damages of six years prior to filing of the complaint or counterclaim for infringement. 35 U.S.C. § 286 (2000).
58 35 U.S.C. § 283 (2000). The general rule is that injunctions are issued upon a finding of patent infringement, absent a sound reason for denying it. HARMON, supra note 34, § 1.1(a), at 7-8.
59 35 U.S.C. § 284 (2000). The compensatory damages awarded may be no less than a reasonable royalty for the use of the invention by the infringer. Id.
60 35 U.S.C. § 284 (2000). Increased damages typically are awarded to punish a willful infringer. HARMON, supra note 34, § 17.1, at 892.
a patent must be directed to a "new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." It is rare for a patent to be found invalid for failure to recite eligible subject matter.

An invention is not patentable if it is not useful. Generally, utility need not be proven unless a person having ordinary skill in the art would reasonably doubt the utility of the invention. The bar to satisfying the utility requirement is set low. To be useful, the invention must be capable of providing an identifiable benefit. Utility does not require that the invention be commercially successful, and the invention may even be less effective than competing devices. The utility requirement is not completely hollow though. For example, a process that works to produce a product that has no known use is not useful, even if the product is the subject of serious scientific investigation. It is rare for a patent to be found invalid for lack of utility.

An invention is not patentable if it is not new. To determine whether an invention is new within the meaning of the statute, the patent claims are compared with a single piece of prior art. Each element of the claim must be shown by the single piece of prior art, either explicitly or inherently.
claim elements are not found in a single piece of prior art, then the patent cannot be found invalid for lack of novelty. Novelty may be lost through acts or omissions of the patentee, known as statutory bars. The statutory bars are linked to the passage of time and provide incentives for the patentee to seek promptly patent protection and disclose the invention. Lack of novelty is a common reason for finding a patent invalid.

An invention is not patentable if it is obvious. An invention is obvious if the differences between the claimed subject matter and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." An obviousness analysis entails determining the scope and content of the prior art, ascertaining the differences between the prior art and the claims, and resolving the level of ordinary skill in the art. In addition, objective evidence of nonobviousness must be taken into account. The objective evidence of nonobviousness, known as "secondary considerations," includes evidence of commercial success, long felt but unsolved needs, and the failure of others. Against this background, the obviousness of the invention is determined. Obviousness is a common reason for finding a patent invalid.

(BNA) 1746, 1749 (Fed. Cir. 1991).

81 Cont'l Can Co., 948 F.2d at 1748. The proper basis for determining validity based on two or more pieces of prior art is obviousness, not novelty. Id.

82 35 U.S.C. § 102(b)-(d) (2000). The bars give the patentee a limited amount of time, typically one year, to perfect the invention and decide if it is beneficial to pursue patent protection. HARMON, supra note 34, § 3.5, at 148. The most commonly encountered bar is the act of placing the invention on sale. Id. For a more detailed description of statutory bars, see HARMON, supra note 34, § 3.5, at 147-49.

83 HARMON, supra note 34, § 3.5, at 148.
84 Allison & Lemley, supra note 69, at 208 (finding eighty patents out of a sample of 138 invalid patents invalid for lack of novelty).
85 35 U.S.C. § 103 (2000). Obviousness is a legal conclusion based upon underlying facts. Cont'l Can Co., 948 F.2d at 1270. The underlying facts are in four general categories: (1) the scope and content of the prior art; (2) the differences between the prior art and the claimed invention; (3) the level of ordinary skill in the art at the time the invention was made; and (4) objective considerations that may be present. Cont'l Can Co., 948 F.2d at 1270.
89 The term was coined in Graham, 383 U.S. at 1.
90 Id. at 17-18.
91 Id. at 17. For more information about the nonobviousness requirement, see HARMON, supra note 34, § 4.
92 Allison & Lemley, supra note 69, at 208 (examining a sample of 138 invalid patents and finding that fifty-eight were declared invalid due to obviousness).
In addition, the patent must comply with statutory provisions as to the form of the patent itself, which are known as section 112 requirements. These requirements are derived from the first and second paragraphs of 35 U.S.C. § 112. The first paragraph of section 112 states that the patent specification:

[shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains... to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.]

The second paragraph of section 112 states that the patent “shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” Failure to comply with the section 112 requirements is yet another common reason for finding a patent invalid. The section 112 requirements are discussed in more detail below.

Section 112 requires a patent to include a specification and drawings. Drawings are required where necessary to understand the subject matter sought to be patented. The specification includes both a written description of the invention and one or more claims. Put simply, the difference between the

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94 Section 112 has six paragraphs. The third, fourth, and fifth paragraphs deal with the independent and dependent forms of claims. See JOHN L. LANDIS, MECHANICS OF PATENT CLAIM DRAFTING 17-18 (2d ed. 1978) (giving an example of an independent claim). See id. at 163 (giving an example of dependent claim). The sixth paragraph gives authorization for claims in the “means plus function” format and describes how such claims are to be construed. See DONNER, supra note 32, at 39-40 (providing more information concerning independent and dependent claims). See HARMON, supra note 34, § 6.6 (providing more information concerning the sixth paragraph of section 112).
96 Id. § 112, ¶ 2. This is in large part what underlies the dedication rule. See infra notes 228-32 and accompanying text.
97 Allison & Lemley, supra note 69, at 208 (examining a sample of 138 invalid patents and finding that forty-five were declared invalid for failure to comply with section 112).
100 35 U.S.C. § 112, ¶¶ 1-2. It is common for the terms specification and written description to be used interchangeably, and for the terms specification and claims to be treated separately. See In re Dossel, 115 F.3d 942, 945, 42 U.S.P.Q.2d (BNA) 1881 (Fed. Cir. 1997) (stating that modern usage of the terms specification and claims does not always conform to the statutory structure). Strictly speaking, however, the term specification refers to both the written description and the claims. A preferred format for the specification is found at 37 C.F.R. § 1.77 (2003) and further detail may be
specification and the claims is that specifications teach, and claims claim. The written description must teach a person having ordinary skill in the art how to make and use the invention without undue experimentation. The written description must also describe the best way to practice the invention that is known to the inventor at the time the patent application is filed. In addition, the written description must demonstrate to a person having ordinary skill in the art that the inventor had possession of the claimed invention as of the filing date of the patent.

The specification concludes with one or more claims that particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The claims define the scope of patent protection. Claims thus give notice of the scope of protection to the patent examiner at the PTO during prosecution and to the public after the patent issues and distinguish the invention from the prior art. The definiteness requirement promotes certainty by ensuring that the claim has a clear and definite meaning when construed in light


102 The "person having ordinary skill in the art" is a legal fiction embodying a legal standard for patentability, similar to the "reasonably prudent person" of tort law. Burk & Lemley, supra note 51, at 1187-88.

103 35 U.S.C. § 112, ¶ 1 (2000); HARMON, supra note 34, § 5.2, at 215-16. This is known as the enablement requirement. Enablement is a question of law, but may involve subsidiary fact findings. Johns Hopkins Univ. v. Cellpro Inc., 152 F.3d 1342 (Fed. Cir. 1998). See HARMON, supra note 34, § 5.2 (providing more information concerning the enablement requirement).

104 35 U.S.C. § 112, ¶ 1; HARMON, supra note 34, § 5.3, at 228. This is known as the best mode requirement. See HARMON, supra note 34, § 5.3 (providing more information concerning the best mode requirement).

105 35 U.S.C. § 112, ¶ 1; see Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563-64, 19 U.S.P.Q.2d (BNA) 1111 (Fed. Cir. 1991) (describing written description requirement of § 112); HARMON, supra note 34, § 5.4, at 215-16. This is known as the written description requirement. The written description requirement is separate from the enablement and best mode requirements. Vas-Cath, 935 F.3d at 1561. For more information concerning the written description requirement, see HARMON, supra note 34, § 5.4.

106 Id. § 112, ¶ 2. This is known as the definiteness requirement. Definiteness is a question of law. Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1 U.S.P.Q.2d (BNA) 1081 (Fed. Cir. 1986). The test is whether a person having ordinary skill in the art would understand the claim language when read in light of the specification. Id. The definiteness requirement is central to the dedication rule. See infra Part V (discussing the dedication rule). See HARMON, supra note 34, § 5.5 (providing more information concerning the definiteness requirement).

107 Johnson, 285 F.3d at 1052 ("Both the Supreme Court and this court have adhered to the fundamental principle that claims define the scope of patent protection.").

108 HARMON, supra note 34, § 5.5(a), at 254.
of the complete patent document. The claims must be supported by the specification, and the scope of the claims may not exceed the scope of disclosure in the patent.

Balanced against the notice function of the claims is the concept of affording fair protection to the patentee by not confining the scope of the patent to the strict literal wording of the claims in all circumstances. The policy of fair protection to the patentee is the animating force behind the judicially created doctrine of equivalents.

The patent must conform to other formal requirements. Among other things, a fee and oath by the inventor are required. The filing fee includes a base fee and may include additional fees depending upon the number and form of the claims.

III. THE PATENT ACQUISITION PROCESS

A. PATENT PROSECUTION

The patent acquisition process involves the procurement of the patent from the United States Patent and Trademark Office ("PTO"). The patent

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109 Miles Labs., Inc. v. Shandon, Inc., 997 F.2d 870, 875, 27 U.S.P.Q.2d (BNA) 1123 (Fed. Cir. 1993); HARMON, supra note 34, § 5.5(a), at 255.

110 The patentee is entitled to claims as broad as the prior art and disclosure in the specification will allow. In re Rasmussen, 650 F.2d 1212 (C.C.P.A. 1981). See supra notes 54-58 and accompanying text.


112 See infra Part III.B (discussing the doctrine of equivalents).


114 Id. The oath or declaration states that the inventor has reviewed and understands the content of the specification, believes themselves to be a first and original inventor of the claimed subject matter, and acknowledges the duty to disclose material information to the PTO. 37 C.F.R. § 1.63 (2003).

115 The filing fees for a small entity are one half the filing fees for a large entity. 35 U.S.C. § 41(h) (2000); 37 C.F.R. §§ 1.16-1.21 (2003). A small entity is defined at 35 U.S.C. § 41(h)(1) (2000) and 36 C.F.R. § 1.27 (2003). Roughly, a small entity is a business with fewer than 500 employees. As an example, the basic filing fee for a large entity is presently $750, which includes an allowance for twenty total claims, three of which may be independent. 35 U.S.C. § 41(a); 37 C.F.R. §§ 1.16(a)-(c). For a large entity, each additional independent claim costs $84 and each additional dependent claim costs $18. 35 U.S.C. § 41(a); 37 C.F.R. §§ 1.16(b)-(c). The fees are subject to annual change. 35 U.S.C. § 41(f).

116 This process is commonly referred to as "patent prosecution." For a detailed description of the patent acquisition process, see DONNER, supra note 32, ch. 2; HARMON, supra note 34, § 18; 3 PATENT PRACTICE 11.1-11.127 (Irving Kayton & Karyl S. Kayton eds. 1995).
acquisition process begins with the drafting of the patent application. The patent application may be drafted by the inventor or by a registered patent agent or attorney. In view of the requirements that must be satisfied by the patent application, it has been said that a patent is "one of the most difficult legal instruments to draw." In a typical scenario, the inventor and patent attorney may have an initial meeting or series of meetings to discuss the invention and the circumstances surrounding the invention. A search of the prior art may be made, and the results of the search discussed with the inventor. The prior art search results may cause a reevaluation of the scope of the invention that will be claimed. After the initial inventor interview and prior art search are conducted, the patent attorney prepares a draft of the patent application. As part of the application drafting process, the patent attorney will describe one or more embodiments of the invention in the specification and drawings and will draft a set of claims to cover the invention for which protection is desired. The scope of the initial claim set is a matter of strategy. Other activity typically precedes the actual drafting process. For example, the inventor may document the development of the invention in a laboratory notebook. A prototype or working model may be produced and tested. The invention may have been demonstrated, sold, or described in a printed publication. The nature of any pre-filing activity will need to be evaluated for potential statutory bars. See supra Part II for a discussion of statutory bars.

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118 Applicants may represent themselves pro se. 37 C.F.R. § 1.31 (2003). Registration is required in order to represent a client before the PTO. 37 C.F.R. § 10.5 (2003). Both lawyers and nonlawyers who meet the requirements set forth by the PTO may become registered. 37 C.F.R. § 10.6 (2003). In order to become registered, a person must pass an examination or have sufficient experience as a patent examiner. 37 C.F.R. § 10.7 (2003). Nonlawyers who are registered are called patent agents. 37 C.F.R. § 10.6.

119 See supra Part II for the requirements of a patent.

120 Topliff v. Topliff, 145 U.S. 156, 171 (1892).

121 This example assumes that the inventor is being represented by a registered patent attorney. Many topics may be discussed in the initial interview, including the scope of the invention, the prior art, the identity and contribution of all inventors, and any potential statutory bar activity.

122 There is no requirement for a prior art search to be performed. American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1352, 220 U.S.P.Q. (BNA) 763, 772 (Fed. Cir. 1984).

123 Only one invention may be claimed in a patent application. 35 U.S.C. § 121 (2000). If more than one invention is claimed, the patent applicant will be required to choose which invention to pursue. Id. The other inventions may be pursued in a different application, known as a continuation application or a divisional application, and will be entitled to the same priority date as the originally filed application. Id. For more information on continuation and divisional applications, see infra notes 158-59 and accompanying text.

124 For more information concerning claim drafting techniques and strategy, see JOHN L. LANDIS, MECHANICS OF PATENT CLAIM DRAFTING (2d ed. 1978); 1 PATENT PRACTICE, supra note 116, at 3.1-3.28.
or an initially narrow set of claims may be drawn with the hope of obtaining a fast allowance. The inventor reviews the application draft and provides feedback. After incorporating inventor feedback, the application is ready to be filed with the PTO.125

The patent application includes the specification, drawings, oath or declaration, and filing fees.126 Before the patent application is filed, it is important to ensure the requirements for a patent are met, especially the section 112 requirements concerning the form of the application. Once the patent has been filed, no new matter may be added.127

A comprehensive set of rules and regulations has been established for the patent examination process.128 The PTO examines the patent application to determine whether the claimed subject matter is entitled to patent protection.129 Pending patent applications are secret until they are published eighteen months after filing.130 The patent prosecution process is conducted ex parte; no participation from third parties is allowed.131

125 A series of drafts may be prepared before the patent is ready to be filed with the PTO.
126 35 U.S.C. § 111 (2000). These are the components needed to obtain a filing date, which acts as a constructive reduction to practice and priority date for prior art purposes. Litton Sys., Inc. v. Whirlpool Corp., 728 F.2d 1423, 1437, 221 U.S.P.Q. (BNA) 97, 105 (Fed. Cir. 1984); HARMON, supra note 34, § 18.2(c), at 968. For a more detailed discussion of each of these components of the patent application, see supra Part II.
129 The PTO “shall cause an examination to be made of the application and the alleged new invention; and if on such examination it appears that the applicant is entitled to a patent under the law, the Director shall issue a patent therefor.” 35 U.S.C. § 131 (2000). For a description of the requirements of a patent, see supra Part II.B; see also 6 CHISUM, supra note 35, §§ 11.01-11.06.
130 35 U.S.C. § 122 (2000). If the application will not be the subject of a foreign patent application, the applicant may request that the pending application not be published. 35 U.S.C. § 122(b)(2). If the application is the subject of a non-publication request, it will remain secret until the patent issues. The only exception is if the application is later the subject of a foreign patent application, the non-publication request must be timely revoked or else the patent application will become abandoned. 35 U.S.C. § 122(b)(2)(B)(ii) (2000).
131 35 U.S.C. § 122 (2000); 37 C.F.R. § 1.14 (2003). If a third party is aware of a pending patent application, there is a very limited right to file a protest, which is a document citing prior art and explaining why a patent should not issue. 37 C.F.R. §§ 1.291, 1.292 (2003). However, the protestor has no additional opportunity to communicate or respond. 37 C.F.R. § 1.291(c) (2003). Because of the secret and ex parte nature of the patent examination process, patent applicants and their representatives are held to high ethical standards in dealing with the PTO. HARMON, supra note 34, § 12.5(a), at 642-45.
Upon filing, the PTO forwards the application to an appropriate art unit where it will be assigned to a particular patent examiner. The examiner reviews the patent application to determine if it is ready for substantive examination, and then conducts a search for prior art. Any claims in the patent application that do not meet the requirements for a patent will be rejected. The examiner communicates the results of the examination to the patent applicant in what is known as an "office action." The first substantive office action may include rejections of claims, objections to claims, allowance of claims, and objections to the specification. Most of the time, the first office action contains objections and rejections.

The applicant must respond to all of the objections or rejections in the office action within an allotted time period, or the application will be abandoned. An art unit is a division within the PTO that examines patent applications directed to a specific technology. The classification of the technology in the patent application determines the art unit assigned for examination. For more information concerning the structure of the PTO, see 3 PATENT PRACTICE, supra note 116, at 11.3-11.5.

The patent examiner has expertise in a particular area of technology and has training in patent examination procedures. Typically, the patent examiner is not an attorney.

The application may be so informal that it is not ready for substantive examination. DONNER, supra note 32, at 61. The patent examiner has expertise in a particular area of technology and has training in patent examination procedures. Typically, the patent examiner is not an attorney.

For more information concerning the mechanics of the patent examination process, see DONNER, supra note 32, ch. 2; 3 PATENT PRACTICE, supra note 116, at 11.1-11.138. The varying quality of the prior art search by the examiner is one source of criticism about patent quality. See infra Part IV. This problem has long been recognized. 3 PATENT PRACTICE, supra note 116, at 11.4-11.5.

The existence, integrity, and currentness of these classified literature and foreign patent collections vary from Art Unit to Art Unit and today are determined solely by the awareness and initiative of individual examiners. This fact, coupled with the limited amount of time that may be allocated by an examiner for searching each patent application, is why there can be no guarantee that the PTO will locate the most relevant prior art in connection with a claimed invention.

See supra Part II.B (describing these requirements).

37 C.F.R. § 1.104(c) (1998).


DONNER, supra note 32, at 62-63.

Id. at 62. In unusual circumstances, all claims may be allowed in the first office action. Id.

35 U.S.C. § 133 (2000). A three month time period is normally set, although a fee may be paid for extensions of time up to a maximum of six months total. 37 C.F.R. § 1.136 (1997). An
applicant may respond to claim rejections by argument, amendment of the claims, or both. 142 For rejections based on section 112, the applicant may seek to amend the specification. 143 However, the amendment may not introduce "new matter" into the application. 144 New matter is subject matter that was not in the patent application as filed. 145

After filing the response, the examiner reconsiders the application. If the examiner is not satisfied with the response, the examiner may issue another office action. 146 Usually, the second office action will be a "final" office action that closes prosecution on the merits. 147 After a final office action, the applicant does not have a right to make an amendment; however, the examiner has discretion to decide whether to enter proposed amendments. 148 Amendment may not be made of right. A patent application may still be allowed after a final rejection, but only minimal changes may be made by the applicant. 149 Thus, the applicant effectively has a single opportunity to freely amend the claims. 150 If the examiner still does not agree that the claims are allowable, the applicant may appeal to the Board of Patent Appeals and Interferences. 151 Alternatively, the applicant may file a request for continuing examination, which has the effect of reopening prosecution on the merits. 152

If she is satisfied with the response, the examiner will issue a notice of allowance. 153 The patent application will be issued as a patent after payment of an issue fee. 154 After allowance, further amendments to the application are not

abandoned application may be revived in limited circumstances. 37 C.F.R. § 1.137 (2003). For more information concerning a response by the applicant, see DONNER, supra note 32; 4 PATENT PRACTICE, supra note 116, at 15.1-15.108.

142 DONNER, supra note 32, at 65-67. The applicant may also interview the patent examiner in person or by telephone to clarify issues. Id. at 67-71.

143 Id. at 64.


145 DONNER, supra note 32, at 66.

146 Id. at 71-72.

147 Id. at 71-72. For a discussion of when a final action is appropriate, see id. at 73.

148 Id. at 72.

149 Id.

150 4 PATENT PRACTICE, supra note 116, at 15.25.

151 DONNER, supra note 32, at 75-80. The applicant may further appeal to federal court from an unfavorable board decision. Id. at 80-86.

152 37 C.F.R. § 1.114 (2003). The continuing application has the same effective filing date as the parent application. Id.

153 DONNER, supra note 32, at 74-75.

154 Id. Thereafter, periodic maintenance fees must be paid or the patent coverage will expire. 35 U.S.C. § 41(b) (2000); 37 C.F.R. § 1.362 (2003). A patent that expired due to failure to pay maintenance fees may be revived under certain, limited circumstances. 35 U.S.C. §§ 41(b)-(c) (2000).
permitted without a showing of good cause why they were not presented earlier.\textsuperscript{155} Before the patent issues, the applicant has an opportunity to file a continuing application.\textsuperscript{156} Two common continuing applications are the continuation application and the divisional application.\textsuperscript{157} A continuation application has the same specification as the parent application, but it may have the same or different claims.\textsuperscript{158} A divisional application is a continuing application that has the same specification as the parent but the claims are directed to a different invention than the parent application, usually because of a restriction requirement made by the patent examiner in the prosecution of the parent application.\textsuperscript{159} Once issued, the patent has a presumption of validity.\textsuperscript{160}

B. POST ACQUISITION ACTIVITIES

The responsibility of the PTO ends when a patent is issued. In limited circumstances, however, the PTO may act with respect to issued patents.\textsuperscript{161} One of these circumstances is the reissue proceeding, where the patentee is provided an opportunity to correct errors in the scope of the issued claims.\textsuperscript{162}

A reissue proceeding may be initiated "[w]hen ever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, ... by reason of the patentee claiming more or less than he had a right to

\textsuperscript{155} 4 PATENT PRACTICE, supra note 116, at 15.24-15.25.
\textsuperscript{156} DONNER, supra note 32, at 951-64. In order to obtain the benefit of the filing date of the parent application, a continuing application must be filed while the parent application is still pending. 35 U.S.C. §§ 120-121 (2000). This requirement is known as copendency. For a more thorough explanation of the various types of continuing applications, see DONNER, supra note 32, at 941-1022.
\textsuperscript{157} DONNER, supra note 32, at 951-64.
\textsuperscript{158} 35 U.S.C. § 120 (2000); DONNER, supra note 32, at 952-53. The continuation application has the same priority date as the parent application. DONNER, supra note 32, at 953. The continuation is directed to the same invention as the parent application, but the scope of the claims differs from the parent application. HARMON, supra note 34, § 18.1, at 940.
\textsuperscript{159} 35 U.S.C. § 121 (2000); DONNER, supra note 32, at 954. A divisional application differs from a continuation application in that it is directed to a different invention disclosed in the specification of the parent application. HARMON, supra note 34, § 18.1, at 940.
\textsuperscript{161} For a more thorough discussion of these circumstances, see 5 PATENT PRACTICE, supra note 116, at 22.1-22.126.
The reissue proceeding is a reprosecution of all claims, and the examiner may consider de novo any issue affecting patentability.\textsuperscript{164}

If the patentee claimed the invention more narrowly than what was supported by the disclosure in the original patent, the patentee may be able to broaden the scope of the claims in the reissue proceeding.\textsuperscript{165} There is a time limit to file a broadening reissue. In particular, the patentee must file within two years of the grant of the original patent.\textsuperscript{166} No new matter may be added in a reissue application,\textsuperscript{167} and the patentee is barred from recapturing claims of the same or broader scope that were cancelled from the original application.\textsuperscript{168} Thus, the reissue proceeding attempts to balance the ability of the patentee to correct errors against the public interest in finality and certainty.\textsuperscript{169}

The term of a reissued patent is the same as the unexpired portion of the term of the original patent, so the life of the patent is not extended.\textsuperscript{170} The reissue proceeding has no effect on claims in the reissued patent that are identical to those in the original patent.\textsuperscript{171} Any claims that are not identical, however, are effective only as of the grant date of the reissued patent and thus operate only prospectively to exclude infringing acts.\textsuperscript{172}

The doctrine of intervening rights provides a defense to infringement for claims in reissued patent that are not identical to the claims in the original


\textsuperscript{164} 37 C.F.R. § 1.176 (2003). For a detailed description of the reissue procedure, see HARMON, supra note 34, § 18.3, at 982-96; 5 PATENT PRACTICE, supra note 116, at 22.38. Unlike examination of the original application, reissue proceedings are open to public inspection. 5 PATENT PRACTICE, supra note 116, at 22.39. The reissue application may contain the same claims as the original patent application, in addition to claims that are broader or narrower in scope. 5 PATENT PRACTICE, supra note 116, at 22.67-69, 22.89-90. All claims in the reissue application are examined, even claims identical to those in the original application. 37 C.F.R. § 1.176 (1998).

\textsuperscript{165} HARMON, supra note 34, § 18.3(a), at 987-89. This is known as a broadening reissue. Id.

\textsuperscript{166} 35 U.S.C. § 251 (2000). The two-year limit arose by analogy to the law regarding the "public use" bar to obtaining a patent. Timothy R. DeWitt, Does Supreme Court Precend Sink Submarine Patents?, 38 IDEA 601, 611 (1998). For a description of the public use bar, which furthers the policy of encouraging an inventor to promptly file the patent application after the invention has been used in public, see HARMON, supra note 34, § 3.4(e). The "public use" bar time period is now one year. 35 U.S.C. § 102(b) (2000). Congress later codified the two-year limit for reissue applications in the 1952 Patent Act. 4 DONALD S. CHISUM, CHISUM ON PATENTS § 15.02[9][a], at 15-30 (1997).


\textsuperscript{168} Mentor Corp. v. Coloplast, Inc., 998 F.2d 992, 995, 27 U.S.P.Q.2d (BNA) 1521 (Fed. Cir. 1993); HARMON, supra note 34, § 18.3(a), at 989-93.

\textsuperscript{169} HARMON, supra note 34, § 18.3(a), at 982-83.


Specifically, the doctrine of intervening rights provides protection for otherwise infringing acts which occur after the original patent issues but before the grant date of the reissued patent. The statute provides both mandatory intervening rights and discretionary intervening rights for the new claims in a reissued patent. Mandatory intervening rights permit the future use and sale of items made before the date the reissued patent is granted. Discretionary intervening rights are equitable in nature and are to be used to protect investments made prior to the grant of the reissued patent by permitting new manufactures and sales to continue after the reissued patent is granted.

Other circumstances where the PTO may act upon an issued patent include reexamination proceedings and certificates of correction. A certificate of correction may be issued to correct mistakes made by the PTO, minor clerical or typographical mistakes by the applicant, and to correct inventorship. A reexamination of a patent may be initiated by the PTO if a "substantial new question of patentability" is raised by prior art patents or printed publications. The reexamination proceeding may be requested by any person. A reexamination proceeding may be ex parte or inter partes. The rules for intervening rights in reissued patents apply to reexamined patents.

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174 5 PATENT PRACTICE, supra note 116, at 22.47-22.51; Janicke, supra note 162, at 27-30. Acts protected by intervening rights do not infringe claims in the original patent, but infringe the claims in the patent after reissue.
175 Janicke, supra note 162, at 27-28.
176 HARMON, supra note 34, § 18.3(b), at 994-95.
177 Id.; Janicke, supra note 162, at 28. Discretionary intervening rights are rarely granted. Janicke, supra note 162, at 29.
178 See HARMON, supra note 34, §§ 9.1(a) & 18.1 for more information concerning certificates of correction. For more information on the reexamination proceedings, see HARMON, supra note 34, § 18.4. Like the reissue proceeding, reexamination proceedings are open to public inspection. MPEP, supra note 100, § 2232.
185 35 U.S.C. §§ 311-318 (2000). The inter partes reexamination process is relatively new, having been added in 1999. This procedure has not been widely used, likely due to the severe estoppel effects on the party requesting an inter partes reexamination, which may not thereafter in a civil action raise the invalidity of the challenged claims on any ground that was raised or could have been raised in the inter partes reexamination. 35 U.S.C. § 315(c) (2000).
The issued patent does not become prior art against the patentee until one year after issuance.\textsuperscript{187} Therefore, within one year of the issuance of the patent, the patentee may file a second application directed to subject matter described but not claimed in the first patent.\textsuperscript{188} In this case, the second application will not be entitled to the priority date of the first patent because the copendency requirement was not met.\textsuperscript{189} Thus, the second application is vulnerable to a greater range of prior art.

After the patent issues, the patentee may exploit the exclusionary rights granted by the patent.\textsuperscript{190} The enforcement of patent rights may take several forms.\textsuperscript{191} For example, the patentee may license or sell the rights to practice the patented invention. The patentee also may sue for patent infringement to obtain an injunction and/or damages. An infringement analysis involves two steps.\textsuperscript{192} First, the court construes the asserted claims to determine their scope and meaning.\textsuperscript{193} Because claims define the scope of the right to exclude, claim construction is extremely important.\textsuperscript{194} Claim construction is a question of law.\textsuperscript{195} Second, the properly construed claims are compared to the alleged infringing device.\textsuperscript{196} Infringement of a claim requires that the accused device meet every limitation of the claim, either literally or by equivalents.\textsuperscript{197} Infringement is a question of fact.\textsuperscript{198}

\textsuperscript{188} If the patentee files a second patent directed to the same subject matter as the first patent, the PTO will issue a double patenting rejection. MPEP, \textit{supra} note 100, § 804. Double patenting prevents a patentee from improperly extending the patent term. \textit{Id}.
\textsuperscript{189} \textit{See supra} note 156 for a discussion of the copendency requirement.
\textsuperscript{190} \textit{See 1 PATENT PRACTICE, supra} note 116, at 1.5-1.11 (discussing ways for the patentee to exploit the patented invention).
\textsuperscript{191} One commentator has noted that hard data on what patentees do with their patents is difficult to obtain. Mark A. Lemley, \textit{Rational Ignorance at the Patent Office}, 95 NW. U. L. REV. 1495, 1500 (2001). It appears, however, that only a small percentage of all issued patents are ever litigated, and a "surprisingly large number" of patents expire due to failure to pay maintenance fees. \textit{Id} at 1503.
\textsuperscript{192} Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1454, 46 U.S.P.Q.2d (BNA) 1169 (Fed. Cir. 1998).
\textsuperscript{193} \textit{Id} (citing Markman v. Westview Instruments, Inc., 517 U.S. 370, 371-73 (1996)).
\textsuperscript{194} \textit{See supra} notes 106-08 and accompanying text (regarding the definitional and notice function of claims). For more information about claim construction, see 6 CHISUM, \textit{supra} note 35, § 18.03.
\textsuperscript{196} \textit{Cybor}, 138 F.3d at 1454.
Literal infringement occurs when every limitation of the claim, as properly construed, is found exactly in the accused device.\(^1\) Even if the claim is not literally infringed, infringement may still be found under the doctrine of equivalents.\(^2\) Under the doctrine of equivalents, a product or process that does not literally infringe the express terms of a patent claim may nonetheless be found to infringe if there is an equivalence between the elements of the accused product and the claim limitations of the patented invention.\(^3\)

There are several legal limitations that have been placed on the doctrine of equivalents.\(^4\) These limitations include the doctrine of prosecution history estoppel, the all elements rule, and obviousness.\(^5\) As will be discussed in Part V, the dedication rule has traditionally been viewed as yet another limitation on the doctrine of equivalents.

**IV. THE PATENT QUALITY DEBATE**

Poor patent quality causes many problems which stem from uncertainty as to the scope and validity of the patent claims. Bad patents, especially in large numbers, may produce "in terrorem" effects on innovation.\(^6\) Lack of clarity in the scope of patent claims impedes legitimate investment in products and services in the technology sector.\(^7\) The problems caused by poor patent quality include:

1. opportunistic licensing practices by extracting royalties and fees from a licensor who may find it cost effective to license the patent rather than resort to litigation;
2. creation of disincentives to downstream innovation by deterring competitors from entering the market due to fear of infringement;
3. the cost of unnecessary and wasteful design-around activity by competitors;
4. the cost of rent seekers who may invest in companies based upon poor quality patents, thereby diverting resources from true innovators;
5. inappropriate product pricing if there is an absence of non-infringing substitute goods for the poor quality patent; and
6. the subsequent costs of having the courts fix the mistakes of the PTO for issuing the poor quality patent.\(^8\)

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\(^1\) *Carl Zeiss Stiftung*, 945 F.2d at 1178-79. For more information concerning literal infringement, see *Harmon*, supra note 34, § 7.


\(^3\) *Id* at 21. See *Harmon*, supra note 34, § 8 (providing more information on the doctrine of equivalents).

\(^4\) See *Michel*, supra note 7, at 125-26.

\(^5\) *Id*.

\(^6\) *Thomas*, supra note 18, at 731.

\(^7\) *Chisum*, supra note 111, at 7.

Rent seeking behavior may arise when the holder of a poor quality patent seeks to enforce exclusionary rights that are probably invalid or seeks to stretch a valid narrow exclusionary right to cover acts outside the proper scope of the patent. Bad patents pose a "credible threat" of litigation. When the PTO grants a poor quality patent, the patentee obtains exclusionary rights that have a presumption of validity. There are mechanisms available to invalidate or correct the scope of a poor quality patent through recourse to the judicial system or the PTO. The cost of making such corrections may be significant. Poor patent quality also has an adverse effect by eroding the confidence of the public and scientific and technical communities in the patent system.

Poor quality patents are not a new problem. Overbroad and invalid patents have been issued throughout the history of the patent system. For example, in 1895, the PTO issued an overbroad patent with claims that covered all light gasoline-powered internal combustion engines even though the patent only described one embodiment of such an engine. The patent likely harmed innovation in the automobile industry by the time it was narrowed on appeal, after having been upheld twice by district courts.

Recently, however, the issue of patent quality has become increasing visible and controversial. Commentators and the press have had much to say on this.

Litiiation, 44 B.C. L. Rev. 509 (2003); Thomas, supra note 18, at 731.

207 Meurer, supra note 206, at 512-16.

208 Id.


210 For example, through a declaratory judgment action. Of course, certain requirements must be met before such an action may be instituted. HARMON, supra note 34, § 10.1.

211 For example, through a reexamination proceeding. See supra Part III (discussing the reexamination proceedings).

212 Ghosh & Kesan, supra note 209, at 1227-35.

213 Robert P. Merges & Richard R. Nelson, On the Complex Economics of Patent Scope, 90 Colum. L. Rev. 839, 882 (1990); Note, Extopping the Madness at the PTO: Improving Patent Administration Through Prosecution History Estoppel, 116 Harv. L. Rev. 2164, 2170 (2003) (discussing "the infamous Selden patent"). It has been stated that the Selden patent issued due to a tendency of the PTO to grant overbroad claims rather than from a lack of resources. Id. at 2170 n.44.

214 Note, supra note 213, at 2170; Merges & Nelson, supra note 213, at 882.

215 See, e.g., Julie E. Cohen & Mark A. Lemley, Patent Scope and Innovation in the Software Industry, 89 Cal. L. Rev. 1, 43 (2001) (arguing for narrow scope of equivalents to be applied to software patents due to problems with prior art at PTO); Ghosh & Kesan, supra note 209, at 1226-35 (arguing for optimal ignorance by the PTO based on an assessment of the social costs and benefits of the patent system); Kesan, supra note 206 (proposing five strategies to increase quality of information obtained

210 The problem of patent quality has been covered by industry press and the popular press. See, e.g., James Surowiecki, Patent Bending, NEW YORKER, July 14, 2003, at 36 (role of the PTO "should be to distinguish between small innovations that are worth patenting and those that are not"); Joseph N. Hosteny, What's Wrong with the Patent Office, INTELLECTUAL PROPERTY TODAY, June, 2003, at 18 (describing problem of poor quality examiners at the PTO); Sabra Chartand, Patents; The Patents Commissioner Seeks to Reinvent a Notoriously Backlogged Office and Process, N.Y. TIMES, Sept. 23, 2002, at C2 (interviewing Hon. James E. Rogan concerning PTO overhaul plans); Gary L. Reback, Patently Absurd, (June 24, 2002), at http://www.forbes.com/asap/2002/0624/044.html ("The undisciplined proliferation of patent grants puts vast sectors of the economy off-limits to competition, without any corresponding benefit to the public."); Panel Explores Validity of PTO Practices in Examining Business Method Patents, DAILY REP. FOR EXECUTIVES (BNA), Aug. 10, 2000, at A-5 (discussing problems with PTO prior art resources and procedures); Mark Voohees, One-Click Monster, AMERICAN LAWYER, May 2000, at 52 ("The solution is not to eliminate or curtail software, Internet, or e-commerce patents, but to improve the quality of all patents."); Teresa Riordan, Historians Take a Longer View of Net Battles, N.Y. TIMES, Apr. 10, 2000, at C1 (noting criticism of the PTO for issuing "bad patents" in historical context); Jenna Greene, Staking a Claim: How State Street Has Spurred a Rush on the PTO, LEGAL TIMES, Apr. 10, 2000, 14, 23 ("[S]ome of the patents issued thus far offer scant reassurance when it comes to quality."); David Warsh, Patenting Ideas, BOSTON GLOBE, Apr. 2, 2000, at K1 (" 'Bad patents'—those issued by hasty examiners unfamiliar with prior art—are a problem in any field. . . . Even a few bad patents can stifle innovation."); Margaret Quan, Patents Seen as Gold at End of High-Tech Rainbow, ELEC. ENG'G TIMES, Jan. 31, 2000 ("There are a lot of people out there talking about the need for a patent portfolio, but no one is paying attention to the quality of the patents." (quoting Mr. Greg Aharonian, editor of the Internet Patent News Service)); Lawrence Lessig, The Problem with Patents, Apr. 23, 1999, http://www.lessig.org/content/standard/0,1902,4296,00.html (last visited May 5, 2004) (" 'Bad Patents' thus become the space debris of
issue. The issue has also been recognized by Congress \textsuperscript{217} and the PTO. \textsuperscript{218} There is even a growing industry for assessing and rating patent quality. \textsuperscript{219}

Several factors have contributed to the increased concern over bad patents. Chief among the concerns are the opening of business methods and software to patent protection. \textsuperscript{220} Patent application filings have increased dramatically due in part to the availability of this new protection. \textsuperscript{221} At the same time, PTO resources are being strained, and funding for the PTO continues to be diverted by Congress. \textsuperscript{222} Assuming that the PTO does not improve its "error rate," \textsuperscript{223} more bad patents than ever are likely be issued.

Many solutions to the problem of patent quality have been proposed. \textsuperscript{224} These solutions, for the most part, involve institutional reform at the PTO and overlook the potential of existing patent law and doctrines to improve patent quality. In particular, existing patent law doctrines have the potential to create incentives for the patentee to improve patent quality during the patent acquisition process. Such an approach will lead to a higher quality input to the patent prosecution process, which will lead to a higher quality output as an issued patent. Professor Polk Wagner argues in favor of just such a re-evaluation for the well-established

\textsuperscript{217} See supra note 11 and accompanying text.

\textsuperscript{218} See supra note 12 and accompanying text.

\textsuperscript{219} See supra note 15 and accompanying text.

\textsuperscript{220} See, e.g., Cohen & Lemley, supra note 215, at 43; Lemley, supra note 191, at 1495-96; Merges, supra note 215, at 578-81; Thomas, supra note 215. This opening is a direct result of the 1998 Federal Circuit decision in State Street Bank and Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998) and the 1999 Federal Circuit decision in AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352 (Fed. Cir. 1999). The concern over patent quality, however, is not confined to such patents. See supra note 10 and accompanying text (discussing other patents that raise concerns about patent quality).

\textsuperscript{221} Thomas, supra note 18, at 744. Complaints about increased filings at the PTO are hardly new. In 1940, the Supreme Court noted the "problems incident to our rapidly expanding patent system. From a small State Department bureau in 1836, the Patent Office has expanded until in 1939 over 40,000 patent were granted in 1838, 515 were granted. Although of immense importance, the system has become exceedingly complex." Sontag Chain Stores Co. v. Nat'l Nut Co., 310 U.S. 281, 292-93 (1940). In 1999, 153,493 patents were issued. John R. Allison & Mark A. Lemley, The Growing Complexity of the United States Patent System, 82 B.U. L. Rev. 77, 78 n.1 (2002), http://papers.ssrn.com/abstract=281395.

\textsuperscript{222} Thomas, supra note 18, at 731. There has even been a lawsuit filed alleging that the fee diversion is unconstitutional.

\textsuperscript{223} Error rate is a term used by one commentator in suggesting improvements to the patent system. Merges, supra note 215, at 590.

\textsuperscript{224} See supra note 213 and accompanying text (discussing potential solutions to problem of patent quality).
PATENT QUALITY

V. THE DEDICATION RULE

The historical and modern evolution of the dedication rule is briefly discussed below. A series of decisions by the Federal Circuit led to confusion and conflicting precedent in the dedication rule. Recently, as discussed in Part VI, much of the confusion has been eliminated by a recent en banc Federal Circuit case.

Under the dedication rule, subject matter disclosed in a patent but not claimed is deemed to be dedicated to the public. Dedication is found as a matter of law. Where dedication is found, the patentee loses all exclusionary rights for the dedicated subject matter. The traditional policy basis for the dedication rule lies in promoting the public notice function of the claims and the idea that the patentee should not be permitted to avoid examination of broad claims by the PTO. Such an avoidance would be accomplished if the patentee were allowed to disclose broadly in the specification but claim narrowly during prosecution and after the patent issues, seek to find infringement based on the unexamined subject matter that was broadly disclosed but not explicitly claimed. Although today it is universally applied and discussed as a limitation on the doctrine of equivalents, the dedication rule originated in the context of broadening reissue patents.

A. EARLY CASES

The dedication rule arose in the context of laches and validity for broadening reissue patents in the 1881 case of Miller v. Brass Co. and in the 1884 case of

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225 See HARMON, supra note 34, § 8.2 (discussing the doctrine of prosecution history of estoppel).
226 Wagner, supra note 16, at 240.
227 See Boalick, supra note 7, at 2385-94 (giving a more detailed discussion).
228 Unique Concepts, Inc. v. Brown, 939 F.2d 1558, 1562-63, 19 U.S.P.Q.2d (BNA) 1500, 1504 (Fed. Cir. 1991) ("It is also well-established that subject matter disclosed but not claimed in a patent application is dedicated to the public.").
229 Michel, supra note 7, at 126. Thus, in the context of infringement under the doctrine of equivalents, the dedication rule has the effect of transforming a question of fact into a question of law.
230 Maxwell, 86 F.3d at 1107.
231 Id.
232 See sources cited supra note 7 (discussing the dedication rule as a limitation on the doctrine of equivalents).
233 104 U.S. 350 (1881).
The reissue patent at issue in Miller was directed to an improved design for a lamp. The original patent claimed a lamp with a double dome and without a chimney. Fifteen years after the patent issued, the patentee sought a reissue patent directed to a single dome lamp with a chimney. The patentee claimed that the single dome lamp was part of the original invention and that it had not been claimed by inadvertence and mistake. The patentee was successful in obtaining a new claim in reissue directed to the single dome lamp with chimney. The issue before the court was the validity of reissued patent.

The Court set forth the dedication rule, stating that "the claim of a specific device... and an omission to claim other devices... apparent on the face of the patent, are, in law, a dedication to the public of that which is not claimed." The Court recognized a valid interest in allowing a patentee to correct mistakes and enlarge the scope of the claims through a broadening reissue proceeding. The Court, however, thought that this right had been "greatly misunderstood and abused" and that any "unnecessary laches or delay" in seeking a broadening reissue would affect the rights of the patentee.

The Court held that the failure to claim the "single dome with chimney" lamp disclosed in the specification constituted a dedication of that subject matter to the public, and therefore held the broadened reissued patent invalid. Although the patentee may broaden claims through a timely reissue, the Court found that the reissue application was untimely filed. The Court rejected the patentee's argument that a mistake in claim scope had been made, finding that the "only mistake suggested is, that the claim was not as broad as it might have been. This mistake, if it was a mistake, was apparent upon the first inspection of the patent, and if any correction was desired, it should have been applied for immediately."

Prior to the 1952 Patent Act, there was no statutory limit on the time for obtaining a reissue patent to broaden the patent claims. See supra note 164 (describing evolution of time limitation for broadening reissue patents); see also Chisum, supra note 111, at 21 n.107. However, the courts often applied a flexible two-year laches period. Id.
The patentee’s claim that the mistake was only recognized after a period of fifteen-years was “too bald for human credence.”247 The Court stated that “the rule of laches should be strictly applied” in the context of a broadening reissue patent.248 Thus, the Court applied the rule of laches to prevent the patentee from broadening the scope of the patent to cover unclaimed subject matter that was disclosed in the specification.

Three years after Miller, the Supreme Court reaffirmed the dedication rule in Mahn v. Harwood.249 As with Miller, Mahn involved the validity of a broadening reissue patent. The reissue patent in Mahn was directed to leather covers for baseballs.250 Four years after the patent issued, the assignee of the patent sought a broadening reissue.251 Discussing Miller at length, the Court applied the dedication rule to find the broadened claims invalid.252 The Court reasoned that

[t]he taking out of a patent which has (as the law requires it to have) a specific claim, is notice to all the world, of the most public and solemn kind, that all those parts of the art, machine or manufacture set out and described in the specification and not embraced in such specific claim, are not claimed by the patentee, at least not claimed in and by that patent.253

If the patentee “has a distinct patent for other parts, or has made application therefore, or has reserved the right to make such application, that is another matter, not affecting the patent in question.”254 But, so far as the original patent is concerned, “the claim actually made operates in law as a disclaimer of what is not claimed; and of all this the law charges the patentee with the fullest notice.”255

Stressing the public notice function of the claims, the Court explained that “[t]he public is notified and informed by the most solemn act on the part of the patentee, that his claim to invention is for such and such an element or combination, and for nothing more. Of course, what is not claimed is public property.”256

247 Id. at 352.
249 112 U.S. 354 (1884).
250 Id. at 356.
251 Id. at 358.
252 Id. at 365.
253 Id. at 360-61.
254 Id. at 361.
255 Id.
256 Id.
The Court stated that the "presumption is, and such is generally the fact, that what is not claimed was not invented by the patentee, but was known and used before he made his invention. But, whether so or not, his own act has made it public property if it was not so before." Articulating the policy behind the dedication rule, the Court stated that

[the public has the undoubted right to use, and it is to be presumed does use, what is not specifically claimed in the patent. Every day that passes after the issue of the patent adds to the strength of this right, and increases the barrier against subsequent expansion of the claim by reissue under a pretence of inadvertence and mistake."

The Court held that the four year delay was unreasonable, especially because the specification was not complex and the claims in the original patent were clear and explicit. Thus, the Court applied the Miller rule to prevent the patentee from broadening the scope of the patent to cover unclaimed subject matter that was disclosed in the specification.

B. MODERN CASES

Miller and Mabn applied the dedication rule in the context of reissue validity, not in a doctrine of equivalents context. As the dedication rule evolved, its use was not constrained to the broadening reissue context. Because the dedication rule implicates the public notice function of patent claims and the role of PTO examination of the claims, it was later discussed and applied in the context of claim construction for literal infringement and patent infringement under the doctrine of equivalents. The doctrine also was discussed in the context of patent invalidity due to the inventor's abandonment of the invention. The
PATENT QUALITY

The dedication rule was applied by the Federal Circuit in a series of cases which led to a strengthening of the rule, followed by a decision that created a conflict and confusion in the law. As discussed in Part VI, this conflict was recently resolved by the en banc Federal Circuit.

1. Supreme Court. After Miller and Mahn, the Supreme Court continued to apply the dedication rule in the context of broadening reissue patents. In Sontag Chain Stores Co., the Supreme Court cited Miller and stated that "[i]t is now accepted doctrine that 'the claim of a specific device or combination, and an omission to claim other devices or combinations apparent on the face of the patent are, in law, a dedication to the public of that which is not claimed.'" The Court found that

[In the case under consideration the patentee might have included in the application for the original patent, claims broad enough to embrace petitioner's accused machine, but did not. This 'gave the public to understand' that whatever was not claimed 'did not come within his patent and might rightfully be made by anyone.' ]

The Court has not relied on the dedication rule in recent times. The Court has noted the dedication rule in contexts beyond reissue validity and laches where the rule was first appeared though. In particular, the dedication rule has been discussed in the context of infringement under the doctrine of equivalents and in the context of determining the content of the prior art in an obviousness analysis.

In Graver Tank II, the Supreme Court reaffirmed the vitality of patent infringement under the doctrine of equivalents. The patent at issue in Graver Tank involved welding fluxes for use in electric arc welding. The patented flux used magnesium, which is an alkaline earth metal silicate. Earlier in the litigation, the district court refused to invalidate a set of claims reciting an "alkaline earth

an earlier application).

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264 See infra Part V.B.2 and IV.c (discussing Federal Circuit decisions that created confusion).
265 E.g., Sontag Chain Stores Co., 310 U.S. at 967.
266 Id. at 267.
267 Id.
268 The reissue statute codifies the laches period applied in Miller and Mahn. See supra note 164.
270 Graver Tank II, 339 U.S. at 608-09.
272 Graver Tank II, 339 U.S. at 606-07.
metal silicate. However, the district court invalidated another set of claims reciting any “silicate.” The Supreme Court upheld the finding of invalidity.

The accused welding flux used manganese, which is a silicate but not an alkaline earth metal silicate. The accused welding flux would have literally infringed the claims reciting any silicate, but these claims were held invalid. The valid set of “alkaline earth metal silicate” claims were not literally infringed because the accused welding flux did not use an alkaline earth metal silicate.

Nevertheless, the district court applied the doctrine of equivalents to find infringement of the “alkaline earth metal silicate” claims. Over a strong dissent, the Supreme Court affirmed the finding of infringement under the doctrine of equivalents.

Justices Black and Douglas dissented. In their view, the majority failed to account for the public notice function of patent claims. Justice Black argued that the finding of infringement under the doctrine of equivalents violated “a direct mandate of Congress,” by violating the statutory requirement that an inventor “particularly point out and distinctly claim” that which the inventor regards as the invention. Thus, the dissent argued that the finding of infringement violated the principle that the claim “measures the grant to the patentee.”

Justice Black referred to the dedication rule, stating that “[w]hat is not specifically claimed is dedicated to the public.” The function of claims is to exclude patent coverage for “all that is not specifically claimed, whatever may appear in the specification[].” In a separate dissent, Justice Douglas argued that the accused welding flux was disclosed in the specification and then excluded from the claims; and therefore, became public property.

Justice Black argued that the proper remedy was for the patentee to broaden the scope of the patent claims in a reissue proceeding. Reissue “adequately protects patentees from ‘fraud,’ ‘piracy,’ and ‘stealing’ . . . [and] also protects business men from retroactive infringement suits and judicial expansion of a monopoly sphere beyond that which a patent expressly authorizes.” Thus,
Justice Black argued that the reissue solution was "just, fair, and reasonable." A commentator has noted that Justice Black's argument seems to be strengthened by subsequent Congressional action. In the Patent Act of 1952, Congress explicitly allowed reissue applications to broaden the scope of the claims, but also placed a strict two-year limitation on such broadening reissue applications and provided protection for intervening rights.

The dedication rule seems misplaced, however, in the context of the facts of Graver Tank because the accused product was literally covered by claims in the patent as originally issued; these claims were later held invalid by the district court. For the dedication rule to apply, the disclosed subject matter would not have been covered by the claims in the patent as issued.

The Supreme Court next mentioned the dedication rule in a footnote in Graham, which involved the issue of patent invalidity due to obviousness. The Court reviewed the content of the prior art and found that a particular feature was disclosed in a prior art patent. Citing Miller, the Court noted that "[w]hile the sealing feature was not specifically claimed . . . , it was disclosed in the drawings and specifications. Under long-settled law the feature became public property." To date, Graham marks the last time the Supreme Court has explicitly mentioned the dedication rule, citing it with approval.

2. Federal Circuit. The dedication rule was applied in several decisions of the Federal Circuit and its predecessor court, the Court of Customs and Patent Appeals. These decisions discussed and applied the dedication rule in a variety of contexts such as reissue validity, patent invalidity due to the inventor's

285 Id.
286 See 6 CHISUM, supra note 35, § 18.02[2], at 18-30 (discussing changes made in subsequent legislation).
288 See 6 CHISUM, supra note 35, § 18.02[2], at 18-29 (discussing broadening reissue applications). See also supra notes 165-77 and accompanying text (same).
289 This is the view of several courts and commentators. See, e.g., Maxwell, 86 F.3d at 1107 (holding no dedication to the public where claims in the original patent encompass subject matter disclosed in the specification, but later are held invalid); 6 CHISUM, supra note 35, § 18.02[2], at 18-14 (explaining no dedication to the public took place because the claims provided warning as to nature of the claimed invention, even though the claims were later held invalid).
291 Id. at 31.
292 Id. at 31 n.17.
293 In re Hayes, 178 F.2d at 940. Recall that this is the context in which the dedication rule first arose. See supra notes 233-34 and accompanying text (discussing early history of dedication rule).
abandonment of the invention,294 claim construction for literal infringement,295 and patent infringement under the doctrine of equivalents.296 The Federal Circuit applied the dedication rule in a series of cases which led to a strengthening of the rule, followed by a decision that created a conflict and confusion in the law.297 As discussed in Part VI, this conflict was recently resolved by the en banc Federal Circuit.

The Court of Customs and Patent Appeals continued to apply the dedication rule in the context of broadening reissue patents.298 In the 1949 case of In re Hayes, the court affirmed the rejection by the PTO of a broadening reissue application due to laches.299 The patent at issue in Hayes involved a fishing reel.300 During licensing negotiations with a fishing reel manufacturer two years and eleven months after the patent issued, the patentee learned that the claims were "insufficient."301 A reissue application was filed three years and one month after the patent issued.302 The PTO rejected the reissue application due to laches by the patentee.303 In affirming the rejection, the court acknowledged that "[i]t is true that the drafting of patent specifications and claims is fraught with the peril of understatement, overstatement, and ambiguity."304 Nevertheless, the court reasoned that

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\text{[t]he issue of a patent with a broad disclosure and narrow claims is surely notice to the public that the inventor is not reserving to himself the exclusive use of the advance in the art which his patent teaches, but does not claim, and where the public has before it such an implied disclaimer for a period of time in excess of the statutory period which serves to bar an inventor from recapturing that which}
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296 See infra notes 314-22 and accompanying text (discussing cases that apply the dedication rule in a doctrine of equivalents context).
297 See infra Part V.B.2 and IV.C (discussing case law development). See Boalick, supra note 7 (providing a more detailed discussion of this series of Federal Circuit cases).
298 At least until the two year time limit for broadening reissue patents was codified in the Patent Act of 1952. See supra note 166 for more information regarding the two year time limit.
299 178 F.2d at 944.
300 Id. at 941.
301 Id. at 942.
302 Id. at 941. The delay was due in part to illness of the patent attorney, who had an emergency operation. Id.
303 Id.
304 Hayes, 178 F.2d at 944.
by his express consent has been in public use, it would seem to follow inevitably that by analogy he is as effectively barred by his implied dedication to the public. 305

The Court of Customs and Patent Appeals also discussed the dedication rule in the context of invalidity due to the inventor's abandonment of the invention in the case of In re Gibbs. 306 Gibbs involved the rejection of a patent application by the PTO. 307 The rejection was based upon an earlier-issued patent naming the same inventors and assigned to the same company as the patent application at issue. 308 The patent application at issue was filed less than one year after the issuance of the patent used to reject it and was not co-pending with the earlier-issued patent. 309 The earlier-issued patent disclosed, but did not claim, the subject matter claimed in the later-filed patent application. 310 The PTO rejected the claims later-filed patent application because that subject matter had been dedicated, and thus abandoned, in the earlier-issued patent due to the failure to claim it in the earlier-issued patent or any application that was co-pending with the earlier-issued patent. 311 The court reversed, finding that any inference of dedication in the later-filed patent application due to disclosure and failure to claim in an earlier-issued patent had been rebutted by the claiming of that subject matter in the later-filed patent application. 312 In other words, the court would not impute dedication in the earlier-issued patent to a later-filed patent application, as long as that application was filed within one year of the issuance of that patent. 313

The Federal Circuit first applied the dedication rule in the 1991 decision of Unique Concepts. 314 Use of the dedication rule in the doctrine of equivalents

305 Id.
306 437 F.2d at 491. Under 35 U.S.C. § 102(c), a patent is invalid for lack of novelty if the invention was abandoned by the inventor.
307 Gibbs, 437 F.2d at 486.
308 Id.
309 Id. It is possible for a patent application to be filed within one year of an earlier-issued patent and still claim the same subject matter disclosed in the earlier patent. See supra notes 187-89 and accompanying text (discussing filing of a patent application after earlier patent issues).
310 Gibbs, 437 F.2d at 386-87. The dissent did not think that the subject matter claimed by the later-filed application was sufficiently disclosed in the earlier-issued patent and could not have been claimed in the earlier-issued patent due to failure to meet the section 112 requirements. Id. (Almond, J., dissenting). Thus, the dissent felt it was not necessary to reach the issue of the dedication rule. Id.
311 Id. at 487.
312 Id. at 494.
313 Id. The earlier-issued patent would become a statutory bar after one year under 35 U.S.C. § 102(b). See supra note 82 and accompanying text (giving more information regarding statutory bars).
314 Unique Concepts, 939 F.2d at 1562-63.
context was advocated by the concurring opinion in the 1993 decision of International Visual Corp. v. Crown Metal Manufacturing Co.\textsuperscript{315} The dedication rule was applied in a doctrine of equivalents context in 1996 and 1997 with the decisions of Maxwell v. J. Baker, Inc.\textsuperscript{316} and Sage Products, Inc. v. Devon Industries, Inc.\textsuperscript{317} Then, the 1998 decision in YBM Magnex, Inc. v. International Trade Commission\textsuperscript{318} purported to limit the dedication rule to the factually specific context of Maxwell, where two distinct embodiments were disclosed but only one was claimed.\textsuperscript{319} In the 2000 decision of Moore, the Federal Circuit applied the dedication rule despite the purported narrowing of the rule in YBM Magnex.\textsuperscript{320} The decision in YBM Magnex created a conflict with other precedent in the application of the dedication rule,\textsuperscript{321} which in turn created “uncertainty and confusion in an area that had just started to become more clear and certain.”\textsuperscript{322}

Unique Concepts involved a method of attaching a fabric wall covering to a wall.\textsuperscript{323} The claims were directed to an assembly of “border pieces,” including “linear border pieces” and “right angle corner border pieces,” that are arranged to form a frame around the area of the wall to be covered.\textsuperscript{324} The specification disclosed and claimed unitary right angle border pieces.\textsuperscript{325} The specification also referred to “improvised corner pieces” that could be made by miter-cutting the ends of a pair of short linear border pieces.\textsuperscript{326} The court found, however, that the miter cut subject matter was only disclosed, not claimed.\textsuperscript{327} The accused infringer made corners by using two mitered linear pieces instead of one preformed corner piece.\textsuperscript{328}

The Federal Circuit found that the claims to the “right angle corner pieces” were not infringed by the mitered corner pieces of the alleged infringing products,

\textsuperscript{315} 991 F.2d 768, 773-75, 26 U.S.P.Q.2d (BNA) 1588, 1593 (Fed. Cir. 1993) (Lourie, J., concurring).
\textsuperscript{316} Maxwell, 86 F.3d at 1106-07.
\textsuperscript{317} 126 F.3d 1420, 1425, 44 U.S.P.Q.2d (BNA) 1103, 1109 (Fed. Cir. 1997).
\textsuperscript{319} Id. at 1321.
\textsuperscript{320} 229 F.3d at 1107.
\textsuperscript{321} Several commentators noted the conflict created by YBM Magnex. See, e.g., Boalick, supra note 7, at 2385-88.
\textsuperscript{322} Id. at 2386.
\textsuperscript{323} Unique Concepts, 939 F.2d at 1559.
\textsuperscript{324} Id.
\textsuperscript{325} Id. at 1561-62.
\textsuperscript{326} Id. at 1562.
\textsuperscript{327} Id. The dissent disagreed with the claim construction of the majority, arguing that the claims should be construed to literally cover the miter cut embodiment. Id. at 1565 (Rich, J., dissenting).
\textsuperscript{328} Unique Concepts, 939 F.2d at 1561.
either literally or under the doctrine of equivalents. Writing for the majority, Judge Lourie construed the claims to require two distinct types of elements: linear border pieces and right angle corner pieces. The court rejected the patentee’s argument that mitered linear border pieces should be construed as right angle corner pieces. That construction would fail to give meaning to all of the claim limitations. The majority noted the statutory requirement that “an inventor particularly point out and distinctly claim the subject matter of his invention.” The court reasoned that an inventor should not be able to expressly state throughout the specification and in the claims that the invention must include “right angle corner border pieces” and then be allowed to avoid that claim limitation in a later infringement suit by pointing to one paragraph of the specification that discloses an alternative. Otherwise, “[s]uch a result would encourage an applicant to escape examination of a more broadly-claimed invention by filing narrow claims and then, after grant, asserting a broader scope of the claims based on a statement in the specification of an alternative never presented in the claims for examination.”

Citing Miller, the court applied the dedication rule, stating that “[i]t is also well-established that subject matter disclosed but not claimed in a patent application is dedicated to the public.” Here, the patentee disclosed but did not claim the mitered linear pieces as an alternative to the right angle corner pieces.

In dissent, Judge Rich argued that because the application was originally filed with claims covering mitered linear pieces, an assembly of mitered linear pieces should be construed as “right angle border pieces.” These claims were canceled during prosecution before the PTO and were not contained in the patent as issued. Because they were part of the prosecution history, however, Judge Rich did not think it significant that the claims were canceled before the patent was granted. Judge Rich argued that because the subject matter should be construed as part of the claims, it was not dedicated to the public.

329 Id. at 1564-65.
330 Id. at 1562.
331 Id.
332 Id.
334 Id. at 1562.
335 Id.
336 Id. at 1562-63.
337 Id.
339 Id.
340 Id.
341 Id. at 1566.
In a concurring opinion of International Visual Corp., Judge Lourie advocated the use of the dedication rule in a doctrine of equivalents context. The opinion discussed the equitable nature of the doctrine of equivalents to avoid a fraud on a patent by discouraging an unscrupulous copyist from making insubstantial changes which, though adding nothing, would be enough to take the copied matter outside the claim. Emphasizing the public notice function of the claims, however, Judge Lourie noted that if the doctrine of equivalents were to become "simply the second prong of every infringement charge, regularly available to extend protection beyond the scope of the claims, then claims will cease to serve their intended purpose."

In the dedication rule context, Judge Lourie argued that a patentee's attempt to extend coverage "by means of the doctrine of equivalents to include disclosed, but unclaimed, subject matter may not be deserving of equitable consideration because it essentially permits a patentee to avoid examination by the [PTO]." A patentee "should not be able to present a broad disclosure in the specification of [the] patent, file narrow claims, and after allowance and grant of those narrow claims, seek to extend protection by the doctrine of equivalents to the disclosed, but unexamined, subject matter." Judge Lourie also noted that the patent holder has a two-year period to obtain broader claims through a reissue proceeding.

In Maxwell, the Federal Circuit applied the dedication rule in a doctrine of equivalents context. The patent in Maxwell was directed to a system for attaching pairs of shoes together. Mrs. Maxwell, an employee at a Target retail store, figured out a way to connect pairs of shoes that do not have eyelets. The patented system attached tabs along the inside of each shoe and connected the shoes with a filament threaded through each tab. The patent specification

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342 Int'l Visual Corp., 991 F.2d at 773-75 (Lourie, J., concurring).
343 See id. at 773-74 (quoting Graver Tank, 339 U.S. 605, 607-08 (1950)). Note that this case was decided before Warner-Jenkinson. Presumably, the equitable nature of the doctrine is no longer important after Warner-Jenkinson. See supra notes 200-01 and accompanying text (discussing the doctrine of equivalents).
344 Int'l Visual Corp., 991 F.2d at 774 (citations omitted).
345 Id. at 775.
346 Id.
347 Id. at 775.
348 Maxwell, 86 F.3d at 1107-08.
349 Id. at 1102. Separate litigation under this patent continues to this day. Maxwell v. Angel-Etts, Inc., Nos. 01-1601, 01-1647, 02-1198, 02-1219, 2002 WL 31809442 (Fed. Cir. Dec. 13, 2002) (unpublished).
350 Maxwell, 86 F.3d at 1101.
351 Id.
disclosed two alternative embodiments of the invention but only one was claimed.\textsuperscript{352}

The alleged infringer, J. Baker, used three different versions of a system to connect shoes.\textsuperscript{353} The first was known as the "under the sock lining" version, which was found to infringe Maxwell's patent.\textsuperscript{354} After being informed that this system infringed the Maxwell patent, J. Baker designed two more versions. These alternative versions were known as the "counter pocket" version and the "top line" version and were the same as the alternative system disclosed, but not claimed, by the Maxwell patent.\textsuperscript{355} The jury found that the "under the sock lining" version literally infringed the patent, and the alternative versions infringed under the doctrine of equivalents.\textsuperscript{356}

The Federal Circuit reversed the findings of infringement under the doctrine of equivalents for the alternative systems.\textsuperscript{357} The court, in an opinion written by Judge Lourie,\textsuperscript{358} applied the dedication rule and held that the alternative systems did not infringe.\textsuperscript{359} Because the Maxwell patent disclosed but did not claim the same alternative systems used by J. Baker, they were dedicated to the public.\textsuperscript{360}

The court "reiterated the well-established rule that 'subject matter disclosed but not claimed in a patent application is dedicated to the public.'"\textsuperscript{361} The court noted that the dedication rule applies to both literal infringement and infringement under the doctrine of equivalents.\textsuperscript{362} The court reiterated the policy that a patentee may not narrowly claim an invention and then, at a later time during a patent infringement suit, argue that the doctrine of equivalents should permit a finding of infringement because the specification discloses the equivalent.\textsuperscript{363} Otherwise, a patent applicant would be motivated to present a broad disclosure in the specification, file narrow claims, and avoid examination of broader claims by the PTO.\textsuperscript{364} This would be "clearly contrary to 35 U.S.C. § 112, which requires that a patent applicant 'particularly point[ ] out and distinctly claim[ ]' the subject matter which the applicant regards as his invention."\textsuperscript{365} The court recognized

\textsuperscript{352} Id. at 1106.
\textsuperscript{353} Id. at 1103.
\textsuperscript{354} Id. at 1106, 1112.
\textsuperscript{355} Maxwell, 86 F.3d at 1103, 1106.
\textsuperscript{356} Id. at 1104.
\textsuperscript{357} Id. at 1106, 1112.
\textsuperscript{358} The panel consisted of Judge Lourie, Senior Judge Skelton, and Judge Schall.
\textsuperscript{359} Maxwell, 86 F.3d at 1108.
\textsuperscript{360} Id.
\textsuperscript{361} Id. at 1106 (quoting Unique Concepts, 939 F.2d at 1562-63).
\textsuperscript{362} Id. at 1107.
\textsuperscript{363} Id.
\textsuperscript{364} Maxwell, 86 F.3d at 1107.
\textsuperscript{365} See id. (quoting 35 U.S.C. § 112).
the possibility, however, that the patent holder could broaden the scope of the patent claims through a reissue proceeding within two years of the patent grant. 366

The court distinguished Graver Tank on the ground that the alternative embodiment in Graver Tank was claimed in the original patent, although those claims were later held invalid by a court. 367 Thus, the patentee in Graver Tank "could not be said to have dedicated such an embodiment of the invention to the public." 368 By contrast, the patentee in Maxwell never claimed the disclosed alternative embodiment, and therefore it was dedicated to the public. 369

After Maxwell, it was clear that the dedication rule would apply to subject matter disclosed but not claimed in a patent. This subject matter would be deemed dedicated to the public and could not be used by the patent holder for a finding of infringement. If the subject matter was claimed in the original patent as issued, and those claims were later held invalid, however, then the dedication rule would not apply. Also, the patent holder could broaden the scope of the patent claims through a reissue proceeding within two years of the patent issuance. Additionally, the patent holder could file a continuation application while the original patent was pending at the PTO, or file a separate application within one year of issuance of the original patent. 370

In Sage, the Federal Circuit articulated a further policy rationale for the dedication rule. 371 The patent at issue in Sage was directed to a hazardous waste disposal container for safely disposing of sharp medical instruments. The claims recited "an elongated slot at the top of the container body," and "a first constriction extending over said slot." 372 The "elongated slot" in the container body of the accused product was not at the top of the container body, but rather within the container body. 373 The Federal Circuit found no infringement, either literally or under the doctrine of equivalents. The court, in an opinion by Judge Rader, 374 noted that "as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure." 375

366 Id. at 1107 n.2.
367 Id. at 1107.
368 Id. at 1107-08.
369 Maxwell, 86 F.3d at 1108.
370 See supra notes 156-58 & 187-89 and accompanying text.
371 Sage, 126 F.3d at 1423-25.
372 Id. at 1422.
373 Id. at 1423.
374 The panel consisted of Judge Rader, Judge Mayer, and Judge Schall.
375 See Sage, 126 F.3d at 1425 (citing Maxwell, 86 F.3d at 1108).
The court recognized that this policy "places a premium on forethought in patent drafting. Indeed this premium may lead to higher costs of patent prosecution." The court reasoned, however, that the alternative rule of allowing broad application of the doctrine of equivalents would also lead to higher costs borne by society "in the form of virtual foreclosure of competitive activity within the penumbra of each issued claim." Thus, the court made a choice to impose higher costs of careful patent drafting on the patentee rather than impose higher costs of foreclosed business competition on society. The court reasoned that "the costs are properly imposed on the group best positioned to determine whether or not a particular invention warrants investment at a higher level, that is, the patentees."

In *YBM Magnex*, the Federal Circuit purported to narrow significantly the reach of the dedication rule. In an opinion by Judge Newman, the court essentially restricted the dedication rule to the facts of *Maxwell*, where distinct and alternative embodiments are described, but not all embodiments are claimed. The patent in *YBM Magnex* was directed to magnet alloys "consisting essentially of... 6,000 to 35,000 ppm oxygen..." A graph in the patent, however, disclosed magnets with an oxygen content below 6,000 ppm. The magnets made by the alleged infringer had an oxygen content between 5,450 and 6,000 ppm. In an investigation before the International Trade Commission (ITC), the Administrative Law Judge (ALJ) found the accused magnets to infringe under the doctrine of equivalents. While a subsequent enforcement proceeding was pending at the ITC, the Federal Circuit decided *Maxwell*. In view of *Maxwell*, the alleged infringers argued that the dedication rule applied so as to bar application of the doctrine of equivalents to the magnets with oxygen contents between 5,450 and 6,000 ppm.
6,000 ppm. In particular, the accused infringers argued that because the patent disclosed but did not claim oxygen content between 5,450 and 6,000 ppm, this subject matter was dedicated to the public. The ALJ rejected the argument, but the Commission reversed the ALJ, holding that "the doctrine of equivalents can no longer be applied to reach subject matter that is disclosed in the patent but is not claimed."

The Federal Circuit reversed, finding infringement under the doctrine of equivalents. The court stated that the Supreme Court decisions of Warner-Jenkinson and Graver Tank regarding the doctrine of equivalents "do[ ] not permit the blanket rule that everything disclosed but not claimed is barred from access to the doctrine of equivalents, whatever the facts, circumstances, and evidence." The court purported to limit Maxwell to its facts, stating that "Maxwell accords with the [Supreme] Court's precedent [concerning the doctrine of equivalents] only when its decision is understood and applied in light of its particular facts." The court stated that Maxwell disclosed two distinct alternative ways to attached pairs of shoes, and only claimed one of them. Thus, according to the YBM Magnex court, "[i]n view of the distinctness of the two embodiments, both of which were fully described in the spec, the Federal Circuit denied Maxwell the opportunity to enforce the unclaimed embodiment as an equivalent of the one that was claimed." The court stated that "Maxwell did not displace the wealth of precedent that permits determination of equivalency, vel non, as to subject matter included in the written description but not claimed."

After YBM Magnex, the dedication rule was purportedly narrowed to the facts of Maxwell. Nevertheless, the Federal Circuit applied the dedication rule in a doctrine of equivalents context in the 2000 case of Moore. The patent in Moore was directed to a mailer-type business form. The claim recited "first and second longitudinal strips of adhesive ... extending the majority of the lengths of said longitudinal marginal portions, and parallel to said first and second longitudinal edges." The written description of the patent taught that the

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384 Id.
385 Id. at 1320.
386 Id. at 1322.
387 Id. at 1320. For a discussion of the Supreme Court decisions in Warner-Jenkinson and Graver Tank, see Boalick, supra note 7, at 2374-82.
388 YBM Magnex, 145 F.3d at 1321.
389 Id. at 1320.
390 Id.
391 Id. at 1322.
392 229 F.3d at 1107.
393 Two patents were at issue in Moore but only one involved a dedication rule issue.
394 Moore, 229 F.3d at 1095. Other claims and other patents also were at issue but did not involve the dedication rule.
length of the first and second strips may be about “half of the length” of the longitudinal margin portions. The accused form had longitudinal strips of adhesive that extended 47.8% of the total margin length. The Federal Circuit, in an opinion by Judge Michel, found no infringement under the doctrine of equivalents. Citing Maxwell, the court used the dedication rule to reject the patentee’s argument that the teaching in the specification should give rise to a scope of equivalents that would cover a “minority” of the length. The court stated that, because the patentee

fully disclosed two distinct embodiments, one in which the first and second longitudinal strips extend a majority of the length of the longitudinal marginal portions, and one in which they do not, Moore is not entitled to ‘enforce the unclaimed embodiment as an equivalent of the one that was claimed.’

Judge Newman dissented, arguing that Moore did not dedicate all embodiments less than the majority of the length. According to the dissent, there was no dedication because neither the prosecution history nor the prior art was ever asserted as limiting the scope of equivalents to more than fifty percent of the length.

C. UNCERTAINTY IN FEDERAL CIRCUIT DEDICATION RULE PRECEDENT

After the Federal Circuit’s decision in YBM Magnex, the status of the dedication rule was unclear. The result in YBM Magnex also appeared to be contrary to the result in the earlier non-precedential decision Brunswick and the later decision in Moore. The holding in YBM Magnex purported to limit the earlier decision in Maxwell to its facts. No policy rationale was given in YBM Magnex for the requirement of “distinct” embodiments to trigger the dedication rule. Moreover, the YBM Magnex decision created confusion over precisely what a “distinct” embodiment was and how a “distinct” embodiment could be identified.

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395 Id. at 1107.
396 Id. at 1097.
397 The panel consisted of Judge Newman, Judge Michel, and Judge Clevenger. Judge Newman dissented.
398 Moore, 229 F.3d at 1107 (quoting YBM Magnex, 145 F.3d at 1320).
399 Id. at 1119-20 (Newman, J., dissenting).
400 Id. at 1120.
Hope for clarification seemed dim, as the Federal Circuit had denied en banc review to Maxwell, YBM Magnex, and Moore.

VI. RECENT DEVELOPMENTS IN THE DEDICATION RULE: JOHNSON & JOHNSTON ASSOCIATES INC. V. R.E. SERVICE CO.

The uncertainty surrounding the dedication rule due to conflicting precedent was recently resolved in the 2002 en banc case of Johnson. In a per curiam decision, a strong version of the dedication rule was affirmed and YBM Magnex was overruled. After Johnson, the dedication rule was restored as a potent doctrine to limit the overbroad application of claims.

The patent at issue in Johnson was directed to printed circuit boards. A printed circuit board has a thin sheet of copper foil that is joined to a nonconductive material during assembly of the board. The copper foil may be damaged by manual handling during the printed circuit board assembly process. The invention attaches the fragile copper foil to a stiffer substrate of aluminum, which enables safe handling of the copper foil during the assembly process. The claim recited “a sheet of aluminum which constitutes a discardable item” and later in the claim referred to the “aluminum sheet.” The specification, however, contained a broader disclosure. In particular, the specification taught that “[w]hile aluminum is currently the preferred material for the substrate, other metals, such as stainless steel or nickel alloys may be used.” The accused product used a steel substrate.

The district court granted a summary judgment motion for no literal infringement. Regarding infringement under the doctrine of equivalents, the accused infringer argued that a steel substrate was dedicated under the rule of Maxwell while the patentee argued that the steel substrate was not dedicated under YBM Magnex. The district court ruled that there was no dedication and

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401 See Boalick, supra note 7, at 2394 (noting missed opportunities for the Federal Circuit to clarify the dedication rule).
402 285 F.3d at 1055. A petition for a writ of certiorari was not filed with the Supreme Court.
403 Id. at 1048-49.
404 Id. at 1048.
405 Id. at 1049.
406 Id.
407 Johnson, 285 F.3d at 1050.
408 Id. at 1055.
409 Id. at 1050.
410 Id.
411 Id.
proceeded to hold a jury trial. The jury found infringement and awarded damages, which the district court enhanced.

The en banc Federal Circuit reversed. In a per curiam opinion, the court found dedication under the rule of Maxwell and overruled YBM Magnex to the extent there was a conflict with Maxwell. The court discussed the history of the dedication rule, explaining that there was no conflict with Supreme Court precedent regarding the doctrine of equivalents. The court reviewed the Maxwell and YBM Magnex decisions, noting that "this court in YBM Magnex purported to limit Maxwell to situations where a patent discloses an unclaimed alternative distinct from the claimed invention." In overruling YBM Magnex, the per curiam opinion reiterated the Maxwell rule that "when a patent drafter discloses but declines to claim subject matter, as in this case, this action dedicates that unclaimed subject matter to the public." The court relied on the traditional two-fold rationale. First, application of the doctrine of equivalents to capture subject matter left unclaimed would conflict with the notice function of the claims. Second, a patentee may not disclose broadly, yet claim narrowly, to avoid PTO scrutiny of claims that are broader than those actually pursued by the patent holder. Although such broader claims find support in the specification, the patent holder chose not to present them during prosecution. After the narrow claims issue, however, the patent holder attempts to use the doctrine of equivalents to establish infringement by the disclosed but unclaimed subject matter. "By enforcing the Maxwell rule, the courts avoid the problem of extending the coverage of an exclusive right to encompass more than that properly examined by the PTO." The court also noted that "one of the advantages of the Maxwell rule is that it is a purely objective test. The patentee's subjective intent is irrelevant to determining whether unclaimed subject matter has been disclosed and therefore dedicated to the public.

412 Johnson, 285 F.3d at 1050.
413 Id. The jury awarded damages of $1,138,764, and the district court doubled the amount awarded for lost profits and reasonable royalty, but not for price erosion. Id.
414 Id. at 1054.
415 See id. at 1053-54 & n.1 (explaining no conflict with Graver Tank and Warner-Jenkinson).
416 Johnson, 285 F.3d at 1051-52.
417 Id. at 1044-55.
418 The court, therefore, missed an opportunity to articulate a broader rationale for the dedication rule as a tool to improve patent quality.
419 Johnson, 285 F.3d at 1054. The court discussed the importance of the notice function of the claims at length. Id. at 1052-55.
420 Id.
421 Id.
422 Id. at 1055.
423 Johnson, 285 F.3d at 1053 n.1.
Turning to the facts, the court found that the patentee had broadly disclosed in the specification that “[w]hile aluminum is currently the preferred material for the substrate, other metals, such as stainless steel or nickel alloys may be used.”\textsuperscript{424} Despite this broad disclosure, the patentee specifically limited the claims to “a sheet of aluminum” and “an aluminum sheet.”\textsuperscript{425} Because the steel substrate was disclosed but not claimed, the dedication rule applied to deny the patentee the ability “to extend its aluminum limitation to cover steel.”\textsuperscript{426} The court noted that a patentee who inadvertently fails to claim disclosed subject matter has the option of pursuing a broadening reissue within two years from the patent grant or pursuing a continuing application that claims that subject matter.\textsuperscript{427} Notably, the patentee had pursued the second option and filed two continuing applications that literally claimed a steel substrate.\textsuperscript{428}

In his concurrence, Judge Clevenger\textsuperscript{429} emphasized that the Johnson decision was in harmony with Supreme Court precedent in Graver Tank, contrary to the assertion made by the dissent.\textsuperscript{430} Judge Clevenger also emphasized that the Johnson decision did not make new law because the law was old as of the time of Maxwell.\textsuperscript{431} Rather, the decision merely reconciled the perceived conflict between Maxwell and YBM Magnex and “reassure[d] the district courts and the bar that our previous decision in Maxwell states the correct rule.”\textsuperscript{432} Thus, “[f]or the reasons stated in the court’s opinion in this case, it is not possible for the older holding in Maxwell to live comfortably with the newer holding in YBM Magnex. Our choice in this case was simple: whether to overrule Maxwell or YBM Magnex.”\textsuperscript{433}

Judge Rader’s concurrence\textsuperscript{434} endorsed the results and reasoning of the court but offered an alternative reasoning for reaching the same result.\textsuperscript{435} Judge Rader’s proposal focused on an attempt to reconcile the notice function of the claims

\textsuperscript{424} Id.
\textsuperscript{425} Id.
\textsuperscript{426} Id.
\textsuperscript{427} Id. For more information on reissue applications and continuing applications, see supra Part IV.
\textsuperscript{428} Johnson, 285 F.3d at 1055 & n.2. One continuation application claimed “a sheet of stainless steel” and the other claimed “a metal substrate sheet.” Id. at n.2. The continuation patents issued on October 7, 1997, and March 10, 1998, approximately five years after the patent in suit had issued on October 6, 1992. Thus, if the continuation patents were to be enforced, the patentee would lose five years worth of potential damages compared to the original patent.
\textsuperscript{429} Judge Clevenger was joined by Judges Schall, Gajarsa, and Dyk.
\textsuperscript{430} Johnson, 285 F.3d at 1055-56 (Clevenger, J., concurring).
\textsuperscript{431} Id. at 1056.
\textsuperscript{432} Id.
\textsuperscript{433} Id.
\textsuperscript{434} Judge Rader was joined by Chief Judge Mayer.
\textsuperscript{435} Johnson, 285 F.3d at 1056 (Rader, J., concurring).
with the protective function of the doctrine of equivalents.\textsuperscript{436} Under this proposed rule, the doctrine of equivalents would not be permitted to capture subject matter that a patent drafter reasonably could have foreseen during the application process and included in the claims.\textsuperscript{437} According to the proposed test, "if one of ordinary skill in the relevant art would reasonably anticipate ways to evade the literal claim language, the patent applicant has an obligation to cast its claims to provide notice of that coverage."\textsuperscript{438} Judge Rader argued that this "foreseeability bar thus places a premium on claim drafting and enhances the notice function of the claims."\textsuperscript{439} Judge Rader noted that prior cases, including\textsuperscript{Sage},\textsuperscript{440} acknowledged the value of a foreseeability limit on the doctrine of equivalents.\textsuperscript{441} Although admitting that\textsuperscript{Maxwell} did not explicitly invoke foreseeability principles, Judge Rader argued that the court had relied on the perspective of one of skill in the art, and therefore suggested that foreseeability "adds weight" to the dedication rule.\textsuperscript{442}

The concurring opinion of Judge Dyk\textsuperscript{443} added further explanation as to why the majority opinion is consistent with the Supreme Court's decision in\textsuperscript{Graver Tank}.\textsuperscript{444} Judge Dyk conducted an in-depth analysis of\textsuperscript{Graver Tank}, finding several factual distinctions between\textsuperscript{Johnson} and\textsuperscript{Graver Tank}.\textsuperscript{445} Judge Dyk also concluded that it was "highly likely that the Supreme Court did not even consider the question of dedication by disclosure in the specification to be properly before it."\textsuperscript{446} Thus, "the better reading of\textsuperscript{Graver Tank II} is that the issue of dedication by specification disclosure simply was not decided. There is thus no holding on this issue that binds this court."\textsuperscript{447}

Judge Lourie's\textsuperscript{448} concurring opinion was written exclusively to comment on Judge Rader's concurring opinion.\textsuperscript{449} Judge Lourie agreed that "a patent applicant should include in his patent application whatever is within the scope of his

\textsuperscript{436} Id.
\textsuperscript{437} Id. For a criticism of foreseeability tests in a doctrine of equivalents contexts, see Wagner, supra note 20.
\textsuperscript{438} Johnson, 285 F.3d at 1057.
\textsuperscript{439} Id.
\textsuperscript{440} Recall that Judge Rader was the author of the\textsuperscript{Sage} opinion.
\textsuperscript{441} Johnson, 285 F.3d at 1058.
\textsuperscript{442} Id. at 1059.
\textsuperscript{443} Judge Dyk was joined by Judge Linn.
\textsuperscript{444} Johnson, 285 F.3d at 1059 (Dyk, J., concurring).
\textsuperscript{445} Id. at 1060-61.
\textsuperscript{446} Id. at 1061.
\textsuperscript{447} Id. at 1062-63.
\textsuperscript{448} Judge Lourie was not joined by other judges in this concurrence. Recall that Judge Lourie was the author of the\textsuperscript{Maxwell} opinion.
\textsuperscript{449} Johnson, 285 F.3d at 1063 (Lourie, J., concurring).
inventive concept and is foreseeable.”450 Judge Lourie was not convinced, however, that introducing the concept of foreseeability was the correct answer to the “equivalence dilemma.”451 In particular, Judge Lourie disagreed that “the concept of foreseeability would simplify equivalence issues and make them more amenable to summary judgment.”452 To the contrary, he “suggested” that introducing foreseeability would raise new factual issues.453 Fact finding would be necessary to determine what one skilled in the art would have foreseen,454 in contrast to what is disclosed in a patent, which is readily determinable.455 To the extent that foreseeability is similar to obviousness, “foreseeability creates conflicts with conventional patent law ideas.”456 To the extent that foreseeability is different from obviousness, “we would be inserting new complexity into what is already an amorphous and vague area of the law. That would not be a step forward.”457 Thus, Judge Lourie had “serious doubts” about foreseeability as a viable answer.458

In a vigorous dissent, Judge Newman459 argued that the majority decision established “a new absolute bar to equivalency” and was in conflict with the Supreme Court’s decisions in Graver Tank and Warner-Jenkinson.460 Judge Newman thought the majority had created a “new, unnecessary and often unjust, per se rule” that “jettisons even the possibility of relief when relief is warranted, and further distorts the long-established balance of policies that undergird patent-supported industrial innovation.”461 Judge Newman asserted that it was “self-evident that the placement of an increasing number of pitfalls in the path of patentees serves only as a deterrent to innovation.”462 In particular, the dissent reasoned that a strong dedication rule would have an adverse effect on the disclosure of information in the specification.463

450 Id. at 1063.
451 Id.
452 Id.
453 Id.
454 Id.
455 Id. at 1063.
456 Id.
457 Id.
458 Id. at 1064.
459 Judge Newman was the sole dissenter. Recall that Judge Newman was the author of the YBM Magnex opinion that was overruled by Johnson.
461 Id. at 1064.
462 Id.
463 Id.
Judge Newman first argued that the majority decision was contrary to *Graver Tank* and *Warner-Jenkinson.* Next, she argued that the majority decision was contrary to several earlier Federal Circuit cases, most of which were cited as support for the *YBM Magnex* rule in the *YBM Magnex* decision. Judge Newman did not agree that a per se rule of dedication was necessary or appropriate. Finally, she argued that the majority opinion would not serve the public interest in fostering innovation, and would penalize the inclusion of information in the specification, making patents a less useful source of knowledge. Thus, the patent system would be less effective in fostering innovation.

VII. THE ROLE OF THE DEDICATION RULE IN IMPROVING PATENT QUALITY

The traditional understanding of the dedication rule as a limitation on the doctrine of equivalents is incomplete and misses a broader point. As a liability rule, the dedication rule creates incentives for the patentee to alter behavior during the patent acquisition process in order to avoid adverse consequences and loss of rights. The dedication rule applies to cause a loss of rights only when the patent has been drafted and prosecuted in a certain manner. Specifically, the rule applies when the patent has been drafted with a broad specification but narrow claims. Thus, the dedication rule will provide incentives for the patentee to claim the scope of protection desired. If the patentee chooses to claim more narrowly than he is entitled to claim, the patentee will be stuck with the narrow claim scope.
that was chosen because the dedication rule will act to prevent the patentee from obtaining a broader exclusionary right after the patent issues.\textsuperscript{469}

The notice function of the claims is better served by ensuring that the patentee is only able to cover that which is claimed, and not other subject matter that the patentee chose to disclose but not claim. By creating incentives for the patentee to claim the scope of coverage desired in the first instance, patent quality is improved for every application that is filed and prosecuted before the PTO. If there are clear and meaningful liability consequences to the patentee for poor patent drafting and prosecution, the patentee will have incentives initially to produce a better quality patent application. To avoid the adverse consequences, the patentee will be willing to pay more up front in the patent procurement process or else risk losing exclusionary rights during litigation and winding up with a potentially worthless patent. Thus, a strong dedication rule will increase clarity and certainty of patent claims, which will lead to improved patent quality.

Moreover, the dedication rule is fair to both the public and the patentee.\textsuperscript{470} The patentee is in a better position to draft claims of appropriate scope in view of the disclosure provided. The patentee is also in a better position to ascertain the scope of the prior art at the time of filing the patent application. If the patentee accidentally claims too narrowly, there are three mechanisms for the patentee to obtain the broader coverage to which they are entitled.\textsuperscript{471} First, if less than two years have passed since the patent issued, the patentee may seek a broadening reissue.\textsuperscript{472} Second, if the patent application is still pending at the PTO, the applicant may seek a continuing application.\textsuperscript{473} Third, if less than one year has passed since the patent issued, the patentee may file a second independent application that does not claim priority to the first patent.\textsuperscript{474} Under these mechanisms, however, liability for infringers is possible only at the point in time when the patentee clearly defines the scope of the claims. The reissue statute

\textsuperscript{469} The patentee may, under certain conditions, recover the broader claim scope to which they are entitled. \textit{See supra} notes 156-89 and accompanying text.

\textsuperscript{470} In some situations, the dedication rule may even help the patentee. For example, a dedicated embodiment of an invention may assist the patentee in avoiding implied license issues. \textit{See HARMON, supra} note 34, \textsection 7.2(c), at 3690-75 (discussing implied licenses). Thus, a non-infringing use may be dedicated to the public in the patent itself to create a noninfringing use and thus avoid an implied license.

\textsuperscript{471} \textit{See supra} notes 156-89 and accompanying text.

\textsuperscript{472} \textit{See supra} notes 162-72 and accompanying text.

\textsuperscript{473} \textit{See supra} notes 156-59 and accompanying text. If subject matter is dedicated in a parent application, this does not impede the ability of a downstream application to later claim that subject matter. \textit{Gibbs}, 437 F.2d at 491. In other words, each patent is evaluated independently for dedication.

\textsuperscript{474} \textit{See supra} notes 187-89 and accompanying text.
provides for intervening rights, and both continuing applications and subsequent patent applications may only be enforced as of the issue date of these patents, which will be at a later time than the issue date of the original patent. Once the patentee has clearly defined the scope of the claims, that claim scope may be enforced. Similarly, the earlier the patentee clearly defines the scope of the claims, the earlier it may be enforced.

The dedication rule will not create disincentives for the patentee to disclose the invention. If the patentee does not provide an enabling disclosure or otherwise comply with the requirements of section 112, the patent will be invalid. Thus, section 112 provides ample incentives for the patentee to disclose with sufficient breadth to enable the claims. Given the choice between discussing and claiming or not disclosing at all, the patentee will choose to disclose and claim. Otherwise, the patentee will not be able to protect her innovation. It is possible that extraneous disclosure not necessary for section 112 purposes may be discouraged by the dedication rule. The value of such extraneous disclosure is suspect though. Also, without the dedication rule in place, that extraneous disclosure has the opportunity to create confusion as to the scope of the patent. With the dedication rule, it is clear that a competitor may not be excluded from making use of the disclosed but unclaimed subject matter.

The dedication rule is important because it has an impact on patent quality early in the acquisition process and places a burden of clarity on the patent drafter. The costs incurred by the patentee during patent acquisition are significantly less than the costs of patent litigation borne by an accused infringer or by the patentee. A relatively small increment in initial investment by the patentee has the potential to save much larger costs from being borne by society, and the patentee as well, at a later time when the patent is litigated.

One survey indicates that the median cost of preparing a patent application ranges from approximately $5,500 for a simple invention to approximately $10,000 for a complex invention. During prosecution, the median cost of

475 *See supra* notes 173-77 and accompanying text.
476 *See supra* note 190 and accompanying text. In certain instances, provisional rights may be obtained in the claims of a published patent application if the claims in the published application and the issued patent are substantially similar.
477 This was an argument by both the dissent as well as the amici in *Johnson*.
478 *See supra* notes 93-110 and accompanying text (regarding the Section 112 requirements).
479 AM. INTELL. PROP. L. ASS'N, AIPLA Report of the Economic Survey 2003, at 87-88 (on file with author) [hereinafter AIPLA Survey]. The reported costs varied by complexity and technology. The median cost of preparing an original patent application for an invention of minimal complexity was $5,504. *Id* at 87. The 75th percentile cost was $7,500 and the 25th percentile cost was $4,497. *Id.* The median cost of preparing an original patent application for a relatively complex electrical/computer invention was $9,995. *Id* at 88. The 75th percentile cost was $12,011 and the 25th percentile cost was $7,510. *Id.* The median cost of preparing an original patent application for a
preparing an amendment in response to an office action ranges from approximately $1,400 for a simple invention to approximately $2,800 for a complex invention.\(^8\) By contrast, the same survey found that the median cost of an entire patent infringement suit ranged from approximately $500,000 for less than one million dollars at risk to approximately $3.9 million for over twenty five million dollars at risk.\(^9\) The median cost of a patent infringement suit through the end of discovery ranged from approximately $290,000 for less than one million dollars at risk to approximately $2.5 million for over twenty five million dollars at risk.\(^8\)

Thus, the cost of even a complex invention from drafting the patent application through issuance of the patent is not likely to be more than one tenth

relatively complex biotechnology/chemical invention was $10,001. AIPLA, supra note 479, at 88. The 75th percentile cost was $14,985 and the 25th percentile cost was $7,982. Id. The median cost of preparing an original patent application for a relatively complex mechanical invention was $8,001. Id. at 88. The 75th percentile cost was $10,001 and the 25th percentile cost was $6,498. Id.

AIPLA Survey 2003, supra note 479, at 89. The reported costs varied by complexity and technology. The median cost of preparing an amendment/argument for an invention of minimal complexity was $4,499. Id. The 75th percentile cost was $2,000 and the 25th percentile cost was $1,000. Id. The median cost of preparing an amendment/argument for a relatively complex electrical/computer invention was $2,501. Id. The 75th percentile cost was $3,495 and the 25th percentile cost was $1,988. Id. The median cost of preparing an amendment/argument for a relatively complex biotechnology/chemical invention was $2,806. AIPLA Survey, supra note 479, at 89. The 75th percentile cost was $3,994 and the 25th percentile cost was $1,996. Id. The median cost of preparing an amendment/argument for a relatively complex mechanical invention was $2,199. Id. The 75th percentile cost was $3,000 and the 25th percentile cost was $1,501. Id.

AIPLA Survey, supra note 479, at 93-94. The reported costs varied by the amount at risk and was inclusive of all litigation costs. The median cost of a litigation with less than $1 million at risk was $500,000. Id. at 93. The 75th percentile cost was $751,000 and the 25th percentile cost was $351,000. Id. The median cost of a litigation with $1 million to $25 million at risk was $2,000,000. Id. at 93. The 75th percentile cost was $3,000,000 and the 25th percentile cost was $1,001,000. Id. The median cost of a litigation with more than $25 million at risk was $3,995,000. AIPLA Survey, supra note 479, at 94. The 75th percentile cost was $5,996,000 and the 25th percentile cost was $2,306,000. Id.

AIPLA Survey, supra note 479, at 93-94. The reported costs varied by the amount at risk and was inclusive of costs through the end of discovery. The median cost of a litigation with less than $1 million at risk was $290,000. Id. at 93. The 75th percentile cost was $449,000 and the 25th percentile cost was $199,000. Id. The median cost of a litigation with $1 million to $25 million at risk was $1,001,000. Id. at 93. The 75th percentile cost was $1,998,000 and the 25th percentile cost was $502,000. Id. The median cost of a litigation with more than $25 million at risk was $2,500,000. AIPLA Survey, supra note 479, at 94. The 75th percentile cost was $4,000,000 and the 25th percentile cost was $1,000,000. Id. The costs incurred through the end of discovery are still quite significant when compared to the costs incurred for an entire suit. The costs through the end of discovery may be a better point at which to make a comparison with prosecution costs because the application of the dedication rule is matter of law for the judge and dedication can be decided on summary judgment. See Michel, supra note 7, at 126.
the cost of patent litigation. This comparison also does not account for the cost of legal opinions, damages, injunctions, or licensing fees that may be incurred by the accused infringer.

The dedication rule will decrease the need for, and cost of, legal opinions obtained by potential infringers. Typically, a potential infringer will seek a legal opinion of non-infringement or invalidity if there is a reason to be concerned about infringement of patent claims. A potential infringer is more readily able to ascertain whether the patent is infringed when the scope of the claims is clear. The improved clarity in claim scope will eliminate the need for an opinion in many instances. Where an opinion is needed, the cost of the opinion will be reduced because of the increased clarity of the patent claims.

From a societal perspective, it is better to improve patent quality by imposing additional but relatively lower costs on the patentee during patent drafting and prosecution than to impose on a defendant, and ultimately society, the much higher costs of defending against a charge of patent infringement involving a poor quality patent. The disparity in costs is further amplified by the potential for the patentee to receive injunctive relief, collect damages, or extract license fees involving a poor quality patent, as well as the potential need for competitors or other parties to seek legal opinions regarding the patent.

Therefore, the dedication rule, which impacts the patent drafting and prosecution process, is likely to be more cost effective for society than other rules that impact conduct only during patent litigation. The increased certainty that comes with improved patent quality means that society will not have to bear the cost of defending a lawsuit involving a poor quality patent, with the accompanying uncertainty as to its claim scope and validity. The patentee also gets a better bargain because, even though more money is initially spent in prosecution, once the patent issues it will be a better quality and stronger patent, which will lead to less costly and more successful licensing and enforcement actions. In addition, the increased patent quality will lead to a more accurate valuation of the patent, which will help the patentee obtain financing from venture capital sources.

483 The exact numbers will vary, but the disparity in cost between patent acquisition costs in prosecution and enforcement costs in litigation remains large.
484 For example, a competitor who learns of the patent may seek a formal written opinion of non-infringement or invalidity from an attorney. Typically, the competitor will ask for such an opinion as a precautionary measure. Without the opinion, there is a greater possibility of later being found liable for willful infringement and incurring treble damages. See supra note 60 for more information regarding willful infringement and treble damages.
The dedication rule has far reaching implications that start with the first meeting between the inventor and the patent attorney. In drafting the application, much thought must be given to the specific embodiments of the invention and what subject matter the claims should cover. The drafter will be incentivized to ask the inventor about all possible embodiments of the invention that the inventor desires to cover and will ensure that each is distinctly claimed. The drafter also will be motivated to probe the patentability of each embodiment and draft claims to cover each patentable embodiment. The dedication rule therefore ensures that the patentee drafts the patent application to cover the desired invention. Failure to claim aspects of the desired invention that are described in the specification will result in a loss of rights. The dedication rule provides incentives for the patentee to examine the claim scope for every amendment during prosecution to ensure that the claims have been drafted broadly enough to cover the desired invention.

In addition, the dedication rule places the proper emphasis on the existing mechanisms for a patentee to fix mistakes in patent scope. The three existing mechanisms that enable the patentee to obtain coverage of disclosed but unclaimed subject matter are: (1) the statutory reissue process; (2) continuing applications; and (3) the filing of a new application within one year of issuance of the parent application. These mechanisms strike a balance of fair protection to the patentee against the notice function of the claims. The dedication rule enforces these mechanisms by denying the patentee the ability to circumvent them by litigating the disclosed but unclaimed subject matter under the doctrine of equivalents.

B. INTERACTION WITH OTHER PATENT QUALITY IMPROVEMENT MECHANISMS

The dedication rule has an important role in improving patent quality. The dedication rule may be seen, however, as one piece of the puzzle in the overall effort to improve patent quality. In particular, the dedication rule is effective to prevent facially narrow patents from being asserted broadly to cover subject matter that is disclosed but not claimed. If, on the other hand, a patent claims more broadly than is supported by the specification, the dedication rule will not be effective to curb that patent. Instead, other mechanisms, such as section 112 requirements and the doctrine of prosecution history estoppel, may be used to cabin attempts to assert an overly broad patent. Also, if subject matter appears

485 See supra notes 162-89 and accompanying text (discussing mechanisms that allow a patentee to correct errors in claim scope).
486 See id.
487 See id.
cabin attempts to assert an overly broad patent. Also, if subject matter appears to be claimed by the patent but was disclaimed during the patent acquisition process, the dedication rule will not be effective to prevent the patentee from asserting that claim. The doctrine of prosecution history estoppel, however, will prevent the patentee from recapturing the subject matter given up during prosecution. The dedication rule works in harmony with these other mechanisms to improve patent quality.

VIII. THE FUTURE OF THE DEDICATION RULE

In Johnson, the Federal Circuit took an important step toward improving patent quality, apparently without realizing the full ramifications of its decision. Better patent quality will result from the clarification of the dedication rule provided by Johnson, overruling YBM Magnex to the extent there was a conflict with Maxwell. Although Johnson provided much needed clarification, ambiguity in the application of the dedication rule remains. To achieve the potential for improvement in patent quality, four areas require additional clarification. A legislative solution is most appropriate.

First, Congress should codify the dedication rule. The Federal Circuit decision in Johnson may arguably conflict with Supreme Court precedent in Graver Tank. Whether a conflict exists has not been decided. Reasonable parties could disagree. Both sides of the argument were vigorously and forcefully articulated in Johnson. The argument that no conflict exists was laid out by the per curiam majority, the concurrence of Judge Clevenger, and the concurrence of Judge Dyk. The argument that a conflict exists was given by the dissent of Judge Newman. Supreme Court intervention seems unlikely. Congressional legislation would remove the cloud of uncertainty regarding potential conflict with Supreme Court precedent that currently hangs over the dedication rule.

The second area for Congress to clarify is the nature and quality of disclosure in the specification that will trigger the dedication rule. Without this clarifica-
tion, patent drafters will not be able to predict reliably when the dedication rule will apply. In addition to creating confusion during the drafting and prosecution of the patent, this uncertainty also will impede an even application of the dedication rule during litigation. Patent drafters must know precisely when they are disclosing subject matter in a way that will make it eligible for dedication. Having the knowledge that a particular disclosure of subject matter is sufficient to be dedicated will enable the patent drafter to decide affirmatively whether to claim or dedicate the disclosed subject matter. This will lead to improved clarity in claim scope.

In order for disclosed subject matter to be eligible for the dedication rule, Congress should make clear that the disclosure needs to meet the section 112 requirements of written description and enablement. If the subject matter to be dedicated meets the section 112 requirements, the patent drafter could have written a claim to cover it during the drafting and prosecution of the patent. If the subject matter to be dedicated does not meet the section 112 requirements of written description and enablement, then the patent drafter could not have written a valid claim to that subject matter in the first instance. The dedication rule is premised on the notion that the patentee must not avoid PTO examination of subject matter to be claimed. Thus, subject matter that could not have been claimed cannot be dedicated.

The third area that Congress should clarify is the impact that a finding of dedication in one patent has upon other patents. The finding of dedication in one patent should have no impact on whether dedication is found in a different patent. Dedication should be found on an individual patent-by-patent basis, without regard to what is claimed or not claimed in other patents. Even different patents that share the same specification are able to, and indeed are expected to, claim different subject matter. The failure to claim subject matter in an earlier application does not prevent a patentee from claiming that same subject matter in a different patent. Similarly, the dedication of subject matter in an earlier application should have no bearing on the ability of a patentee to claim the same subject matter in a different patent. This is consistent with Gibbs, where a finding of dedication in an earlier-filed and issued patent did not flow to a later-

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497 At least, to the extent that there is not double patenting. See supra note 188 for more information concerning double patenting.

498 Of course, this is subject to certain rules, such as copendency for continuing applications, and the one year bar date for later filed applications. See supra notes 156-59 & 187-89 and accompanying text.

499 As discussed in supra note 498, this is limited by other rules, including rules for continuing applications and bar dates.

500 437 F.2d at 491.

https://digitalcommons.law.uga.edu/jipl/vol11/iss2/2
filed patent application. Similarly, a finding of dedication in a later-filed and issued patent should not flow back to an earlier-filed patent or patent application.

The fourth area for Congress to clarify is how a finding of dedication can be remedied. When subject matter is found to be dedicated in a particular patent, the finding of dedication should not be able to be remedied in that patent, except by the statutory mechanism of reissue. In particular, Congress should clarify that dedication of subject matter in a particular patent is not remedied by the patentee claiming the dedicated subject matter in a different patent or patent application. That is, a finding of no dedication in a later filed patent or patent application should not remedy the finding of dedication in an earlier filed patent. This is a logical extension of *Gibbs*.

In *Gibbs*, a finding of dedication in an earlier-filed and issued patent did not flow to a later-filed patent application. Here, a finding of dedication in an earlier-filed and issued patent should not be remedied by a lack of dedication in a later-filed patent application. Similarly, a finding of dedication in a later-filed and issued patent should not be remedied by a lack of dedication in an earlier-filed patent or patent application.

A legislative solution is most appropriate. First, the issues are sufficiently honed for Congress to act. In addition to the issue of whether the dedication rule conflicts with *Graver Tank*, the other three areas for clarification proposed here have been refined through a long history of case law. The tensions are recognized and set for resolution. Second, the issues to be clarified involve a policy choice in favor of bright line rules in applying the dedication rule to improve patent quality. Congress is the appropriate body to make such a policy choice. In support of the policy decision, Congress can conduct fact findings concerning the impact of the dedication rule on patent quality. The clarity that Congress can bring will enable the dedication rule to achieve its potential to improve patent quality.

IX. CONCLUSION

The dedication rule has the potential to improve patent quality. Additional clarification is needed to achieve this potential. Once clarified, the dedication rule will create incentives for the patentee to draft clear and comprehensive claims at

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501 Recall that, in addition to reissue, there are two other mechanisms to obtain coverage of the disclosed but unclaimed subject matter: (1) continuing applications; and (2) the filing of a new application within one year of issuance of the parent application. See supra notes 485-86 and accompanying text. However, these other two mechanisms involve different patents. The reissue mechanism involves the same patent where dedication was found.

502 437 F.2d at 491.

503 Id.

504 Recall that this was another argument of the dissent in *Johnson*. 285 F.3d at 1064.
the earliest stages of the patent acquisition process. By forcing the patent applicant to ensure that the scope of the claims matches the scope of innovation, the resulting patents will increase clarity and certainty. The increased certainty and predictability in the patent claims will lower transaction costs and fulfill the patent system’s goal of fostering innovation.