SOURCES OF PATENT PROSECUTION HISTORY MUST NOT VIOLATE PUBLIC NOTICE REQUIREMENT

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INTRODUCTION

An attorney prosecuting a patent[1] in the United States Patent

[1] The United States Constitution grants Congress the power "to 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." U.S. CONST. art. I, § 8. A patent grants the patentee "the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States." 35 U.S.C. § 154(a)(1) (1994). In exchange for the government's grant of a limited monopoly on the invention, an inventor must fully disclose his or her invention in a patent application that would enable one skilled in the art to practice the invention. 35 U.S.C. § 112 (1994). Courts presume that a person skilled in the art possesses the knowledge of all persons practicing the art of the invention. *In re* Winslow, 365 F.2d 1017, 1020 (C.C.P.A. 1966) (invalidating patent claims because they contained material that was already known by those in the art and would have been obvious to combine).

A patent application includes a specification and drawings. 35 U.S.C. §§ 112-113 (1994). The specification contains a detailed description of the invention and claims to the invention. 35 U.S.C. § 112 (1994). In addition to full disclosure and enablement, the patent must provide claims that point out and distinctly claim "the subject matter which the applicant regards as his invention." *Id.*

The process of obtaining patents from the United States Patent and Trademark Office (USPTO) is called patent prosecution. Note, *To Bar or Not To Bar: Prosecution History Estoppel After* Warner-Jenkinson, 111 HARV. L. REV. 2330, 2330 n.5 (1998) [hereinafter Note]. During patent prosecution, a patent attorney submits a patent application to the examiner, an employee of the USPTO who is responsible for analyzing the application. Manual of Patent Examining Procedure § 903.08(b) (7th ed. 2000) [hereinafter MPEP]. The examiner has the authority to accept or reject submitted claims. 37 C.F.R. § 1.104 (2000); MPEP, *supra*, § 706. Further, the examiner may allow issuance of a patent. 37 C.F.R. § 1.311 (2000); MPEP, *supra*, § 1303.

A patent must meet statutory requirements in order to issue. *See generally* 35 U.S.C §§ 101-103, 112 (1994); Werner Stemer, Note and Comment, *The Doctrine of Equivalents after* Hilton Davis *and* Markman, *and a Proposal for Further Clarification*, 22 VILL. L. REV. 783, 786-88 (1998) (describing the fundamentals of obtaining a patent).

The Supreme Court explained that "anything under the sun that is made by man" is patentable. Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) (quotations omitted) (holding that a man-made microorganism was patentable). Patentable inventions may be processes, machines, manufacturing products, chemical compounds and mixtures of the like, or any improvement thereupon. 35 U.S.C. §

and Trademark Office (USPTO)[2] should always be aware that anything submitted can and will be used again when analyzing the patent.[3] Although this version of the *Miranda* warning[4] might seem

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101 (1994). In contrast, "laws of nature, physical phenomena, and abstract ideas" are not patentable. *Diamond*, 447 U.S. at 309. For example, the law of gravity is not patentable. *Id.*

[2] 35 U.S.C. § 1 (1994). The USPTO is an agency subject to the policies of the Department of Commerce. *Id.*

[3] *See, e.g.*, E.I. DuPont De Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1438 (Fed. Cir. 1988) (remanding for reinterpretation of a claim term because the district court's interpretation was contrary to the patent owner's position taken during patent prosecution). Later patent analyses would most frequently occur during litigation for infringement. *See, e.g., id.* at 1430. In an infringement suit, a patent owner defends his or her right to exclude against alleged infringers. 35 U.S.C. § 271 (1994). When analyzing an infringement claim, a court must interpret the claims, then compare the accused device to the claim. Read Corp. v. Portec, Inc., 970 F.2d 816, 821 (Fed. Cir. 1992). Literal infringement occurs when every claim limitation is present in the accused device. *Id.* Where a claim limitation is missing, but a legally determined equivalent thereof is present, there is infringement under the doctrine of equivalents. *Id.* at 821-22. Essentially, interpreting the claim identifies the thing that has been patented. *Id.* at 822. This is a question of law. *Id.* A finding of infringement results when a jury decides that the patented invention has "been constructed, used, or sold by the defendants" without permission. *Id.*

In *Read*, the one patent claim at issue, U.S. Patent No. 4,197,194 (issued April 8, 1980) [hereinafter '194 patent], states:

> A portable screening apparatus for separating coarse material from finer material comprising:
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> [A] frame of generally rectangular cross section and having a tall end and a short end joint [sic] by sides, said *short end being closed from an upper edge of said short end to the ground* and the lower portion of said tall end being completely open from the ground to a height sufficiently high to permit a payloader to collect the finer material from within the frame;
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> [S]aid frame at said tall end having a width sufficient to accommodate the shovel of a payloader;
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> [A] material separating shaker screen sloping downwardly from near the upper edge of said tall end to near the upper edge of said short end;
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> [A] *set of wheels* mounted to one of said sides and *movable relative to said frame* from an operative position for transporting said apparatus to an inoperative position for resting said frame flush on the ground; and
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> a trailer hitch mounted to the other of said sides.

Id. at 819 (paragraphing and emphasis added). The emphasized words are examples of claim limitations. *Id.* The Federal Circuit identified that these limitations were critical to the determination of infringement. *Id.* For interpreting this claim, the court looked at the claim language, patent specification, and prosecution history. *Id.* at 823. The Federal Circuit affirmed the district court's determination that the limitation of the short end being "closed to the ground" meant that the short end was sufficiently closed to perform the function of the invention, but not completely closed. *Id.* Because the accused device contained a short end that was closed to the ground, but not completely, the court validated the jury finding that the short end limitation of the claim was literally infringed. *Id.* at 822-23. Further, the Federal Circuit declined to find literal infringement of the movable wheels limitation where

inappropriate in the context of patent law,[5] it reminds patent attorneys to carefully heed their creation of prosecution history.[6] The process of getting a patent involves give-and-take between the prosecuting patent attorney and the USPTO.[7] During patent prosecution, a USPTO examiner[8] studies the entire patent

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the accused device contained fixed wheels on a movable frame. *Id.* at 823. The court, however, determined that the fixed wheels on a movable frame were equivalent to the movable-wheels. *Id.* at 824. As a result of these analyses, the judges found that the defendants infringed the '194 patent. *Id.* at 825.

[4] Miranda v. Arizona, 384 U.S. 436, 479 (1966). A criminal suspect:

> [M]ust be warned prior to any questioning that he has the right to remain silent, that *anything he says can be used against him* in a court of law, that he has the right to the presence of an attorney, and that if he cannot afford an attorney one will be appointed for him prior to any questioning if he so desires.

Id. (emphasis added).

[5] In fact, during the process of obtaining a patent, there are other ways that an applicant's own actions may be used against him or her. *See, e.g.*, 35 U.S.C. § 102(b) (1994) (articulating that one prohibition to obtaining a patent exists when an applicant published an article on the invention more than one year prior to the patent application date); Lance Leonard Barry, *Anything You Say Can Be Used Against You: Admissions of Prior Art*, 82 J. PAT. & TRADEMARK OFF. SOC'Y 347 (2000) (proffering situations where patent applicant admitted what were examples of prior art, even if the patent examiner did not determine such).

[6] Prosecution history is synonymous with the file wrapper of the patent. *See* Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 30 (1997) (articulating that estoppel as related to this concept is "known variously as 'prosecution history estoppel' and 'file wrapper estoppel.'") (citation omitted); *see also* Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 1485 (Fed. Cir. 1984) (referring to prosecution history in the main text and to file wrapper parenthetically). Prosecution history is "[t]he complete record of proceedings in the Patent and Trademark Office . . . ." BLACK'S LAW DICTIONARY 1237 (7th ed. 1999). *See also* Jonsson v. Stanley Works, 903 F.2d 812, 817 (Fed. Cir. 1990) (specifying that prosecution history includes "the entire record of proceedings in the . . . [USPTO] . . ., including representations made to the [e]xaminer that the invention is patentable"). Technically, however, the file wrapper is the physical "folder in which the. . .[USPTO]. . .maintains the [patent] application papers." MPEP, *supra* note 1, § 719. Hence, prosecution history includes the information of the papers located in the file wrapper.

[7] *See generally* 35 U.S.C. §§ 131-132, 134 (1994). Typical correspondence from the USPTO examiner during patent prosecution includes office actions, which should identify rejected and accepted claims. *See generally* 37 C.F.R. § 1.104 (2000); MPEP, *supra* note 1, §§ 706, 2262. The patent applicant submits [r]eplies to [o]ffice actions likely containing amendments to the claims and/or arguments for allowance. *See generally* 37 C.F.R. § 1.111 (2000); MPEP, *supra* note 1, § 714.02. Ultimately, either a notice of allowance is granted, which shows the patent will be issued, or a final rejection is sent, which shows that the patent has been finally rejected. 37 C.F.R. § 1.113 (2000); 37 C.F.R. § 1.311 (2000); MPEP, *supra* note 1, §§ 706.07, 1303.

The patent attorney prosecutes the patent for the benefit of the applicant. Hence, reference may be made with equivalent effect to either the patent attorney or the applicant.

[8] MPEP, *supra* note 1, § 903.08(b). Upon submission to the USPTO, an

application, which includes a specification, drawings, and at least one claim.[9] The examiner then analyzes whether the patent claims[10] are both novel[11] and non-obvious[12] in light of the prior art.[13] Based on this analysis, the examiner may reject a claim for any of several reasons: (1) the claim is either not enabled by the specification[14] or indefinite[15] in violation of 35 U.S.C. § 112 (§ 112);[16] (2) the claim is not novel under 35 U.S.C. § 102 (§ 102);[17] or (3) the claim is obvious

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examiner evaluates patent applications. *Id.*

[9] 35 U.S.C. §§ 112-113 (1994). The specification contains several sections of narrative, including "Field of Invention," "Description of Related Art," "Background of Invention," "Summary of Invention," "Brief Description of the Drawings," and "Detailed Description of the Invention." 37 C.F.R. § 1.77 (2000); MPEP, *supra* note 1, § 608.01(a). The claim section contains at least one independent claim in the form of a list. *Id.* An independent claim does not reference any other claim. *Cf.* 37 C.F.R. § 1.75 (2000) (identifying that dependent claims refer back to and further limit other claims in the application).

[10] Patent claims give the public "fair notice of what the patentee and the ... [USPTO] ... have agreed constitute the metes and bounds of the claimed invention." London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed. Cir. 1991). The term "metes and bounds" traditionally refers to "[t]he territorial limits of real property...." BLACK'S LAW DICTIONARY 1005 (7th ed. 1999). In patent law, therefore, the claims of the invention are intended to provide the boundaries of the invention. The right of a patent permits the patentee to exclude others from practicing the art within such boundaries. 35 U.S.C. § 154(a)(1) (1994). An infringer operates within the boundaries that the claims define. Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 759 (Fed. Cir. 1984) (citations omitted).

For example, in *London*, a patent for clamps used within garment bags was at issue. *London*, 946 F.2d at 1535. One of the patent claims contained, among other elements, a mechanism for grasping the shank of a hanger. *Id.* at 1539. The hanger shank was defined within the patent claim as the location "between the supporting hook for the hanger and the support for the garment." *Id.* Because the accused device grasped hanger hooks, rather than hanger shanks, it did not infringe literally or through the doctrine of equivalents. *Id.* at 1535, 1539. Thus, the accused infringer did not operate within the metes and bounds of the claimed invention. *See id.*

[11] 35 U.S.C. § 102 (1994) (providing a provision entitled "Conditions for patentability; novelty and loss of right to patent").

[12] 35 U.S.C. § 103 (1994) (providing a provision entitled "Conditions for patentability; non-obvious subject matter").

[13] Prior art is the body of knowledge relevant to a comparable invention available for analyzing whether a patent application should be granted or denied. BLACK'S LAW DICTIONARY 106 (7th ed. 1999).

[14] *Supra* note 9.

[15] Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 1343 (Fed. Cir. 2001) (identifying that the examiner rejected a claim as indefinite under § 112).

[16] 35 U.S.C. § 112 (1994). The patent specification must provide a description of the invention that would "enable any person skilled in the art to which it pertains" to construct and use the invention. *Id.* In addition, the application must include at least one claim "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." *Id.*

[17] 35 U.S.C. § 102 (1994). Lack of novelty occurs when "the invention was known

pursuant to 35 U.S.C. § 103 (§ 103).[18] An attorney submits arguments and amendments[19] to reply to claim rejections with the goal of securing issuance of the patent.[20] Such documented arguments and amendments are part of the patent's prosecution history.[21] Prosecution history traces the interaction between the examiner and the applicant, thereby lending insight into the spirit of the patent claims, the mindset of the examiner, and the thought process of the applicant.[22] Because the information is relevant to

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or used by others" prior to the application. 35 U.S.C. § 102(a) (1994). In addition, if the invention was completely described in a single printed publication before the application, then the invention is anticipated and not patentable. *Id.* Further, no patent issues if "the invention was described in a patent granted on an application for patent by another" filed prior to the application. 35 U.S.C. § 102(e) (1994). Finally, the applicant's actions may prevent novelty. 35 U.S.C. § 102(b)–(d) (1994).

[18] 35 U.S.C. § 103 (1994). No patent may issue "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *Id.* Obviousness may arise when a single incident of prior art does not completely contain the invention, but a combination of the prior art suggests the invention. *See id.*

[19] Amendments directed to patent claims result in changes to the claims as originally submitted, but they may not introduce new matter. 35 U.S.C. § 132 (1994). Changes to claims may include additional limitations to narrow the scope of the claim. Graham v. John Deere Co., 383 U.S. 1, 32-34 (1966). Arguments may be made to explain amendments or to explain to the examiner why the invention should be patented. 35 U.S.C. § 132 (1994); 37 C.F.R. § 1.111 (2000).

[20] *See* 35 U.S.C. § 132 (1994) (explaining that the patent application is to be re-examined when the applicant continues prosecution after receiving a notice of rejection).

[21] 37 C.F.R. § 1.2 (2000). All correspondence with the USPTO must be in writing. *Id.*

[22] *See* Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 978 (Fed. Cir. 1999) (quoting Lemelson v. Gen. Mills, Inc., 968 F.2d 1202 (Fed. Cir. 1992) (noting that "[t]he prosecution history gives insight into what the applicant originally claimed as the invention, and often what the applicant gave up in order to meet the [e]xaminer's objections")). In *Elkay*, the patent at issue contained adapters for bottled water coolers designed to prevent spills. *Id.* at 975. During patent prosecution, in response to a § 103 rejection, Elkay argued that its invention contained "a flow path for delivering liquid . . . and for admitting air . . . ." *Id.* at 978. In particular, Elkay argued that the prior art contained two flow paths. *Id.* In so doing, the patent applicant surrendered an interpretation of its claims that might include two flow paths. *Id.* at 979. As a result, the Federal Circuit found that the accused device containing two flow paths did not literally infringe. *Id.* at 980. In addition, the court determined that, because the devices with two flow paths were surrendered by argument during patent prosecution, prosecution history estoppel prevented infringement under the doctrine of equivalents. *Id.* at 981.

For further insight into prosecution history limiting infringement claims, see Desper Prods., Inc. v. QSound Labs, Inc., 157 F.3d 1325, 1335-37 (Fed. Cir. 1998) (noting that "the prosecuting attorney who wrote and prosecuted the application . . . presumably was in the best position at the time to understand the true nature of the

understanding the patent, however, prosecution history can later limit the protection that the patent claims offer.[23]

Patents primarily function to give the public notice.[24] In particular, the claims within the patent apprise the public of "the metes and bounds of the claimed invention."[25] A party infringes on a patent by operating within the patent's metes and bounds during the patent term.[26] The patent owner is entitled to a twenty-year monopoly on the invention.[27]

Reasonable competitors participate in the same market as the patentee.[28] As such, the possibility of patent infringement exists as an offshoot of competition. Most likely, reasonable competitors are the

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invention" and stating that "[p]rosecution history is an important source of intrinsic evidence in interpreting claims because it is a contemporaneous exchange between the applicant and the examiner"); E.I. DuPont De Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1438 (Fed. Cir. 1988) (identifying that use of the prosecution history, claims, and specification permits a court "to ascertain the true meaning of what the inventor intended to convey in the claims"); John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. REV. 183, 185 (1999) (noting that "[a]n episodic compilation of correspondence, affidavits, prior art, summaries of examiner interviews, and other documents, the prosecution history records the colloquy between the inventor and Patent Office representatives"). Further, "[u]nlike the more tightly drafted patent instrument, prosecution histories are not designed for ready parsing by a stranger to the transaction." *Id.* at 190.

[23] *See, e.g.*, Bai v. L & L Wings, Inc., 160 F.3d 1350, 1355-56 (Fed. Cir. 1998) (declaring that the patent claim did not cover any devices not containing a saucer shape, because the hemispherical limitation was added during prosecution to distinguish the prior art that disclosed a saucer shape).

[24] Note, *supra* note 1, at 2330 n.3. "[C]laims do indeed serve both a definitional and a notice function. . ." Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 33 (1997). The distinct claim provision in § 112 exemplifies the Founders' concerns "for the security in public expectations of the scope of a patent." William T. Kryger, Note, *The Doctrine of Equivalents Into the Year 2000: The Line Is Becoming Brighter for Some but Remains Dim for Others*, 3 MARQ. INTELL. PROP. L. REV. 203, 206 (1999).

[25] London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1538 (Fed. Cir. 1991). For a thorough description of the fundamentals of a patent claim, see Stemer, *supra* note 1, at 788-89.

[26] Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 759 (Fed. Cir. 1984).

[27] 35 U.S.C. § 154(a)(2) (1994). The patent term begins when the patent is issued and expires twenty years from the date of application. *Id.* When the patent term expires, the invention is dedicated to the public. Scott Paper Co. v. Marcalus Mfg. Co., 326 U.S. 249, 258 (1945).

[28] The reasonable competitor, from the standpoint of prosecution history, has the same viewpoint as one skilled in the art. *See* Hoganas AB v. Dresser Indus., Inc., 9 F.3d 948, 952 n.15 (Fed. Cir. 1993). A reasonable competitor, therefore, practices the same art that is the subject of the patent. *See id.* One skilled in the art is a standard "not unlike the 'reasonable man' and other ghosts in the law." Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir. 1987).

parties who will infringe the patent due to their close proximity to the patentee in the marketplace. To avoid infringing, therefore, a reasonable competitor must be able to determine the metes and bounds of the invention.[29] Anyone may obtain the prosecution history of any issued patent.[30] As such, a reasonable competitor should be able to rely on prosecution history to help identify the boundaries of the invention and protect themselves from infringement litigation.

For the purposes of this Comment, a source of prosecution history refers to either a patent or an action before the USPTO regarding a patent.[31] Because both competitors and the public may scrutinize prosecution history, sources of prosecution history must be clear. Courts have established that the prosecution history related to one patent claim could be used for interpreting the entire patent, even if the arguments and amendments address a claim other than the one at issue.[32] Additionally, the prosecution histories for formally

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[29] Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). In this landmark case, the Federal Circuit held that claim construction and interpretation, "which define the scope of the patentee's rights under the patent, is a matter of law exclusively for the court." *Id.* at 970-71. Chief Judge Archer, writing for the majority, noted that the Federal Circuit itself had treated this issue inconsistently, whereas the United States Supreme Court had consistently identified that claim construction was within the purview of the court. *Id.* at 970, 976-78. One justification for making claim construction a legal matter, the court further articulated, is that a patent is "a fully integrated written instrument" that warrants "a true and consistent scope of the patent owner's rights." *Id.* at 978-79. Additionally, because the patent is a public record, competitors, according to the court, should be able to analyze the patent using the appropriate claim construction rules and end up with a consistent understanding of the patent as a judge using the same rules would. *Id.* at 979. Furthermore, "[t]he public notice function of patents would be frustrated by forcing a patentee's competitors to guess" the scope of patent claims. Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 1345 (Fed. Cir. 2001).

[30] 37 C.F.R. § 1.11 (2001). Copies of patent files are available to the public upon the filing of the appropriate fee. *Id.*

[31] One source of prosecution history is the prosecution history attributed to the patent itself. *See* American Permahedge, Inc. v. Barcana, Inc., 105 F.3d 1441, 1446 (Fed. Cir. 1997). Another source of prosecution history is the prosecution history attributed to a patent formally related to the patent at issue. *See* Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed. Cir. 1990). Furthermore, a source of prosecution history may be statements made during prosecution of one patent regarding the patent at issue. *See* Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855, 862 n.16 (Fed. Cir. 1988). *See* discussion *infra* Part I.B.

[32] American Permahedge, 105 F.3d at 1446. During patent prosecution for an artificial shrubbery application, the patent applicant, responding to the examiner's rejection of claims that ultimately were canceled, distinguished a prior art patent as not having fibers arranged in a planar array. *Id.* at 1443-44. Although different claims were in issue during trial, the court used this response to create prosecution history estoppel. *Id.* at 1446. The applicant, thereby, could not claim that devices

related patents[33] have served as sources for prosecution history.[34] Further, in *Sextant Avionique, S.A. v. Analog Devices, Inc.*,[35] the Federal Circuit[36] heard an appeal where the prosecution history of one patent was used to interpret another patent although a formal relationship between the two was lacking.[37]

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containing prior art were equivalent to the invention. *Id.* The Federal Circuit articulated that "[p]rosecution history estoppel . . . is not limited to the claims with respect to which the applicant's statements were made." *Id.* Further, the court noted that "identical claim terms used in different claims must be interpreted consistently." *Id.* Because the accused device was similar to the prior art with respect to the planar array issue, there was no infringement. *Id.* at 1445.

[33] A formally related patent, for the purposes of this article, is one that has continuity with an earlier-filed patent application, called a parent application, that is considered one of the following: continuation, continuation-in-part, or divisional. MPEP, *supra* note 1, § 201.11. The formally related patent must meet the disclosure requirements of § 112 and reference the parent application; such parent application must not have issued and must have at least one inventor in common. *Id.* The benefit of formally related patents is to give the later-filed patents the benefit of the earlier-filed application for priority purposes in light of prior art challenges. 35 U.S.C. § 120 (1994). Continuation patents contain no new material compared to the parent application, but continuation-in-part patents contain new matter compared to the parent application and the new matter does not receive the benefit of the earlier filing date. MPEP, *supra* note 1, § 201.11. Divisional patents result from an examiner's issuance of a restriction requirement for an application where more than one patentable invention is claimed within one application. 35 U.S.C. § 121 (1994). Because there can be multiple patents related in such a way, a family tree (of sorts) can be created to link the patents together. *In re* Henriksen, 399 F.2d 253, 254 (C.C.P.A. 1968) (holding that there is no limit to the number of simultaneously pending patents stemming from a parent, which the court terms "chain of copendency").

[34] Jonsson v. Stanley Works, 903 F.2d 812, 814-15, 817-18 (Fed. Cir. 1990).

[35] 172 F.3d 817 (Fed. Cir. 1999).

[36] The Federal Circuit was established in 1982 by the Federal Courts Improvement Act (hereinafter, the Act). Pub. L. No. 97-164, 96 Stat. 25 (1982). The Federal Circuit has jurisdiction to hear patent appeals. 28 U.S.C. § 1295(a) (1994) (granting exclusive appellate jurisdiction to patent cases). Creation of the Federal Circuit resulted in the abolishment of the Court of Customs and Patent Appeals and the Court of Claims, where some patent cases had previously been heard. *See* Ellen E. Sward & Rodney F. Page, Comment, *The Federal Courts Improvement Act: A Practitioner's Perspective*, 33 AM. U. L. REV. 385, 385-86, 388 n.18 (1984). Also prior to the Act, appeals for patent cases that had been brought in district court were heard in the appropriate circuit court. *Id.* at 387. Because of the various courts hearing patent cases, patent law precedent was inconsistent from court to court. *Id.* Such discrepancies led to forum shopping, "discouraged innovation[,] and made business planning difficult and investment uncertain." *Id.*

The structure of the Federal Circuit is consistent with other appellate courts where the court hears most cases in three-member panels, but is the only circuit court authorized to hear cases in larger panels. *Id.* at 391. Furthermore, the judges are rotated so that they do not become compartmentalized into a limited field of cases. *Id.* A full panel of the Federal Circuit consists of twelve judges. *Id.* at 392.

[37] Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 821, 825-26 (Fed. Cir. 1999). *See* discussion *infra* Part II.B.

The District Court for the Northern District of California used prosecution history from one patent of a similar subject matter to interpret another patent.[38] The district court justified such use where the timing of the amendments for one patent appeared to be directly related to the allowance of claims in the other patent.[39] These patents were commonly-owned, prosecuted by the same attorney, and had related subject matter, but a different patent examiner allowed each patent.[40] The Federal Circuit affirmed the district court's decision on other grounds without directly addressing whether the use of an unrelated patent as a source for prosecution history was proper.[41] As a result, future litigants potentially could do the same, but such action should be discouraged to avoid expanding the pool of sources of prosecution history beyond what would be reasonably obvious to the public.

This Comment addresses sources of prosecution history, concluding that sources of prosecution history should be limited to formally related patents so that the public interest is protected. Part I.A provides a general overview of the uses of prosecution history during patent litigation. Part I.B details sources of prosecution history. Part II.A explains the approach of the District Court of the Northern District of California, which imputed the prosecution history of an unrelated patent to another patent in *Sextant.* Part II.B presents the subsequent analysis of the Federal Circuit in *Sextant.* Part II.C illustrates that the Federal Circuit's silence towards the district court's approach in *Sextant* creates uncertainty regarding the appropriate sources of prosecution history. Part III proposes that, in order to serve the public notice function of patents, only prosecution histories stemming from a particular patent and patents formally related to the particular patent should be permitted. Finally, this Comment concludes that imputing the prosecution history of an unrelated patent to another creates the potential for uncertainty as to the breadth of the patent at issue, which is contrary to protecting the

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[38] *Sextant*, 172 F.3d at 823, 826.

[39] *Id.* at 824. The court "concluded that the [prosecution history] estoppels present in the Marcillat file history were applicable to limit the scope of equivalence of the same claim terms in the Boura patent." *Id.* In so doing, the court held as a matter of law that the accused devices did not infringe the Boura patent under the doctrine of equivalents. *Id.* *See* discussion *infra* Part II.A.

[40] *Id.* at 819, 821-23.

[41] *Id.* at 819, 824. The Federal Circuit held that an unrebutted *Warner-Jenkinson* presumption invoked prosecution history estoppel to completely bar the use of the doctrine of equivalents with respect to the unexplained amendments to the Boura patent. *Id.* at 832. As such, the accused devices did not infringe the Boura patent under the doctrine of equivalents. *Id.*

public interest.

I. UTILITY AND ORIGINS OF PROSECUTION HISTORY

A. *Litigation Uses of Prosecution History*

Obtaining a patent is an achievement,[42] but the power of the patent is the right to curtail infringement.[43] Patent owners protect their patent right by bringing infringement suits.[44] In response to a patent owner's allegations of infringement, alleged infringers attempt to either invalidate the patent[45] or assert the defense of non-infringement.[46] Determining the issue of infringement or non-infringement involves two steps.[47] First, courts construct the patent claim or claims to establish the patent's metes and bounds.[48] For claim construction, courts use intrinsic evidence, which consists of the claim language, the patent specification, and the prosecution history.[49] Second, the court compares the accused device to the claims to determine whether the actions of the alleged infringer reside within the boundaries of the patent.[50] If every element of the accused device is present in the claim as the court constructed it,

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[42] In order to issue, a patent must meet statutory requirements, particularly that the invention is novel, useful and non-obvious. *Supra* notes 15-16.

[43] *See* 35 U.S.C. § 271 (1994).

[44] Read Corp. v. Portec, Inc., 970 F.2d 816, 818, 820 (Fed. Cir. 1992). *See also* Stemer, *supra* note 1, at 793-94.

[45] A patent is entitled to the statutory presumption that it is valid. 35 U.S.C. § 282 (Supp. 1998). Patents are invalidated, however, by a showing that at least one of the statutory requirements for issuance is violated. *See, e.g.*, Carman Indus., Inc. v. Wahl, 724 F.2d 932, 933 (Fed. Cir. 1983) (identifying that the asserted grounds for patent invalidity included violations of § 102 and § 103). *See supra* text accompanying notes 14-16.

[46] *See, e.g.*, E.I. DuPont De Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1432 (Fed. Cir. 1988) (alleging patent invalidity, unenforceability, and non-infringement); Carman Indus., Inc. v. Wahl, 724 F.2d 932, 933 (Fed. Cir. 1983) (filing of a declaratory judgment in the context of patent infringement contains claims of patent invalidity and non-infringement).

[47] *Read*, 970 F.2d at 821.

[48] *Id.*

[49] Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citing Markman v. Westview Instruments, Inc., 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). In *Vitronics*, the Federal Circuit determined that the district court erred in its claim interpretation when it relied on extrinsic evidence. *Id.* at 1585. The patent specification, the court explained, contained a clear and unambiguous definition of the claim term at issue, rendering "reliance on th[e] extrinsic evidence . . . legally incorrect." *Id.*

[50] *Read*, 970 F.2d at 821.

then the patent is literally infringed.[51] In the absence of literal infringement, courts may find infringement under the doctrine of equivalents,[52] where an accused device is deemed equivalent to the claimed invention.[53]

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[51] Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 1454 (Fed. Cir. 1998). In *Litton*, the court defined the claim term "Kaufman-type ion beam source" to include "any ion beam gun with the four stated components: a hot-wire cathode, an anode, grids, and magnets." *Id.* Because the accused devices were lacking a hot-wire cathode, the court affirmed the lower court's ruling of no literal infringement. *Id.*

[52] For infringement under the doctrine of equivalents, the equivalent of the claim elements must be present in the accused device. *Warner-Jenkinson*, 520 U.S. at 21 (reaffirming the vitality of the doctrine of equivalents). The doctrine of equivalents evolved to provide an alternate infringement analysis where an accused device did not include every claim element literally. Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 607-08 (1950). The intent of such a doctrine is to discourage "the unscrupulous copyist to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law." *Id.* at 607. An element of the accused device is equivalent to a claimed element if the differences between the two are insubstantial to one of ordinary skill, because there is "an insubstantial change. . .adds nothing of significance to the claimed invention." Valmont Indus. Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1043 (Fed. Cir. 1993). The Federal Circuit utilizes an "'insubstantial differences test recognizing [its] admitted short-comings." Dawn Equip. Co. v. Kentucky Farms Inc., 140 F.3d 1009, 1015 (Fed. Cir. 1998). *See, e.g., Warner-Jenkinson*, 520 U.S. at 40 ("The insubstantial differences test offers little additional guidance as to what might render any given difference 'insubstantial.'").

Another consideration for the court is the function-way-result test. *Dawn Equip.*, 140 F.3d at 1016. Such a test dictates that if the element of the accused device performs substantially the same function, in substantially the same way, to achieve substantially the same result, it is considered equivalent. *Id.* Additionally, the fact that elements are interchangeable is a significant, albeit not dispositive, factor for a court to consider. Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309 (Fed. Cir. 1998). The mere presence of means-plus-function claims, as permitted under 35 U.S.C. § 112, ¶ 6, does not preclude application of the doctrine of equivalents. *See Alpex*, 102 F.3d at 1221.

[53] Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). After almost fifty years of inconsistent application by lower courts, the United States Supreme Court upheld the doctrine of equivalents as a method of determining infringement. *Id.* The Court further clarified the doctrine by imposing limits to its application. *Id.* at 29-30. In particular, the Court identified that the doctrine required comparison of the claim elements of the invention and the elements of the accused device. *Id.* at 29. The Court indicated this requirement would eliminate prior attempts at simply comparing the performance of the accused device overall with the patented invention. *Id.* The Court then identified that prosecution history estoppel is another limitation to the application of the doctrine of equivalents. *Id.* at 30. The Court explained that amendments made to claims may create estoppel, depending on the reason for the change. *Id.* at 32. Prosecution history estoppel applies, the Court reiterated, when an amendment is related to patentability, or in other words, related to avoiding the prior art. *Id.* at 30. In the absence of an explanation, however, the Court articulated a new rebuttable presumption that an amendment was related to patentability, thereby invoking prosecution history

During patent infringement litigation, courts use prosecution history for two purposes: (1) to interpret claims,[54] and (2) to create prosecution history estoppel.[55] Claim interpretation determines the scope of the patent for infringement analyses.[56] In interpreting a claim, the claim language and the patent specification language are taken for their plain meaning.[57] The prosecution history gives context and meaning to the claim language.[58] If a court determines that the meaning of a claim is still unclear after this initial analysis, then extrinsic evidence[59] may be used to interpret the claim.[60]

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estoppel and barring the application of the doctrine of equivalents as to the amended element. *Id.* at 33.

[54] Claim interpretation is the first step in an infringement analysis. *Read*, 970 F.2d at 821. Prosecution history is appropriate for interpreting claims. Alpex Computer Corp. v. Nintendo Co., 102 F.3d 1214, 1220 (Fed. Cir. 1996). Prosecution history is also "of primary significance in understanding the claims." Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc) (citing Autogiro Co. of America v. United States, 384 F.2d 391, 397 (Ct. Cl. 1967)). The prosecution history provides an "avowed understanding of the patentee . . . when his application for the original patent was pending." Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 227 (1880).

[55] *Warner-Jenkinson*, 520 U.S. at 30. Estoppel, in general, prevents a party from making assertions or denials based on that party's prior behavior or statements. BLACK'S LAW DICTIONARY 570 (7th ed. 1999). Estoppel in this context is fittingly called prosecution history estoppel, a legal limitation where a patentee may not seek to recover certain subject matter relinquished during patent prosecution. *Warner-Jenkinson*, 520 U.S. at 30. Prosecution history estoppel is a policy limitation denying a patentee from extending "the range of equivalents accorded the device or process to subject matter relinquished during prosecution of the patent." Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1173 (Fed. Cir. 1993). Prosecution history estoppel is an equitable tool that prevents a patentee from resurrecting subject matter surrendered during patent prosecution. Mannesmann Demag Corp. v. Engineered Metal Prods. Co., 793 F.2d 1279, 1284 (Fed. Cir. 1986). Although prosecution history estoppel and file wrapper estoppel refer to the same concept, the Federal Circuit uses the term prosecution history estoppel. *See* Amstar Corp. v. Envirotech Corp., 730 F.2d 1476, 1485 (Fed. Cir. 1984).

[56] Read Corp. v. Portec, Inc., 970 F.2d 816, 822 (Fed. Cir. 1992) (explaining that once the thing that has been patented is identified, the accused infringer's actions are evaluated as to whether there is infringement).

[57] Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). *See also* K-2 Corp. v. Salomon, S.A., 191 F.3d 1356, 1362 (Fed. Cir. 1999). Also, an applicant can serve as his own lexicographer, where the applicant provides definitions for certain terms in the specification itself. *Vitronics*, 90 F.3d at 1582.

[58] *Id.* at 1582 (proclaiming that the complete record of prosecution history is often a critical component of establishing claim meaning). *But see* Thomas, *supra* note 22, at 187 (proposing that the patent community "eliminate altogether its reliance upon prosecution histories").

[59] *Markman*, 52 F.3d at 980. "Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Id.* The court may use extrinsic evidence to educate itself about the patent, but may not use such evidence to come to a claim

Further, prosecution history estoppel has three uses during litigation. First, prosecution history estoppel limits the equivalents available to elements of the patented device under infringement analyses using the doctrine of equivalents.[61] Second, an alleged infringer can raise prosecution history estoppel as an affirmative defense.[62] Finally, prosecution history estoppel prevents a patentee from taking positions that are contrary to the prosecution history because the patent issuance is based on such.[63]

Establishing prosecution history estoppel requires two determinations: (1) whether there is estoppel,[64] and (2) the scope of estoppel.[65] In one instance, prosecution history estoppel, referred to as claim amendment-based estoppel, arises from patent claim amendments made to secure issuance of a patent.[66] Additionally, argument-based estoppel arises from arguments made to secure a claim, with or without a corresponding claim amendment.[67]

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interpretation contrary to one supported by intrinsic evidence. *Id.* at 981. *See also Vitronics*, 90 F.3d at 1585 (declaring that extrinsic evidence contrary to the patent specification and prosecution history should have been disregarded by the trial court).

[60] *Vitronics*, 90 F.3d at 1584. "Only if there were still some genuine ambiguity in the claims, after consideration of all available intrinsic evidence, should the trial court have resorted to extrinsic evidence . . . ." *Id.*

[61] Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 826 (Fed. Cir. 1999).

[62] Carman Indus., Inc. v. Wahl, 724 F.2d 932, 942 (Fed. Cir. 1983) (noting that estoppel, in general, is an affirmative defense pursuant to Federal Rule of Civil Procedure 8(c)).

[63] *See* E.I. DuPont De Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 1438 (Fed. Cir. 1988). In *DuPont*, the applicant submitted a claim containing a density limitation of 0.9 to 0.95. *Id.* In response to a prior art reference, the applicant argued that densities of 0.9547 and higher were outside of the claims. *Id.* For interpreting the limit 0.95 at trial, however, DuPont urged a meaning of 0.9451 to 0.9550. *See id.* Even though such a meaning was consistent with accepted scientific practices and adopted by the district court, the Federal Circuit remanded the case because such an interpretation was inconsistent with one that DuPont asserted during patent prosecution. *Id. See also* Litton Sys., Inc. v. Honeywell, Inc., 140 F.3d 1449, 1453 (Fed. Cir. 1998) (denying a patentee from arguing a claim construction contrary to prosecution history of reissued patent); Litton Sys. v. Whirlpool Corp., 728 F.2d 1423, 1439 (Fed. Cir. 1984) (proclaiming that "[a] patent attorney should not be able . . . to choose one course of action within the [US]PTO with the anticipation that, if later checked, he or she can always choose an alternate course of prosecution in trial before a federal judge").

[64] Bai v. L & L Wings, Inc., 160 F.3d 1350, 1354 (Fed. Cir. 1998) (determining "first . . . whether prosecution history estoppel applies").

[65] *Id.* at 1356.

[66] *Warner-Jenkinson*, 520 U.S. at 30-31.

[67] Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174-75 (Fed. Cir. 1993). In *Texas Instruments*, a patentee responded to an

In *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*,[68] the Supreme Court declared that whether there is prosecution history estoppel based on claim amendments depends on the purpose behind the amendments.[69] A Federal Circuit *en banc* decision, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,[70] recently set down guidelines for analyzing prosecution history estoppel.[71] First, claim amendments that narrow the breadth of the claim may create prosecution history estoppel.[72]

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obviousness rejection of a predecessor claim to the claim in issue by arguing that the prior art did not suggest the opposite-side gating feature of the invention. *Id.* at 1174. There was no need for a claim amendment because the opposite-side gating feature was already in the claim. *Id.* at 1169. Given the nature of the argument to assert patentability, the Federal Circuit affirmed the International Trade Commission's determination that the patentee had disclaimed any devices that contained same-side gating as being equivalent. *Id.* at 1175. The court articulated that "[u]nmistakable assertions made by the applicant to the . . . [USPTO] . . . in support of patentability, whether or not required to secure allowance of the claim, also may operate to preclude the patentee from asserting equivalency between a limitation of the claim and a substituted structure or process step." *Id.* at 1174.

The standard for argument-based estoppel is whether a reasonable competitor would understand the subject matter to be surrendered. Bayer AG v. Elan Pharm. Research Corp., 212 F.3d 1241, 1252 (Fed. Cir. 2000) (choosing not to determine the reasons for the amendments because the surrender of the subject matter was clear where the surface area of the active ingredient, as measured in square meters per gram, was originally 1 to 6 m^2/g and amended to 1 to 4 m^2/g). Such surrender may not be equivocal. Pharmacia v. Mylan Pharm., Inc., 170 F.3d 1373, 1377 (Fed. Cir. 2000) (citing Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1582 (Fed. Cir. 1996) (not invoking estoppel given the equivocal nature of the prosecution history)). *See also* Insituform Tech., Inc. v. CAT Contracting, Inc., 99 F.3d 1098, 1108-09 (Fed. Cir. 1996) (invoking estoppel because the amendment stemmed from a prior art rejection, but the equivocal nature of the explanation rendered no clear surrender of subject matter and no bar to the doctrine of equivalents). The scope of estoppel is that surrendered subject matter. *Insituform*, 99 F.3d at 1107-08. Surrendered subject matter is that which the applicant deemed was not part of his or her invention. *See, e.g., Texas Instruments*, 988 F.2d at 1173, 1175. *Festo* has not affected argument-based estoppel. *See* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 568 (Fed. Cir. 2000) (en banc), *cert. granted*, 121 S. Ct. 2519 (2001). *See also* William M. Atkinson et al., *Was* Festo *Really Necessary?*, 83 J. PAT. & TRADEMARK OFF. SOC'Y 111, 128 (2001) (proffering that with respect to argument-based estoppel, the *Festo* decision may either maintain the status quo or open the door to barring application of the doctrine of equivalents for disputed elements).

[68] 520 U.S. 17 (1997).

[69] *Warner-Jenkinson*, 520 U.S. at 31-32.

[70] 234 F.3d 558 (Fed. Cir. 2000) (en banc), *cert. granted*, 121 S. Ct. 2519 (2001).

[71] *Festo*, 234 F.3d at 563-64.

[72] Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341 (Fed. Cir. 2001) (citing *Festo*, 234 F.3d at 586). Adding a limitation to a claim, for example, adding the limitation "switching analog" to a claim element called "multiplier circuit" results in an amended element of "switching analog multiplier circuit," which narrows the breadth of the original claim. *Id.* at 1343-44. *See also* Graham v. John Deere Co., 383

Second, for a claim amendment substantially related to patentability,[73] prosecution history estoppel is automatically invoked.[74] Interpretations of *Warner-Jenkinson* construed rejections falling under § 102 or § 103 as patentability rejections, and thus, invoked estoppel.[75] This definition meant that other amendments, such as those responding to § 112 rejections, usually did not relate to patentability and therefore did not invoke estoppel.[76] Prior to *Festo*, the scope of prosecution history estoppel was flexible, having "a limiting effect within a spectrum ranging from great to small to zero."[77] Under the broader definition in *Festo*, however, patentability rejections include all of the rejections to a patent claim founded upon a statutory requirement.[78] As a result, rejections falling under § 101, § 102, § 103, and § 112 all relate to patentability and thus invoke estoppel.[79]

When there is an unclear reason for an amendment, a rebuttable presumption arises that the reason was substantially related to patentability.[80] When the presumption arises, prosecution

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U.S. 1, 32-34 (1966) (noting that adding limitations to a claim narrows its scope).

[73] *Festo*, 234 F.3d at 566. The "substantially related to patentability" standard from *Warner-Jenkinson* is now inclusive of all patent statutory requirements. *Id.* In the context of *Warner-Jenkinson*, patentability referred to prior art and obviousness concerns, which, if not overcome, would have "rendered the claimed subject matter unpatentable." *Warner-Jenkinson*, 520 U.S. at 30-31.

[74] *Warner-Jenkinson*, 520 U.S. at 30-31; *Festo*, 234 F.3d at 567.

[75] *See* Bai v. L & L Wings, Inc., 160 F.3d 1350, 1355 (Fed. Cir. 1998) ("The meaning of the word 'patentability' was not made clear [by the *Warner-Jenkinson* Court], but the context of the court's discussion was patentability over the prior art."). "The Court [in *Warner-Jenkinson*] did not resolve the issue whether an amendment made in response to a section 112 rejection is an amendment made for 'reasons of patentability' . . . ." *Sextant*, 172 F.3d at 828. The rehearing decision of *Festo* determined that patentability encompasses all statutorily-based rejections, such as sections 101, 102, 103, and 112 rejections. *Festo*, 234 F.3d at 567. Now, amendments made to overcome prior art form the "classic basis for the application of prosecution history estoppel." *Pioneer Magnetics*, 238 F.3d at 1346.

[76] Caterpillar Tractor Co. v. Berco, 714 F.2d 1110, 1115 (Fed. Cir. 1983). No prosecution history estoppel was invoked when the response to a section 112 rejection was independent of the prior art. *Id.* This is no longer the situation as now an amendment responsive to a section 112 rejection creates estoppel and bars all equivalents to the amended claim limitation. *Festo*, 234 F.3d at 567.

[77] Hughes Aircraft Co. v. United States, 717 F.2d 1351, 1363 (Fed. Cir. 1983) (Hughes VII), *overruled by* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558 (Fed. Cir. 2000) (en banc), *cert. granted*, 121 S. Ct. 2519 (2001). *Festo* maintained that the Federal Circuit's "decision to reject the flexible bar approach . . . comes after nearly twenty years of experience in performing [the] role as the sole court of appeals for patent matters." *Festo*, 234 F.3d at 574.

[78] *Festo*, 234 F.3d at 566.

[79] *Id.* at 567.

[80] *Warner-Jenkinson*, 520 U.S. at 33 ("We are left with the problem . . . of what to

history estoppel applies, and no scope of equivalents is permitted.[81] If the presumption is overcome, then the doctrine of equivalents is barred only for that subject matter clearly surrendered during prosecution.[82] The presumption could be overcome, for example, with a showing that the amendment was related to clarification only.[83]

Finally, amendments characterized as voluntary also invoke prosecution history estoppel.[84] The *Festo* court defined voluntary amendments as those not based on a specific rejection or an examiner's requirement.[85] When a voluntary amendment narrows a patent claim limitation, prosecution history estoppel is invoked and no range of equivalents is allowed for the amended limitation.[86]

In summary, the effect of *Festo* on prosecution history estoppel stemming from claim amendments is to collapse the inquiry into one question: Is estoppel invoked? Estoppel will be invoked whenever a narrowing claim amendment is related to patentability[87] or is voluntary.[88] Whenever estoppel is invoked under *Festo*, the scope of estoppel is no longer a question since the doctrine of equivalents is

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do in a case . . . where the record seems not to reveal the reason for including [the amendment].").

[81] *Id.* Where the presumption is operative, analyzing the scope of equivalents would be futile in the absence of arguments. *See also* Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 832 (Fed. Cir. 1999). *Festo* did not impact the analysis for prosecution history estoppel when the *Warner-Jenkinson* presumption arises. *Festo*, 234 F.3d at 576, 578.

[82] *See* Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1174 (Fed. Cir. 1993). Surrendered subject matter is that which the applicant deemed was not part of his or her invention. *See, e.g., id.* at 1173, 1175.

[83] *See, e.g.*, Black and Decker, Inc. v. Hoover Serv. Ctr., 886 F.2d 1285, 1294 n.13 (Fed. Cir. 1989). An amendment made after the claim was allowed over the prior art was related to clarification only. *Id.* The clarification provided consistency between the claim and specification and did not invoke prosecution history estoppel. *Id.*

[84] *Festo*, 234 F.3d at 568. Voluntary amendments are not based on a specific rejection or an examiner's requirement. *Id.*

[85] *Id.* at 568.

[86] *Id.* Unfortunately, the Federal Circuit has left the definition of a "voluntary amendment" ambiguous. At one point, the definition included an amendment that was made for no stated reason. *Id.* The court, however, further identified that a voluntary amendment that gave rise to estoppel was one "that narrows the scope of a claim for a reason related to the statutory requirements . . . ." *Id.* The court did not say how a party discerns if the amendment narrows the scope for a reason related to the statutory requirements, when the voluntary amendment has no stated reason behind it.

[87] An amendment related to patentability will arise either through a statutory rejection or the *Warner-Jenkinson* presumption. *See supra* notes 73-75 and accompanying text.

[88] *Festo*, 234 F.3d at 563-64. It appears that a voluntary amendment exemplifies an applicant's belief that the claim is unpatentable. *Id.* at 567.

now completely barred as to the amended claim limitation.[89]

B. *Sources of Prosecution History*

Because the use of prosecution history during litigation may impact the determination of infringement, the origin of prosecution history is an important consideration. Although each patent is prosecuted individually[90] in the USPTO, patents may refer to other patents.[91] A formal reference occurs when one patent formally links itself or has continuity to a parent application.[92] Formally related patents include continuations, continuations-in-part, and divisionals.[93] Linking to a parent application is advantageous to obtain the benefit of its earlier filing date, thereby eliminating some potential prior art.[94] In order for patents to be formally related, the patents must be co-pending, contain at least one common inventor, and there must be a specific reference to the parent application.[95] Informally, a patent may mention other patents by comparing itself to the prior art or by declaring itself as an improvement over another.[96] In the 1990 decision *Jonsson v. Stanley Works*,[97] the Federal Circuit permitted the use of prosecution histories of related applications for claim interpretation and for invoking prosecution history estoppel during the litigation of two continuation-in-part patents.[98] Subsequent cases to *Jonsson* have used prosecution histories

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[89] *See id.* at 563-64.

[90] Regarding the patent itself, using the entire prosecution history, regardless of which patent claim an argument of amendment is directed to, creates a uniform approach for determining claim meaning and potential prosecution history estoppel. *See* American Permahedge, Inc. v. Barcana, Inc., 105 F.3d 1441, 1446 (Fed. Cir. 1997). In particular, for claims within the same patent, the Federal Circuit has proclaimed that "identical claim terms used in different claims must be interpreted consistently." *Id.* (citation omitted). As for prosecution history estoppel, the permissible range of equivalents should be consistent for the same claim limitation used in different claims. *Id.*

[91] *See* Sextant Avionique, S.A. v. Analog Devices, Inc., 172 F.3d 817, 821 (Fed. Cir. 1999).

[92] MPEP, *supra* note 1, § 201.11. A parent application is the first patent application from which related patents stem. *See, e.g., In re* DeSeversky, 474 F.2d 671, 673 (C.C.P.A. 1973). A parent application must still be pending in order for other patents to formally link to it. 35 U.S.C. § 120 (1994).

[93] MPEP, *supra* note 1, § 201.11.

[94] 35 U.S.C. § 120 (1994).

[95] *Id.*

[96] *See, e.g., Sextant*, 172 F.3d at 821.

[97] 903 F.2d 812 (Fed. Cir. 1990).

[98] Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed. Cir. 1990). The U.S. Patent Application No. 155,008 [hereinafter '008 application] led to the two patents in suit,

of related patents, as needed, to interpret claims and to establish prosecution history estoppel.[99] In fact, the Federal Circuit, in *Laitram Corp. v. Morehouse Indus., Inc.*,[100] referred to prosecution history for two continuation patents "without reference to the patent to which it pertain[ed]."[101] In addition to creating prosecution history estoppel

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both filed as continuations-in-part: U.S. Patent No. 4,467,251 (issued Aug. 21, 1984) [hereinafter '251 patent] and U.S. Patent No. 4,560,912 (issued Dec. 24, 1985) [hereinafter '912 patent]. *Id.* at 814. Arguments during the '008 application created prosecution history estoppel for the '912 patent. *Id.* at 817-18. Further, the '912 patent was interpreted pursuant to the prosecution history of the '251 patent. *Id.* at 818.

In particular, during prosecution of the parent application, the inventor, Jonsson, provided arguments and corresponding claim amendments asserting that his invention differed from the prior art because his invention's sensor used "diffuse light, originating from many sources." *Id.* at 814. The first continuation-in-part patent claimed a sensor that included "a plurality of elements," which was consistent with the prior arguments and amendments. *Id.* at 815. The second continuation-in-part patent, however, provided a broader claim for its sensor. *Id.* In terms of the second continuation-in-part patent, prosecution history from the parent application was used for invoking prosecution history estoppel, and prosecution history from the first continuation-in-part patent was used for interpreting the term "diffuse light." *Id.* at 817-18. The Federal Circuit did not find error with the district court's interpretation of diffuse light, and thus, upheld the finding of no literal infringement. *Id.* at 816-18. Also, the Federal Circuit agreed with the lower court that Jonsson had surrendered any devices not containing diffuse light as being equivalent. *Id.* at 818. Further, the broader claim of the second continuation-in-part patent was limited to the same scope as the first continuation-in-part patent. *Id.* at 818-19. Because the accused device did not contain diffuse light, there was no infringement under the doctrine of equivalents. *Id.* at 815, 821.

[99] *See, e.g.*, Wang Lab. Inc., v. America Online, Inc., 197 F.3d 1377 (Fed. Cir. 1999). The court used an "Information Disclosure Statement" submitted with the parent patent application for claim interpretation purposes and found no literal infringement of a continuation-in-part patent. *Id.* at 1384-85. Even though the court could have created prosecution history estoppel with the same information, the court chose to find no infringement under the doctrine of equivalents because "no reasonable trier of fact could find only insubstantial differences." *Id.* at 1385. *See also* Augustine Med., Inc. v. Gaymar Indus., Inc., 181 F.3d 1291, 1300 (Fed. Cir. 1999) (invoking prosecution history estoppel against related patents based on claims canceled and amended to overcome prior art of a parent application); Elkay Mfg. Co. v. Ebco Mfg. Co., 192 F.3d 973, 980-81 (Fed. Cir. 1999) (using prosecution history of a related application for both claim interpretation and prosecution history estoppel purposes, and further noting that this case was stronger than *Jonsson* because the applicant, as part of the prosecution of the patent at issue, explicitly indicated that the new claims were patterned after the claims from a related patent); Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 988 F.2d 1165, 1173-75 (Fed. Cir. 1993) (analyzing prosecution history of grandparent application to impose prosecution history estoppel where the accused device contained the limitation that the grandparent application disavowed as being equivalent).

[100] 143 F.3d 1456 (Fed. Cir. 1998).

[101] *Id.* at 1460 n.2 (invoking no infringement under the doctrine of equivalents due to prosecution history estoppel and explaining that a clear assertion in the application prevented the applicant from arguing contrary to the clear record)

by the presence of statements in the prosecution history, mere creation of subsequently related patents without explanation also creates estoppel.[102]

Any patent that is not formally related to another patent should be considered independent of that patent. Prior to *Sextant*, only a formal relationship created sources of prosecution history beyond that of the patent itself. Independent sources of prosecution history include two kinds of actions: those that third parties take in front of the USPTO regarding the patent at issue, and those that patent assignees take in front of the USPTO regarding patents other than the one in issue.

Courts deny credence to any statements by third parties regarding the patent at issue.[103] For example, in *Water Tech., Inc. v. Calco, Ltd.*,[104] a third party attorney made assertions regarding the patent at issue during prosecution of a different patent in order to distinguish the two patents.[105] The Federal Circuit refused to include such assertions in the prosecution history of the patent at issue.[106] Additionally, in *Laitram Corp. v. Morehouse Industries, Inc.*,[107] the Federal Circuit labeled assertions that a defendant in an infringement suit made to the USPTO regarding the patent at issue as "irrelevant to the construction of the claims."[108] The court explained that considerations for claim interpretation arising from prosecution history result from the applicant's representations, not

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(citation omitted).

The Federal Circuit also imposed a caveat to using prosecution history of related patents by proclaiming that "statements in the parent application must be confined to their proper context." Abtox, Inc. v. Exitron Corp., 122 F.3d 1019, 1027 (Fed. Cir. 1997) *amended by* 131 F.3d 1009 (Fed. Cir. 1997). In *Abtox*, a term present in claims of the parent application directed to two different technologies subsequently appeared in claims residing in two separate, but related patents. Abtox, Inc. v. Exitron Corp., 131 F.3d 1009, 1010 (Fed. Cir. 1997). The Federal Circuit declared that it was appropriate to to rely on the parent application for claim interpretation given the common origination of the claims. *Id.*

[102] Mark I Mktg. Corp. v. R.R. Donnelley & Sons Co., 66 F.3d 285, 292 (Fed. Cir. 1995) (declaring that progressive narrowing of patent claims in subsequent continuation-in-part patents without explanation cannot be ignored for estoppel purposes). *See also* Desper Prods., Inc. v. QSound Labs, Inc., 157 F.3d 1325, 1338 (Fed. Cir. 1998) (clear assertions distinguishing prior art that surrendered subject matter of a predecessor claim could not be ignored).

[103] Water Tech. Corp. v. Calco, Ltd., 850 F.2d 660, 667 (Fed. Cir. 1988). *See also Laitram*, 143 F.3d at 1462-63.

[104] 850 F.2d 660 (Fed. Cir. 1988).

[105] *Id.* at 667.

[106] *Id.*

[107] 143 F.3d 1456 (Fed. Cir. 1998).

[108] *Id.* at 1462.

those from a third party.[109]

Another potential independent source of prosecution history is where a common assignee makes statements regarding patents other than the one under analysis. In *Laitram Corp. v. Cambridge Wire Cloth Co.*,[110] a common assignee submitted patent applications with a common inventor, using the same law firm to prosecute the patents, over a year apart.[111] Although the Federal Circuit chose not to rule on the issue, the court noted that the prosecution history of one independent patent could not be used to create prosecution history estoppel in a subsequent independent patent where there was no overlap in the prosecution.[112] A similar situation arose in *Sextant Avionique, S.A. v. Analog Devices, Inc.*,[113] where the same prosecuting attorney filed two patent applications approximately one year apart for the same assignee, but for two different applicants, and both applications were pending concurrently.[114]

II. ANALYSIS OF *SEXTANT*

In *Sextant*, prosecution history played a significant role in the determination of non-infringement. Two single-inventor patents were at issue: United States Patent No. 4,663,972 (Marcillat patent) and United States Patent No. 4,711,128 (Boura patent).[115] These patents generally covered aviation devices called accelerometers, which measure the rate of change of an aircraft's velocity.[116] Specifically, claim 2 of the Marcillat patent and claim 1 of the Boura patent were directed to accelerometer sensors.[117] As issued, the only significant difference between these two claims resided in the detail afforded one of the sensor components called the flat test body.[118]

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[109] *Id.* at 1462-63.

[110] 863 F.2d 855, 862 n.16 (Fed. Cir. 1988).

[111] *Id.* at 856; U.S. Patent No. 3,870,141 (issued Mar. 11, 1975); U.S. Patent No. 4,051,949 (issued Oct. 4, 1977).

[112] *See Cambridge Wire*, 863 F.2d at 862 n.16.

[113] 172 F.3d 817 (Fed. Cir. 1999).

[114] U.S. Patent No. 4,663,972 (issued May 12, 1987); U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[115] *Sextant*, 172 F.3d at 819-21.

[116] *Id.* at 819. *See also* MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 6 (10th ed. 1998).

[117] *Sextant*, 172 F.3d at 820-21.

[118] *Id.* at 823 ("[T]he language of these claims became substantially identical except for the 'wherein' clauses."). These wherein clauses describe the flat test body. *Id.* Claim 2 of Marcillat, which is representative of the claims at issue, reads as follows:

The prosecuting attorney was the same for both patents.[119] Although these two patents were commonly-owned, the lack of a common inventor between them meant that they could never be formally related.[120] The Boura patent, however, deemed its invention to be of the type described by the Marcillat patent in the section of the patent entitled "Field of Invention."[121] Further, the Boura patent

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> An accelerometer sensor comprising a flat pendular structure made from one and the same crystalline wafer, said structure having in a same plane a flat fixed part, two parallel blades flexible in the said plane and delimiting therebetween a space, each of said blades having a first end portion fixedly connected to said fixed part, and a second end portion, said structure further comprising a flat test body connected to the second end portions of said blades so as to be suspended from the fixed part and to be able to move in translation in the said plane along a sensitive axis, said flat test body extending at least partially into said space, wherein electrical connections between the test body and the fixed part of the pendular structure are formed by metallizations formed on the thin faces of said flexible blades.

Marcillat patent, col. 8, ll. 33-47. *Id.* at 820-21.

Claim 1, the only independent claim in the Boura patent, reads as follows:

> An accelerometer sensor comprising a flat pendular structure made from one and the same crystalline wafer, said structure having in a same plane a flat fixed part, at least two parallel blades flexible in the same plane and delimiting therebetween a space, each of said blades having a first end portion fixedly connected to said fixed part, and a second end portion, said structure further comprising a flat test body connected to the second end portions of said blades so as to be suspended from the flat fixed part and to be able to move in translation in the same plane along a sensitive axis under the effect of an acceleration with a position which varies in relation with said acceleration, said flat test body extending at least partially into said space, wherein said flat test body comprises at least a first edge which carries a first metallization having first and second opposite faces and said flat fixed part comprises at least a second and third edge carrying respectively a second and third metallizations, said second and third metallizations respectively facing said first and second opposite faces, so as to form capacitors whose capacities vary depending on the position of said test body, said first metallization being brought to a first voltage V sub0, whereas the second and the third metallizations are respectively brought to a second and third voltages, V sub1 and V sub2 which are capable of generating an electrostatic return force on the flat test body.

[Boura patent], col. 5, ll. 15-42. *Id.* at 820-21.

[119] *Id.* at 822.

[120] *Id.* at 821. Although the patents were co-pending, they could not have been formally related because there were no common inventors between the two patents. *See* 35 U.S.C.A. § 120 (West. Supp. 2000). Marcillat was the only inventor of U.S. Patent No. 4,663,972, and Boura was the only inventor of U.S. Patent No. 4,711,128. U.S. Patent No. 4,663,972 (issued May 12, 1987); U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[121] *Sextant*, 172 F.3d at 821. The "Field of Invention" is "[a] statement of the field of art to which the invention pertains." MPEP, *supra* note 1, § 608.01(c).

particularly pointed out that its invention was an improvement over the Marcillat invention.[122]

The Marcillat patent specification detailed that the invention could be formed using semiconductor-processing techniques, including the use of "a crystalline silicon or quartz wafer."[123] During the prosecution of the Marcillat patent, the examiner issued a rejection based on a prior art patent that utilized semiconductor-processing techniques including the use of monocrystalline silicon.[124] In order to overcome the obviousness rejection under § 103,[125] the attorney argued that, unlike the Marcillat patent, the prior art invention did not contain metallizations.[126] Further, in response to the § 103 rejection, the attorney submitted claim amendments including three limitations, one of which was metallizations.[127] The Marcillat patent application was filed on March 6, 1985,[128] the examiner allowed the claims on October 22, 1986,[129] and issuance occurred on May 12, 1987.[130]

Later, during the Boura patent prosecution, a different examiner from the one who evaluated the Marcillat patent rejected the only independent claim for § 103 and § 112 deficiencies.[131] To overcome these rejections, the attorney filed a submission dated May

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[122] *Sextant*, 172 F.3d at 821 ("The 'aim' of Boura's invention is summarized as 'to provide . . . an accelerometric sensor of a type similar to the one described above [*i.e.*, the Marcillat's sensor],' . . . but which has an improved return mechanism."). Improvement patents are not unusual. 37 C.F.R. § 1.71(c) (2000).

[123] *Sextant*, 172 F.3d at 820.

[124] *Id.* at 821.

[125] An obviousness-type rejection, under § 103, means that in light of the combination of multiple prior art examples, the invention would be a natural extension of the concepts therein. Graham v. John Deere Co., 383 U.S. 1, 17 (1966).

[126] *Sextant*, 172 F.3d at 821-22. Lacking clear definition of "metallizations" in the arguments that the prosecuting attorney submitted during litigation, the district court interpreted metallization in light of the prosecution history of Marcillat "to mean a deposited metallic material." *Id.* at 823.

[127] *Id.* at 821-22. "In addition to the 'metallization' limitation, the parties do not dispute that the claim limitations 'made from one and the same crystalline wafer' and 'flat fixed part' were added to the claims of Marcillat to distinguish them over the prior art." *Id.* at 822.

[128] U.S. Patent No. 4,663,972 (issued May 12, 1987). The court opinion inaccurately reports that March 6, 1985 was the patent issue date, because the examiner allowed claims after October 22, 1986. *See Sextant*, 172 F.3d at 820.

[129] *Sextant*, 172 F.3d at 824.

[130] U.S. Patent No. 4,663,972 (issued May 12, 1987).

[131] *Sextant*, 172 F.3d at 822. A rejection under § 112 indicates lack of one or both of enablement or definiteness. 35 U.S.C. § 112 (1994). A rejection under § 103 indicates that the claim is obvious in light of the prior art. 35 U.S.C. § 103 (1994).

15, 1987, three days after the Marcillat patent was issued.[132] In this submission, the prosecuting attorney pointed out that the cited prior art located "a thin layer of metal . . . [on] the two sides of th[e] test body" rather than utilizing the location of applicant's invention where "metallizations [were] formed on edge portions of th[e] test body."[133] In addition to this argument, the prosecuting attorney, without clear explanation, amended the independent claim to include the three limitations that had been added to the Marcillat patent.[134] The Boura patent application was filed on April 6, 1986[135] and issuance occurred on December 8, 1987.[136] The district court and the Federal Circuit used prosecution history differently, but both determined that there was no infringement of Sextant's two patents at issue.[137]

A. The District Court Proceedings

Sextant brought an infringement suit against Analog, contending that Analog's devices infringed "claim 2 of Marcillat and claim 1 of Boura."[138] The accused devices utilized semiconductor-processing techniques and contained a polysilicon layer.[139] The District Court for the Northern District of California awarded summary judgment to Analog after determining that neither patent was literally infringed.[140] Additionally, the district court interpreted the term "metallization" for both patents in light of the Marcillat patent prosecution history.[141] According to the district court, the term metallization referred to a deposited layer of metallic material.[142]

Further, under the doctrine of equivalents, the district court awarded judgment as a matter of law finding no infringement of

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[132] *Sextant*, 172 F.3d at 824; U.S. Patent No. 4,663,972 (issued May 12, 1987).

[133] *Sextant*, 172 F.3d at 822.

[134] *Id.* at 823.

[135] U.S. Patent No. 4,711,128 (issued Dec. 8, 1987). The court opinion inaccurately reports that April 14, 1986 was the patent issue date, because there was a submission to the USPTO with claim amendments after May 15, 1987. *See Sextant*, 172 F.3d at 821.

[136] U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[137] *Sextant*, 172 F.3d at 823-26.

[138] *Id.* at 823.

[139] *Id.*

[140] *Id.* at 826.

[141] *Id.* at 823.

[142] *Id.*

either patent.[143] In particular, the district court invoked prosecution history estoppel against the Marcillat patent, identifying that its prosecution history clearly surrendered as equivalent those devices that did not contain a metal layer.[144] The court also invoked prosecution history estoppel against the Boura patent.[145] This action, however, was based on the peculiar facts of the Boura patent prosecution.[146] The court justified invoking prosecution history estoppel based on the contemporaneity of the Marcillat patent allowance and Boura patent amendments.[147] The court had previously identified that the patents had common subject matter and a common prosecuting attorney.[148] The district court further construed that the purpose of the amendments was "to secure quick allowance of the Boura application and avoid the objections raised during Marcillat's prosecution."[149] At the district court level, the judge did not acknowledge the assertion of both parties that the Boura patent amendments were only in response to a § 112 indefiniteness rejection.[150] In fact, the Boura patent claim was rejected for both § 112 and § 103 deficiencies.[151] Because the extent to which a court applied prosecution history estoppel depended on the reasons for a claim amendment, this distinction between the

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[143] *Sextant*, 172 F.3d. at 823-24.

[144] *Id.*

[145] *Id.* at 824.

[146] *Id.* (citing Pall Corp. v. Micron Separations, Inc., 66 F.3d 1211, 1220 (Fed. Cir. 1995) (identifying that a "[change made] in order to more particularly point out the applicant's invention is not presumed to raise an estoppel, but is reviewed on its facts, with the guidance of precedent"). The district court in *Sextant* appears to have misinterpreted the *Pall* quotation since the quotation refers generally to the facts surrounding a § 112 rejection. *See Pall*, 66 F.3d at 1219-20. For the Boura patent, there was a combined § 103 and § 112 rejection. *Sextant*, 172 F.3d at 822. The *Pall* decision does not appear to give trial courts carte blanche to invoke estoppel based on the overall circumstances of the prosecution of the patent, namely the timing of amendments for commonly-owned patents by the same prosecuting attorney.

[147] *Sextant*, 172 F.3d at 824.

[148] *Id.* at 821-22.

[149] *Id.* at 824. Given that the district court did find an explanation of the phrase "to secure quick allowance," the *Warner-Jenkinson* presumption would not have applied. *Id.* at 834-35 (Smith, J., dissenting in part).

[150] *Id.* at 824, 829. Sextant wanted to call the reason for the amendment related to § 112 "indefiniteness" because, prior to *Festo*, such amendments might not have been related to patentability. Caterpillar Tractor Co. v. Berco, 714 F.2d 1110, 1115 (Fed. Cir. 1983). Under *Festo*, a § 112 amendment would invoke prosecution history estoppel and a complete bar to equivalents for the narrowed claim limitation. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 568-69 (Fed. Cir. 2000) (en banc), *cert. granted*, 121 S. Ct. 2519 (2001). *See supra* notes 70-89 and accompanying text.

[151] *Sextant*, 172 F.3d at 824, 829.

reasons behind the Boura patent amendments would later be important to the Federal Circuit.[152]

B. *The Federal Circuit Proceedings*

Sextant appealed the district court's determination of non-infringement, and the Federal Circuit affirmed.[153] In so doing, the Federal Circuit approved the construction of "metallization" that justified the finding of no literal infringement of either patent.[154] The Federal Circuit affirmed the lower court's analysis under the doctrine of equivalents, finding that the accused device contained the matter surrendered by the Marcillat patent amendments, and thus estoppel prevented infringement of the Marcillat patent.[155] Additionally, in addressing the unexplained amendments to the Boura patent, the court held that an unrebutted *Warner-Jenkinson* presumption invoked prosecution history estoppel, completely barring the use of the doctrine of equivalents with respect to the amendments.[156] Hence, the court determined that the accused device did not infringe the Boura patent under the doctrine of equivalents.[157]

The panel first analyzed literal infringement in light of claim construction.[158] Dispensing with Sextant's argument that its own patent[159] was intrinsically ambiguous, the Federal Circuit denied the introduction of extrinsic evidence,[160] and focused instead on the claim language.[161] Sextant, the court observed, did not "act as its own lexicographer,"[162] thereby permitting the court to construe the term metallization by its ordinary and customary meaning.[163] With

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[152] *Id.* at 830 n.5. The Federal Circuit later construed such arguments as ineffective in overcoming the *Warner-Jenkinson* presumption. *Id.* As to the extent of estoppel, under *Festo*, invoking prosecution history estoppel results in a complete bar to equivalents as to the amended limitation. *Festo*, 234 F.3d at 563-64.

[153] *Sextant*, 172 F.3d at 819, 824.

[154] *Id.* at 825.

[155] *Id.* at 827.

[156] *Id.* at 832.

[157] *Id.*

[158] *Sextant*, 172 F.3d at 825.

[159] *Id.* The opinion did not specify to which patent Sextant was referring.

[160] *Id.* Hence, no expert testimony as to the meaning of the claims was permitted. *Id.*

[161] *Id.* at 825. According to the court, the metallization limitation is dispositive. *Id.* at 826.

[162] *Id.* at 825.

[163] *Id.*

reference to the Marcillat patent specification only, the court cited gold, silver, and aluminum as examples of suitable metals.[164] Also, the panel deemed that the prosecution history of the Marcillat patent confirmed their analysis "that the term 'metallization' denote[d] only metallic materials, not doped silicon materials."[165] As a result of this analysis, the Federal Circuit determined that Analog did not literally infringe either the Marcillat patent or the Boura patent.[166]

In contrast to the brief claim interpretation analysis, the court discussed prosecution history estoppel at length in order to analyze the possibility of infringement under the doctrine of equivalents.[167] The scope of estoppel, the court noted, is the subject matter surrendered, from the perspective of a reasonable competitor.[168] With respect to the Marcillat patent, the court noted that because Sextant surrendered "silicon materials made conductive by doping"[169] in order to distinguish the Marcillat invention from the prior art, Sextant was estopped from asserting that the accused device comprising doped silicon was equivalent.[170]

Beginning the analysis of the Boura patent, the court reviewed the criteria for imposing prosecution history estoppel, including the *Warner-Jenkinson* presumption.[171] Additionally, the panel recognized that the United States Supreme Court had not determined whether an amendment pursuant to a § 112 rejection created a reason related to patentability for invoking prosecution history estoppel.[172]

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164 *Sextant*, 172 F.3d at 825.

165 *Id.*

166 *Id.* at 826.

167 *Id.* at 826-32.

168 *Id.* at 826-27.

169 Doping is the addition of impurities to change the properties of a material. WEBSTER'S NEW WORLD DICTIONARY 407 (3d ed. 1994). In *Sextant*, boron was added to the silicon materials to render the materials conductive. *Sextant*, 172 F.3d at 822.

170 *Sextant*, 172 F.3d at 827.

171 *Id.* at 827-28.

172 *Id.* at 828. The panel stated:

> On the one hand, it is clear that a patent applicant must comply with § 112 in order to obtain a patent; failure to meet the requirements of that section results in the denial of a patent, and a basis for denial of a patent is a form of 'patentability' requirement. On the other hand, the patent statute uses the title 'Conditions for patentability' as the heading for the novelty and nonobviousness provisions, see 35 U.S.C. §§ 102, 103, whereas § 112 only refers to the requirements of the specification.

Id.

Further, the Federal Circuit did not rule on this issue, noting that whether a § 112 rejection created prosecution history estoppel was not necessary to resolve the case. *Id.* at 829. The *Festo* decision answered this question by deeming that all amendments related to statutory requirements created prosecution history estoppel.

Although Sextant consistently construed the metallization amendment as responding to a § 112 rejection, the panel found that the Boura patent prosecution history belied that assertion.[173] In addition, the judges noted that the metallization amendment was not required to overcome the § 103 rejection.[174] The court commented that the prosecution history of the Boura patent disclosed the reason for the addition of edge,[175] but not the addition of metallization.[176] The judges, therefore, disregarded the district court's finding that the addition of metallization was to secure quick allowance.[177] Because the panel did not establish a reason for the metallization amendment, the panel invoked the rebuttable *Warner-Jenkinson* presumption.[178] Further, the court determined that Sextant did not rebut the presumption due to repeated assertions that the amendment related to a § 112 rejection.[179] Unlike the district court, the Federal Circuit determined that prosecution history estoppel applied to the Boura patent from analysis of solely the Boura prosecution history.[180] Finally, the court held that estoppel resulting from an unrebutted *Warner-Jenkinson* presumption resulted in a complete bar to the doctrine of equivalents for the amended element.[181]

Judge Smith, dissenting in part, disagreed with the panel majority that the *Warner-Jenkinson* presumption applied to the Boura patent.[182] The judge asserted that the combined addition of edge and metallization resulted in an amendment clearly related to

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Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 566 (Fed. Cir. 2000) (en banc) , *cert. granted*, 121 S. Ct. 2519 (2001).

[173] *Sextant*, 172 F.3d at 829. The § 112 ¶ 2 rejection required the applicant to clarify the improvement claim and to use consistent terminology. *Id.* The court stated that adding the metallization limitation could not have been responsive to those requirements. *Id.*

[174] *Id.*

[175] *See supra* text accompanying note 174.

[176] *Sextant*, 172 F.3d at 829. Edge was required to overcome the prior art, but metallization was not. *Id.*

[177] *Id.*

[178] *Id.*

[179] *Sextant*, 172 F.3d at 829-30. The justice of this determination is certainly suspect because the *Warner-Jenkinson* presumption was not invoked until appeal. The court further noted that some cases would warrant remand for rebuttal, but this case did not warrant such. *Id.* at 830 n.5. The dissent condemned the majority's approach. *Id.* at 833 (Smith, J., dissenting in part).

[180] *Id.* at 830.

[181] *Id.* at 832.

[182] *Id.* at 833 (Smith, J., dissenting in part).

patentability to overcome the prior art.[183] This analysis, according to the dissent, would not preclude the application of the doctrine of equivalents to determine whether the Analog device infringed the Boura patent.[184] Judge Smith was also uneasy about applying the *Warner-Jenkinson* presumption "for the first time on appeal."[185]

Finally, the dissent condemned the majority's acceptance of imputing the Marcillat patent prosecution history to the understanding of the Boura patent.[186] In Federal Circuit precedent, Judge Smith declared, a finding of prosecution history estoppel had never been based "on a statement made by a *different* applicant during prosecution of an *unrelated* application."[187] Never, the judge further posited, had the court hinted that reasonable competitors would have to consult the prosecution histories of independent patents in order to understand a patent in suit.[188] The dissent asserted that "the district court's importation of the Marcillat patent's prosecution history into the Boura patent was erroneous and should be reversed."[189]

C. Sextant *Creates Uncertainty as to Sources of Prosecution History*

Because of the majority's determination that prosecution history estoppel applied in light of the Boura patent prosecution history only, the court chose not to address Sextant's contention that the district court erred by imputing "the Marcillat file history into the Boura file history."[190] The court's silence on this issue creates an uncertain precedent since the available pool of prosecution history has potentially been extended from formally related patents to those patents commonly-owned with a common subject matter and prosecuted by the same attorney.[191]

In terms of claim construction, neither the district court nor the Federal Circuit analyzed the Boura patent independent of the Marcillat patent.[192] While the Boura patent specification noted the

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183 *Id.*

184 *Id.* at 836 (Smith, J., dissenting in part).

185 *Sextant*, 172 F.3d at 834 (Smith, J., dissenting in part).

186 *Id.* at 835 (Smith, J., dissenting in part).

187 *Id.* at 836 (Smith, J., dissenting in part) (emphasis added).

188 *Id.*

189 *Id.*

190 *Id.* at 832 n.7 (Smith, J., dissenting in part).

191 *Sextant*, 172 F.3d at 819, 822, 832.

192 *Id.* at 825-26 (relying on the Marcillat patent's prosecution history to affirm the district court's construction of metallization and finding of no literal infringement of

similarity of the Marcillat patent,[193] the two patents could not have been formally related because they lacked the statutory requirement of a common inventor.[194] The Boura patent, being unrelated to the Marcillat patent, should have thus been analyzed separately for claim interpretation purposes. Because the Boura patent was similar to the Marcillat patent,[195] the court's final claim constructions may not have differed. However, the patents were prosecuted separately in the USPTO, by two different examiners,[196] thereby creating independent interactions. Prosecution history, intrinsic to the patent, is not optional in a claim construction analysis.[197] In contrast, extrinsic evidence is only used where a court determines that it needs further education about the invention or that the claim meaning cannot be ascertained because the combination of the claim language, specification, and prosecution history are vague.[198]

The Federal Circuit interpreted the claims-in-suit from two different patents, in light of only one patent's prosecution history, however, without acknowledging the prosecution history of the other, unrelated patent.[199] This action creates an uncertain precedent. Had the two patents not been brought to suit together, there would not have been a justifiable reason for using the prosecution history of the first patent to interpret the second patent.[200] In addition, prosecution history contains the specific interaction between the prosecuting attorney and the patent examiner.[201] As a result, where patents are not formally related, prosecution history from one patent contains independent interactions with the USPTO compared to another. As such, being able to impute the prosecution history from one patent to another, unrelated patent is incongruous because the

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either the Marcillat or the Boura patents).

[193] *Id.* at 821; U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[194] 35 U.S.C. § 120 (1994).

[195] *Sextant*, 172 F.3d at 823.

[196] *Id.*

[197] *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

[198] *Id.* at 1584-85.

[199] *Sextant*, 172 F.3d at 825-26. It is possible that the use of the Boura patent prosecution history to interpret the Boura patent claim would not have resulted in a different outcome.

[200] *Cf.* Jonsson v. Stanley Works, 903 F.2d 812, 818 (Fed. Cir. 1990). It was appropriate, when two continuation-in-part patents were brought in suit together, to use the prosecution history of the first patent to interpret a term of the second patent. *Id.*

[201] *See* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 628 (Fed. Cir. 2000) (en banc) (Linn, J., concurring in part, dissenting in part), *cert. granted*, 121 S. Ct. 2519 (2001).

exchange within each prosecution history is unique to that patent. The court did not spend any extra commentary justifying its interpretation.[202] Absent a clear directive that such action is improper, a new avenue for litigants has been created for imputing the prosecution history of an independent patent to another patent.

III. SOURCES OF PROSECUTION HISTORY MUST SERVE PUBLIC NOTICE FUNCTION

Public notice is of paramount importance for providing certainty and predictability as to the scope of patent protection.[203] Certainty and predictability are vital for allowing the marketplace to make informed decisions "on how to conduct its affairs."[204] In fact, "[t]he public notice function of patents would be frustrated by forcing a patentee's competitors to guess" at the scope of patent claims.[205] Further, the Federal Circuit believes that rules governing patent law should be workable.[206] Limiting sources of prosecution history gives rise to a rule that is workable, complying with what the Federal Circuit respects.

A. Formally Related Patents Serve a Public Notice Function

Sources of prosecution history should be limited to only the patent at issue and formally related patents. Clearly, the prosecution history of the patent itself is a source because it is the first place a reasonable competitor or the public would look for information on the patent.[207] Because, as a statutory requirement, a formally related patent must specifically reference a parent patent,[208] the public or a reasonable competitor would be on notice that the patents were related. Further, because related patents must meet statutory requirements, the prosecuting attorney would have to make a conscious decision to link the patents. The attorney, therefore,

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[202] *Sextant*, 172 F.3d at 825 (noting that "the district court did not err in its construction of the term 'metallization'").

[203] *Festo*, 234 F.3d at 575.

[204] *Id.*

[205] *See* Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 1345 (Fed. Cir. 2001).

[206] *Festo*, 235 F.3d at 575.

[207] American Permahedge, Inc. v. Barcana, Inc., 105 F.3d 1441, 1446 (Fed. Cir. 1997).

[208] *See supra* note 92.

would be on notice that the prosecution history of the related patents could be used among each other. Ensuring that the public notice function of patents is served keeps the reach of prosecution history from becoming unmanageable.[209] Where to look to interpret claims and determine scopes of equivalents should not create uncertainty by making the determination fact-specific.[210] Given the driving force of public notice, where patents are not formally related, a reasonable competitor may not know where to look for other prosecution histories for the patent at issue.

B. Sextant *Patents, as Sources of Prosecution History, Do Not Serve the Public Notice Function*

In *Sextant*, the Boura patent was not formally related to the Marcillat patent.[211] Even so, the district court imposed prosecution history estoppel based on the particular facts of the Boura patent prosecution.[212] Although the court cited legal authority for this action,[213] one potential doctrinal justification for this action would be to assert that the Boura patent was constructively related to the Marcillat patent because it was co-pending, commonly-owned, and prosecuted by the same attorney.[214] However, the facts of *Sextant* do not justify deeming that the patents are constructively related.

The statutory requirements for related patents are co-pendency, at least one inventor in common, and explicit reference to the parent.[215] Although the two patents were co-pending, they lacked a common inventor.[216] Granted, the Boura patent identified the Marcillat patent as being in the same field of invention and the

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[209] *Cf. Festo*, 234 F.3d at 575. The respect for public notice in *Festo* was one underlying policy for adopting a strict approach to prosecution history estoppel. *Id.* By barring the use of the doctrine of equivalents for claim elements that have been narrowed during prosecution, the Federal Circuit feels as though it has secured predictability and certainty for the scope of patent protection. *Id.* at 575, 577. Applying the same logic, using only related patents as sources of prosecution history also secures predictability and certainty of patent protection.

[210] *Cf. id.* at 575 (identifying the state of the law that provided a flexible approach to prosecution history estoppel was unworkable).

[211] *Sextant*, 172 F.3d at 821.

[212] *See supra* notes 189-91 and accompanying text.

[213] *See supra* note 188.

[214] *Sextant*, 172 F.3d at 819-22; U.S. Patent No. 4,663,972 (issued May 15, 1987); U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[215] 35 U.S.C. § 120 (1994).

[216] U.S. Patent No. 4,663,972 (issued May 12, 1987); U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

invention improved upon.[217] These references between commonly-owned patents, however, are not unusual and do not necessarily indicate a formal relationship.[218] Such references are not sufficient to explicitly notify the public that the patents are formally related.[219]

Further, that two patents are commonly-owned or prosecuted by the same attorney does not create an analogous situation to the statutory requirement that there be a common inventor.[220] Decisions relating to patent ownership and who prosecutes a patent are primarily business-driven. The inventor, in contrast, is intimately tied to the patent since the patent reflects the inventor's own ingenuity.[221] There is a statutory requirement for formally related patents to have one common inventor.[222] One result of this requirement, therefore, is that some of the ingenuity driving the original patent is present in the later related patents.

Perhaps the action of the district court in *Sextant* has some merit, however, for cases factually different from *Sextant.* It is possible that the prosecution history of an unrelated patent with a common subject matter could be relevant to the claim interpretation of the patent at issue.[223] If, and only if, a court determines that a patent contains ambiguous intrinsic evidence,[224] then an unrelated patent

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[217] U.S. Patent No. 4,711,128 (issued Dec. 8, 1987).

[218] *See, e.g.*, U.S. Patent No. 6,028,238 (issued Feb. 22, 2000) (identifying that the patent was an improved process of two other commonly-owned patents, U.S. Patent No. 4,899,011 (issued Feb. 6, 1990) and U.S. Patent No. 5,689,027 (issued Nov. 18, 1997), where formal relationships were not possible due to the lack of co-pendency).

[219] *See* MPEP, *supra* note 1, § 201.11 (setting out the proper verbiage that suffices to specifically refer to the related patent).

[220] 35 U.S.C. § 120 (1994); W. Fritz Fasse, *The Muddy Metaphysics of Joint Ownership: Cleaning up After the 1984 Amendments to 35 U.S.C. § 116*, 5 HARV. J.L. & TECH. 153, 156 (1992) (stating that mere ownership of another's invention does not make the owner an inventor).

[221] *See* Fasse, *supra* note 220, at 156 (identifying that an actual inventor "personally contribute[s] to the inventive idea.").

[222] 35 U.S.C. § 120 (1994). Prior to the 1984 amendment to section 120, the inventors of the earlier patent had to be exactly the same as the patent at issue. Fasse *supra* note 220, at 170. The current one common inventor requirement of section 120 represents an acknowledgment that membership of research teams at institutions often change over time. *Id.* at 170-71. This amendment provides for greater latitude in filing related applications. *See In re* Chu, 66 F.3d 292, 297 (Fed. Cir. 1995). For a thorough discussion on the concept of joint inventorship, see Fasse, *supra* note 220.

[223] *See Sextant*, 172 F.3d at 825-26. It is not disputed that the Marcillat patent prosecution history is *relevant* to the understanding of the Boura patent; however, the issue is whether its use was appropriate.

[224] Recall that the Federal Circuit rejected Sextant's argument that its intrinsic evidence was ambiguous and denied the use of extrinsic evidence to analyze the Marcillat and Boura patents. *Sextant*, 172 F.3d at 825; *supra* notes 138-52 and

could be relevant as extrinsic evidence just as any information external to the patent would be.[225] The impact of using the unrelated patent would then be tempered because other extrinsic evidence, such as expert and inventor testimony, would also be admissible.[226] Use of an unrelated patent, therefore, would be consistent with established rules if it is treated as extrinsic evidence, rather than intrinsic evidence.

CONCLUSION

The use of an independent, unrelated source for prosecution history in *Sextant* creates a potentially expansive pool of sources of prosecution history. Without imposing restrictions, the potential sources of prosecution history become unmanageable in the extreme application of the *Sextant* precedent. Attorneys might attempt to avoid any trail of prosecution history for fear of losing protection in every patent the attorney has prosecuted. Since information disclosure is one of the driving forces behind the patent system, this result is not beneficial. During litigation, parties will have to search every patent prosecuted by the attorney in the hopes of finding a scintilla of limitation to impute to the patent at issue. With no formal link between patents, the task of exploring and pinpointing the prosecution history would be time-consuming and likely counterproductive. Its costs will outweigh any benefits. It is the public interest that must be protected in ensuring that issued patents have clearly discernible scopes. Permitting sources of prosecution history to extend beyond formally related patents creates the potential for uncertainty as to the breadth of the patent at issue, which is contrary to the public interest.

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accompanying text. Rather, the court found that the intrinsic evidence substantiated an understanding of "metallization." *Sextant*, 172 F.3d at 825.

[225] Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995) (en banc) ("Extrinsic evidence consists of all evidence external to the patent and prosecution history . . . .").

[226] *Id.*