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Claire R. Rollor*

Logic, Not Evidence, Supports a Change in Expert Testimony Standards: Why Evidentiary Standards Promulgated by the Supreme Court for Scientific Expert Testimony are Inappropriate and Inefficient When Applied in Patent Infringement Suits

"If you are wondering what the Supreme Court is doing with all of these patent cases, it seems to me that the Court is telling the Federal Circuit that patent cases are no different from any other." —Gretchen S. Sween[1]

I. Introduction

Recently, technology and innovation have been recognized as possible avenues to halt the recent decline of the American economy.[2] President Obama has announced that "[t]he first step in winning the future is encouraging American inno-

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1. Gretchen S. Sween, *Who's Your Daddy? A Psychoanalytic Exegesis of the Supreme Court's Recent Patent Jurisprudence*, 7 Nw. J. Tech. & Intell. Prop. 204, 205 (2009) (quoting the Honorable Lee Yeakel from the June 2008 meeting of the Austin Intellectual Property Law Association where he suggested that the Supreme Court is attempting to promote equitable application of legal standards to patent law); *see also* Timothy B. Lee, *Specialist Patent Courts Are Part Of the Problem*, Forbes, Aug. 19, 2011, http://www.forbes.com/sites/timothylee/2011/08/19/specialist-patent-courts-are-part-of-the-problem/ (arguing that the Court of Appeals for the Federal Circuit consistently provides too much protection for patents by creating unique precedent in patent infringement adjudications). *But see Patent Medicine: Why America's Patent System Needs to Be Reformed, and How To Do It*, Economist, Aug. 20, 2011, http://www.economist.com/node/21526370?fsrc=scn/tw/te/ar/patentmedicine (suggesting that patent law adjudications should be handled by specialized courts as opposed to non-expert juries).

2. *See The Decline and Fall of the American Empire*, CBSNews, Dec. 6, 2010, http://www.cbsnews.com/2100-215_162-7121029.html?pageNum=2 (revealing a decline in American innovation in terms of both number of patent applications filed and number of American students who obtain university degrees); *see also* Louis Uchitelle, *When Factories Vanish, So Can Innovators*, N.Y. Times, Feb. 12, 2011, http://www.nytimes.com/2011/02/13/business/13every.html? ("The big debate today is whether we can continue to be competitive in R&D when we are not making the stuff that we innovate . . . I think not; the two can't be separated.").

vation"[3] and that patent reform will create more jobs.[4] To adapt the United States Code and provide significant patent reform in order to meet these ends, Senator Patrick Leahy introduced a bill to the Senate on January 25, 2011.[5] On September 16, 2011, President Obama signed the Leahy-Smith America Invents Act,[6] which is the most significant change to the patent statutes since the Patent Act of 1952.[7]

Despite express legislative and executive support for the development of consistent and efficient best practices in patent law,[8] the federal judiciary has instead ignored festering issues that have inundated certain aspects of patent law, in particular the current standards governing the admissibility of scientific expert testimony in patent cases.[9] In patent cases, these evidentiary standards play an extremely important role because almost all suits involve scientific expert testimony and the testimony provided frames both legal and factual arguments.[10]

In the midst of procedural evidentiary uncertainty,[11] both the necessity of heightened evidentiary requirements for efficient application of patent rules[12] and strong

3. President Barack Obama, State of the Union Address (Jan. 25, 2011) (transcript available at http://whitehouse.gov/photos-and-video/video/2011/01/26/2011-state-union-adress-enhanced-version?category=9).

4. During the recent State of the Union, President Obama stated that "growing industries in science and technology have twice as many openings as we have workers who can do the job . . . openings at a time when millions of Americans are looking for work." President Barack Obama, State of the Union Address (Jan. 24, 2012) (transcript available at http://www.whitehouse.gov/the-press-office/2012/01/24/remarks-president-state-union-address); *see also* President Barack Obama, Presentation to Congress Regarding the American Jobs Act (Sept. 8, 2011) (transcript available at http://www.whitehouse.gov/photos-and-video/video/2011/09/08/president-obama-presents-american-jobs-act-enhanced-version#transcript). *But See* David Goldman, *Will Patent Reform Really Create 200,000 Jobs?*, CNNMoney, http://money.cnn.com/2011/09/08/technology/patent_reform_jobs/index.htm (finding that the job-creation statistical support promoted by Senator Leahy was "extremely limited in scope" and did not definitively provide evidence that patent reform would create more jobs).

5. S. 23, 112th Cong. (2011). The Senate accepted the House version of the bill. *See* H.R. 1249, 112th Cong. (as passed by the Senate, Sept. 8, 2011).

6. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (to be codified at 35 U.S.C. § 257).

7. Patent Act of 1952, Pub. L. No. 82–593, 66 Stat. 792 (1952); *see also* James C. Danaher, *America Invents Act Brings Sweeping Change to the Patent Laws and Rules - Part 1: Patent Office Changes*, JD Supra (Sept. 26, 2011) ("This Act made significant changes to the patent law and rules.").

8. *See, e.g.*, Wesley D. Markham, *Is Best Mode the Worst? Dueling Arguments, Empirical Analysis, and Recommendations for Reform*, 51 IDEA 129, 153 (2011) (stating that removal of the best mode requirement by the America Invents Act would reduce litigation costs focused on the subjective evaluation of that requirement for the invention).

9. *See infra* Part IV.

10. *See* Edward G. Poplawski, *Selection and Use of Experts in Patent Cases*, 27 AIPLA Q.J. 1, 3 (1999) (stating that testimony from experts is "virtually essential" in patent law cases); *see also* Arianna Frankl, *The Importance of Experts in Patent Litigation*, IP Law Outlook (Jan. 25, 2012), http://www.iplawoutlook.com/2012/01/25/the-importance-of-experts-in-patent-litigation/ (reviewing a recent case in which a party to a patent suit did not rebut persuasive expert testimony and thereby lost its opportunity to later supply additional testimony on appeal).

11. *See infra* Part IV.

12. *See infra* Part V.

congressional intent regarding consistent patent decisions[13] have required federal district courts to create their own standards regarding the admissibility of expert testimony.[14] In doing so, the federal district courts have inconsistently interpreted the Supreme Court's evidentiary standard elucidated in *Daubert* for scientific expert testimony,[15] and as a result, there are substantive variations in similar cases, addressing these procedural issues, across circuits.[16] Instead of continuing to apply incongruent solutions, federal district courts should: 1) adopt the United States Court of Appeals for the Federal Circuit's *Koito* Standard as the proper measure for the admissibility of scientific expert testimony in patent cases and 2) allow admissibility of scientific expert testimony to be determined by judges on a sua sponte basis.

To provide adequate background, Part II of this Comment outlines the typical elements of the patent infringement process, including common defenses and the role of expert testimony.[17] Part III discusses the policy behind the creation of the United States Court of Appeals for the Federal Circuit (Federal Circuit) and the degree of authority the Federal Circuit exercises over cases involving patent related subject matter.[18] Part IV reviews the various disparate standards created and used by the Supreme Court, the Federal Circuit, and regional circuit courts to determine the admissibility of expert testimony in patent infringement cases.[19] Part V discusses problems faced by federal district courts attempting to resolve the disparate standards for admitting scientific expert testimony and also provides parallel areas of laws in which the Supreme Court's solution has yielded inadequate results.[20] Finally, Part VI provides long-term and short-term solutions to the problem at hand.[21] Adopting the suggested solutions will reduce confusion in federal district courts regarding the appropriate evidentiary standard, increase consistency in patent law

13. *See infra* Part III.

14. *See infra* Part IV.

15. Federal district courts have had to determine the admissibility of scientific expert testimony in patent cases in accordance with confusing and unpredictable binding authority. *See infra* Parts IV–V.

16. *See* Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 Berkeley Tech. L.J. 1155, 1197 (2002) (stating that judges may give into the temptation to assume that an expert is automatically a person having ordinary skill in the art and worthy of trust). Law is comprised of both substantive and procedural components. *See* Differing Protections of Procedural and Substantive Due Process, 16B Am. Jur. 2d *Constitutional Law* § 953 (2012) (discussing due process as comprising "dual aspect[s]": procedure and substance); *see also* John Dvorske et al., *What Law Governs*, 1A C.J.S. *Actions* § 41 ("Law is substantive if it creates, defines, and regulates the rights and duties of the parties and may give rise to a cause for action, whereas procedural law pertains to and prescribes the practice and procedure or the legal machinery by which the substantive law is determined or made effective.") However, some procedural changes can have substantive effects. *See, e.g.*, Martin H. Redish & Dennis Murashko, *The Rules Enabling Act and the Procedural-Substantive Tension: A Lesson in Statutory Interpretation*, 93 Minn. L. Rev. 26, 93 (2008) (finding a substantive effect to Rule 38, which predominantly was directed to governing procedural matters in federal appellate courts).

17. *See infra* Part II.

18. *See infra* Part III.

19. *See infra* Part IV.

20. *See infra* Part V.

21. *See infra* Part VI.

outcomes and encourage enforcement of patent rights, and provide patent infringement cases with an evidentiary standard high enough to promote efficient substantive outcomes.

II. Patent Infringement: Validity and Its Interplay with Expert Testimony

Patent law has developed into a specialized and complex branch of intellectual property.[22] To obtain a patent, a party must apply in writing to the United States Patent and Trademark Office and engage in a series of written transactions and conversations, which has been dubbed "patent prosecution."[23] Only after a patent is granted may a party engage in patent litigation and sue parties infringing on patent rights.[24] To comprehend when an expert's scientific testimony would be necessary in patent infringement suits and how the expert's testimony could then affect the case, it is important to have a foundational understanding of both the typical patent process, including invalidity hearings,[25] and the special role that experts providing scientific testimony hold in the patent infringement arena.[26]

A. The Patent Process and a Typical Patent Infringement Suit

A patent is the "right to exclude others from making, using, offering for sale, or selling [an] invention throughout the United States or importing [an] invention into the United States."[27] To be eligible for patent rights, an inventor must first file an application that discloses the invention with the United States Patent and Trademark Office (PTO).[28] A patent examiner employed by the PTO reviews the disclosure to certify that it has met several criteria. Namely: 1) the invention is properly

22. *See* Janine Robben, *Patently Obvious*, 69 Or. St. B. Bull. 19, 21 (2009) (stating that intellectual property is often practiced by boutique firms or specialized departments in larger firms, wherein patent practice is performed by parties with special technical degrees).

23. *See* Blaine Larson, *How Tangential Does It Have to Be Making Sense of* Festo*'s Tangential Limitations*, 48 Hous. L. Rev. 959, 963 (2011) (citing Black's Law Dictionary 1341 (9th ed. 2009)) (discussing the *ex parte* interactions with the United States Patent and Trademark Office that make up patent prosecution); *see also* Amin S. Khan, *Is it Patentable? An Overview of Patentability and Loss of Rights*, DCBA Brief 8, 12 (2005) (defining patent prosecution is the procurement stage during which time there are "patentability tests, supported by an examiner's search on relevant prior art, office actions, and applicant's responses, deletion and/or amendments to claims, telephone and personal interviews, petitions and appeals, and other such events").

24. *See generally* John R. Allison et al., *Valuable Patents*, 92 Geo. L.J. 435, 437–38 (2004) (finding that litigation involving patents tends to occur when the disputed patent is in the early phase of its patent term).

25. *See infra* Part II.A.

26. *See infra* Part II.B.

27. 35 U.S.C.A. § 154(a) (West 2012).

28. 35 U.S.C.A. § 111(a)(1) (West 2012). The patent prosecution process only begins with the filing of the application. It is also common for patent prosecution to include an assignment phase, in which inventors assign their rights to another party. 35 U.S.C.A. § 261 (West 2012).

claimed and disclosed,[29] 2) the invention is of a patentable subject matter and useful,[30] 3) the invention is novel,[31] 4) the invention is not obvious,[32] and 5) the invention is not subject to any statutory bars.[33] If a disclosure does not meet these criteria then the applicant has several options to continue prosecution until either the patent is issued or the application is abandoned.[34] Once the PTO issues a patent, the patent is presumed to be valid[35] for a term of 20 years.[36]

When a patent holder believes that another party is infringing upon his patent rights, he has a cause of action that may be exercised by filing civil suit in federal

29. 35 U.S.C.A. § 112 (West 2012). A patent must meet four requirements under this heading. First, the claims must enable a person of ordinary skill in the art to make and use the claimed invention without undue experimentation. *Id.*; *see also In re* Wands, 858 F.2d 731, 737 (Fed. Cir. 1988) (reviewing eight factors that could be considered in evaluation of undue experimentation). Second, the patent must contain a sufficient written description of the invention, meaning that a person of ordinary skill in the art must be convinced that the inventor has accomplished what is claimed and also fully understand the invention. 35 U.S.C.A. § 112 (West 2012). Third, the disclosure must mention the best mode to practice the claimed invention. *Id.* This particular element, however, has become less significant since the passage of the America Invents Act, which strikes all repercussions for failing to disclose a best mode. Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (to be codified at 35 U.S.C. § 257). Fourth, the patent must be sufficiently definite, meaning that the patent must have clear and distinct claims. 35 U.S.C.A. § 112 (West 2012).

30. 35 U.S.C.A. § 101 (West 2012). Eligible subject matter includes "process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." *Id.* Subject matter explicitly disallowed by the judiciary includes laws of nature, abstract ideas, and physical phenomena. Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980). The invention must also be useful, which generally means that it is operable and has substantial utility. *See* 35 U.S.C.A. § 101 (West 2012); *In re* Fisher, 421 F.3d 1365, (Fed. Cir. 2005) (discussing that substantial utility exists in a patent when there is some "immediate benefit to the public") (internal citations omitted); *In re* Swartz, 50 Fed. Appx. 422, 423–25 (Fed. Cir. 2002) (per curiam) (finding that cold fusion disclosed in an invention was not sufficiently operable).

31. 35 U.S.C.A. § 102(a) (West 2012).

32. 35 U.S.C.A. § 103(a) (West 2012).

33. 35 U.S.C.A. § 102(b) (West 2012). An application must be filed in a timely manner as measured from the date of invention. Disclosures of information regarding the invention will preclude a patent from issuing if the information was released to the public or published more than a year prior to the date of application in the U.S. However, under specific circumstances an experimental use may not bar issuance. City of Elizabeth v. Pavement Co., 97 U.S. 126, 135 (1877) (holding that experimental uses will not prompt a statutory bar if the invention cannot be experimented upon satisfactorily except for in public).

34. An applicant may, upon a final rejection: "1) appeal the decision to the Board of Patent Appeals and Interferences (the 'BPAI'), an administrative body within the USPTO; 2) file a continuation application; 3) file a continuation-in-part (C-I-P) application; 4) request continued examination (RCE); or 5) abandon the application." *See* Nard, The Law of Patents 42 (2d ed. 2011). The Board of Patent Appeals and Interferences is now renamed the Patent Trial and Appeal Board (the 'PTAB') pursuant to changes from the America Invents Act. *See* Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011); *see also* 35 U.S.C.A. § 6(a) (West 2012). The PTAB performs largely the same functions as the BPAI. *See* 35 U.S.C.A. § 6(b) (West 2012).

35. 35 U.S.C.A. § 282 (West 2012). A party challenging the validity of a patent must prove invalidity by clear and convincing evidence. *See, e.g.*, Pfizer, Inc. v. Apotex, Inc., 480 F.3d 1348, 1359 (Fed. Cir. 2007) (stating that clear and convincing evidence is an "intermediate standard" which lies between "beyond a reasonable doubt" and "preponderance of the evidence" standards).

36. 35 U.S.C.A. § 154(a)(2) (West 2012) (providing that the term for a patent begins on the issuance date and ends 20 years after the filing date).

district court.[37] The court first reviews and interprets the claims of the patent through a procedural mechanism that can vary district by district, one of which is known as a Markman Hearing.[38] In all circumstances, the judge has the final say in the interpretation of the patent's claims.[39] After completion of the claim construction, the court begins its infringement review and the alleged infringer is provided with an opportunity to present defenses.[40]

Often defendants in infringement suits allege that the patent under question is invalid.[41] By asserting invalidity, a defendant avoids an infringement investigation and instead stops the suit in a preliminary phase.[42] The benefits to avoiding an infringement investigation include lower transactional costs,[43] lower attorney fees,[44] and freedom to continue previously investigated behavior without payment of roy-

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37. 35 U.S.C.A. § 281 (West 2012). Alternatively, a potential infringer may prompt action by filing for declaratory judgment alleging patent invalidity and non-infringement. 28 U.S.C. § 2201(a) (2006); *see, e.g.*, Cat Tech LLC v. TubeMaster, Inc., 528 F.3d 871, 878–79 (Fed. Cir. 2008) (suggesting that declaratory judgment exists to "prevent avoidable damages from being incurred by a person uncertain of his rights and threatened with damage by delayed adjudication" (quoting Minn. Mining & Mfg. Co. v. Norton Co., 929 F.2d 670, 673 (Fed. Cir. 1991) (internal citations omitted))).

38. *See* Markman v. Westview Instruments, Inc., 517 U.S. 370, 379–80 (1996). Markman hearings, a necessary part of any patent case with complicated claim language, allow both parties to testify as to their understanding of the claim language in the patent at hand. Federal district courts have discretion as to "whether, when, and how to conduct" these proceedings. *See* Doris Johnson Hines & Esther H. Lim, *Markman Practice: Past and Present*, 714 PLI, PATENTS, COPYRIGHTS, TRADEMARKS, AND LITERARY PROPERTY COURSE HANDBOOK SERIES 581, 583 (2002).

39. *Markman*, 517 U.S. at 379–83.

40. *See* 35 U.S.C.A. § 282 (West 2012). The statute specifically provides that:

> The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded: (1) Noninfringement, absence of liability for infringement or unenforceability, (2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability [including §§101–103 and 112], (3) Invalidity of the patent or any claim in suit for failure to comply with any requirement of sections 112 or 251 of this title, (4) Any other fact or act made a defense by this title.

Id.

41. *See, e.g.*, Cadence Pharm., Inc. v. Paddock Labs., Inc., No. 11-733-LPS, 2012 WL 4565013, at *2 (D. Del. Oct. 1, 2012) (reviewing the affirmative defense that several patent claims are invalid); Hoffman-LaRoche Inc. v. Apotex Inc., No. 07-4417 (SRC) (MAS) 2012 WL 4661588, at *1 (D.N.J. Oct. 1, 2012) (investigating an invalidity defense based on obviousness).

42. *See, e.g.*, Nellie A. Fisher, *The Licensee's Choice: Mechanics of Success Fully Challenging a Patent Under License*, 6 TEX. INTELL. PROP. L.J. 1, 7 (1997) (finding that licensees often assert invalidity "as a defense to a suit filed by the patentee for patent infringement"); Thomas H. Case & Scott R. Miller, *An Appraisal of the Court of Appeals for the Federal Circuit*, 57 S. CAL. L. REV. 301, 329 (1984) (categorizing invalidity as an asserted affirmative defense).

43. *See* Edmund W. Kitch, Graham v. John Deere Co.: *New Standards for Patents*, 1966 SUP. CT. REV. 293, 342 (concluding that an invalid patent is often considered "an effective threat" because "defense of an infringement suit . . . is expensive").

44. *See id.* (discussing the favorable nature of settlement as opposed to litigation after a party has announced its intention to begin invalidity hearings).

alties.[45] To render a patent invalid, a defendant (or the party seeking declaratory judgment) may assert that the patent was anticipated or obvious at the time it was filed.[46] To show that the patent under question was anticipated by a particular reference, the testimony must:

1) Be provided by one skilled in the art,

2) Identify each claim element,

3) State the witnesses' interpretation of the claim element, and

4) Explain in detail how each claim element is disclosed in a single prior art reference.[47]

Anticipation is a question of fact.[48] If the patent infringement suit is presented before a jury in federal district courts, anticipation is a matter for the jury to decide.[49] If the decision is appealed, the Federal Circuit reviews anticipation and questions of fact for clear error.[50]

To show that a set of references had obviated the patent, testimony must meet elements one through three above and also:

4) Explain in detail how each claim element is disclosed in a particular set of references, and

5) Provide a motivation for one skilled in the art to combine that particular set of references in order to practice the claimed method.[51]

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45. *See* David A. Toy, *Implied Non-Infringement and Ownership Warranties in Intellectual Property Agree*, 41 Colo. Law. 61, 61 (2012).

46. *See* 35 U.S.C.A. § 282 (West 2012). Invalidity may also be asserted on grounds that mirror the provisions of 35 U.S.C. § 102 and 35 U.S.C. § 103. *See* B.D. Daniel, *Standards of Proof in Patent Infringement Litigation: A Critique*, 36 AIPLA Q.J. 369, 378 (2008); *see also* Christopher R. Leslie, *The Anticompetitive Effects of Unenforced Invalid Patents*, 91 Minn. L. Rev. 101, 109 (2006) (discussing two categories of invalidity suits: "First, it may argue that the patent is invalid as a traditional defense . . . Second, that patent infringement defendant may assert an antitrust counterclaim based on the patentee's enforcement of a fraudulently procured (or known invalid) patent"). All invalidity discussed within the Comment is within the scope of Leslie's first category of invalidity.

47. Schumer v. Lab. Computer Sys., Inc., 308 F.3d 1304, 1315–16 (Fed. Cir. 2002).

48. *In re* Cruciferous Sprout Litig., 301 F.3d 1343, 1346 (Fed. Cir. 2002) (citing Gen. Elec. Co. v. Nintendo Co., 179 F.3d 1350, 1353 (Fed. Cir. 1999)).

49. Finisar Corp. v. DirecTV Group, Inc., 523 F.3d 1323, 1332 (Fed. Cir. 2008).

50. Sanofi-Synthelabo v. Apotex, Inc., 550 F.3d 1075, 1082 (Fed. Cir. 2008).

51. *See generally* Graham v. John Deere, 383 U.S. 1 (1966). A determination of obviousness is a matter of law, for the judge to decide. KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 416–17 (2007). After hearing testimony, the four factors reviewed for an inquiry of obviousness by the judge are: 1) the level of ordinary skill in the

The Supreme Court has determined that obviousness is a question of law.[52] However, not all federal district courts treat it as such, and as a result, obviousness is occasionally presented as a matter for the jury to decide.[53] Upon appeal to the Federal Circuit, the standard of review for obviousness and questions of law is *de novo*.[54]

A judge may use anticipation or obviousness testimony to find the patent under question to be invalid.[55] If the patent under suit is invalidated, the plaintiff no longer has a claim and the case is dismissed — the defendant will have presented a defense sufficient enough to allow the alleged infringer to legally continue his behavior.[56] However, patents are presumed to be valid, given that there is a presumption of agency correctness, and the standard of proof for invalidity is stringent.[57] To overcome a valid patent and successfully meet the standard, a challenging party must provide a significant amount of evidence that the patent is invalid.[58] The recent controversial landmark decision, *Microsoft Corp. v. i4i Ltd. Partnership*,[59] clarified that invalidity must be shown by clear and convincing evidence and not by a preponderance of the evidence.[60] The presumption of validity stands regardless of whether or not the set of prior art reviewed by the PTO was complete.[61] To meet the clear and convincing evidentiary standard, many litigants provide expert testimony, and scientific expert testimony can be crucial in proving invalidity.[62]

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art, 2) the scope and content of the prior art, 3) the differences between the claimed invention and the prior art, and 4) any secondary considerations. *See Graham*, 383 U.S. at 17–18.

52. *See KSR Int'l Co.*, 550 U.S. at 418.

53. *See, e.g.*, Kinetic Concepts, Inc. v. Smith & Nephew, Inc., 688 F.3d 1342, 1353, 1356–57 (Fed. Cir. 2012) (instructing a jury to determine the factual underpinnings of a patent's nonobviousness, a question of law, but reviewing alternative methods employed in some district courts wherein a jury's factual findings would have been used for an obviousness determination).

54. *See* Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1996).

55. *See* Daniel, *supra* note 46.

56. *See* Michelle L. Evans, *Establishing the Defense of Patent Invalidity*, AM. JUR. 3D *POF*, §§ 8–9 (2012).

57. *See* Microsoft Corp. v. i4i, Ltd. Partnership, 131 S. Ct. 2238, 2242 (2011) (explicitly stating that the standard for invalidity is clear and convincing evidence from codification of the common law in the Patent Act of 1952); 35 U.S.C.A. § 282 (West 2012) (providing invalidity as a defense that may counter an infringement suit); *see also* Sue Ann Mota, *The Times They Are a' Changin':* Bilski v. Kappos, Global Tech v. SEB, Standford v. Roche, *and* Microsoft v. i4i, 16 J. TECH. L. & POL'Y 257, 269–71 (2011).

58. *See* Evans, *supra* note 56, at § 15.

59. 131 S. Ct. 2238 (2011).

60. *Id.* at 2246.

61. *See* Irina Oberman, *Maintaining the Clear and Convincing Evidence Standard for Patent Invalidity Challenges in* Microsoft Corp. v. i4i Limited Partnership, 131 S. Ct. 2238 (2011), 35 HARV. J.L. & PUB. POL'Y 439, 440–41 (2012) (suggesting that patents without adequate prior art review in the PTO have benefited from the clear and convincing evidence standard, and that these patent holders can now stymie legitimate innovation with their "bad patents").

62. *See Patent Validity and Infringement Litigation*, 60 AM. JUR. 2D *Patents* § 909 (2012) (providing that expert testimony is typically provided in questions of patent validity).

B. Expert Testimony in Patent Cases

In patent proceedings, members of the appropriate scientific community are selected and verified as meeting a minimum scientific expert testimony standard.[63] If they meet this standard, they bear the title of a "person having ordinary skill in the art" (PHOSITA). Only PHOSITAs may explain the contested technology before the court.[64] The PHOSITA role is filled by an expert who has the normal skills and knowledge in a specific technology for a particular set of patent proceedings.[65] When a patent examiner first reviews a patent, many of the essential criteria for issuance require the patent examiner to consider a hypothetical PHOSITA's perspective.[66] If the patent is later brought before the court in an infringement proceeding, the judge may hear testimony on claim construction from a technical expert, given that the expert may provide a PHOSITA's perspective.[67] After all disputed claims have been reviewed in claim construction proceedings, if the parties do not settle or request summary judgment,[68] some defendants proceed to have their technical experts argue that the allegedly infringed patent was invalid at the time of filing, usually by the anticipation and obviousness constructions discussed above.[69]

Patent infringement proceedings that involve juries provide additional opportunities for technical experts to advance their corresponding party's agenda.[70] Juries are not used in Markman hearings,[71] but it is possible there will be a jury presence

63. *See* James Buchwalter et al., 69 C.J.S. *Patents* § 77 (2012) (discussing the viewpoint of a person of ordinary skill in the invention, which must meet at least the court determined "level of ordinary skill in the art"). *But see* Jonathan J. Darrow, *The Neglected Dimension of Patent Law's PHOSITA Standard*, 23 Harv. J.L. & Tech. 227, 229–38 (2009) (reviewing the PHOSITA standard and the singling out the "level of ordinary skill" as a largely untouched and vague area of law).

64. *See* Darrow, *supra* note 63, at 236.

65. *See generally* Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir. 1987) (likening a PHOSITA to "the reasonable man" found in other branches of the law).

66. A patent examiner uses the PHOSITA standard to assist in determinations of novelty and obviousness. 35 U.S.C.A. §§102(a), 103(a) (West 2012).

67. *See* DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1362 (Fed. Cir. 2006) (allowing one party's expert to speculate about a PHOSITA's characterization); *cf.* Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356, 1362 (Fed. Cir. 2008) (disallowing a patent attorney to testify to technical issues given that he was not also a qualified technical expert and therefore unable to provide a PHOSITA's perspective).

68. *But see* Damon C. Andrews, *Why Patentees Litigate*, 12 Colum. Sci. & Tech. L. Rev. 219, 220 (2011) (stating that settlement, or litigation in efforts to achieve settlement, are the most popular routes taken in patent infringement suits).

69. *See supra* Part II.A.

70. *See generally* Martha K. Gooding & William C. Rooklidge, *The Real Problem with Patent Infringement Damages*, 91 J. Pat. & Trademark Off. Soc'y 484, 485–88 (2009) (reviewing an average juror's susceptibility in patent cases to factors other than evidence and law, including punishment, net returns for the patentee, and other personal reasons).

71. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372 (1996) (pronouncing that the "construction of a patent, including terms of art within its claim, is exclusively within the province of the court").

post claim construction for infringement proceedings.[72] Interestingly enough, despite the Supreme Court's explicit determination that obviousness is a matter of law in *KSR International Co. v. Teleflex, Inc.*,[73] it is still common practice for federal district courts to employ jury trials for most hearings on validity, including those related to obviousness.[74] Many active patent attorneys disagree with such judicial practices and have expressed concern that juries are not the appropriate party to deter-determine whether or not a patent is valid.[75] Given the common concern that juries "decide randomly" and are composed of "mostly people of only average education and intelligence,"[76] there is ample opportunity for a likable technical expert to sway the decision-maker with or without sufficient evidence to support his testimony.[77] Although experts play an important role in patent infringement cases, their role is actually subordinate to that of the presiding court, given that the court system can choose how to apply evidentiary standards that have the potential to impose limitations on the expert's testimony.

III. The Role of the Court of Appeals for the Federal Circuit

The Court of Appeals for the Federal Circuit is often considered the ultimate authority on patent law matters.[78] As the authority on almost all substantive patent law and on some procedural patent law, it is important to understand both the policy behind the creation of the Federal Circuit[79] and the extent to which the Federal Cir-

72. *See generally* U.S. Const. amend. VII. The Seventh Amendment provides that "[i]n [s]uits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved." *Id.*

73. 550 U.S. 398, 416–17 (2007).

74. *See* William A. Demory, *Patent Claim Obviousness in Jury Trials: Where's the Analysis?*, 6 J. Bus. & Tech. L. 449, 458–60 (2011) (providing a comprehensive review of various district courts that employ juries to yield "a simple 'yes' or 'no' on whether a patent claim is obvious" without addressing all of the *Graham* factors); *see also* Kinetic Concepts, Inc. v. Smith & Nephew, Inc, 688 F.3d 1342, 1356 (Fed. Cir. 2012) (premising further discussion on the provision that obviousness is a "mixed question of law and fact").

75. *See, e.g.*, Paul R. Michel & Michelle Rhyu, *Improving Patent Jury Trials*, 6 Fed. Cir. B.J. 89, 90 (1996) (stating that experienced "practitioners often cannot predict jury outcomes"); Devon Curtis Beane, *Whose Right Is It Anyway: The Evisceration of an Infringer's Seventh Amendment Right in Patent Litigation*, 5 U. Ill. L. Rev. 1853, 1853 (2011) (suggesting modern legal scholarship finds that patent law is "far too complex" for jury trials); Allan N. Littman, *The Jury's Role in Determining Key Issues in Patent Cases:* Markman, Hilton Davis *and Beyond*, 37 IDEA 207, 209 (1997) (expressing the sentiment that jury trials may be "less predictable" and "less susceptible to review for consistency").

76. *See* Michel & Rhyu, *supra* note 75, at 90.

77. *See generally* Steve E. Perkel, *If They Don't Like You They Won't Hear You: An Essay on Persuasive Communication*, The Jury Expert, May 1, 2010, *available at* http://www.thejuryexpert.com/2010/05/if-they-dont-like-you-they-wont-hear-you-an-essay-on-persuasive-communication/.

78. *See, e.g.*, James B. Kobak, Jr., *Intellectual Property, Competition Law and Hidden Choices Between Original and Sequential Innovation*, 3 Va. J.L. & Tech. 6, 39 (1998) (claiming that the Federal Circuit is the "ultimate authority for most [patent] misuse issues."); John F. Duffy, *The Federal Circuit in the Shadow of the Solicitor General*, 78 Geo. Wash. L. Rev. 518, 536–37 (2010) (suggesting that Supreme Court review relies almost entirely on splits within the Federal Circuit when it sits en banc, therefore providing a great deal of decision-making power to the Federal Circuit even in cases of review).

79. *See infra* Part III.A.

cuit really has the final word in patent law related matters.[80] Clarification of the underlying purpose of the Federal Circuit and its role in the promulgation of evidentiary standards for patent law allows for a cogent perspective as to why the disparate standards throughout the federal court system for the admissibility of scientific expert testimony are undermining the core values of patent law.

A. The Policy Behind the Creation of the Federal Circuit

The Federal Circuit was created to solve a variety of nationwide legal issues, many of which are patent law specific.[81] Before the creation of the Federal Circuit, patent law litigants invested a great deal of time in selecting a favorable forum because forum shopping was the norm.[82] At that time, certain courts provided an expansionist approach to patents and therefore provided stronger patent protection, while others acted with a strict textualist approach and were not favored by patent holders.[83] Forum shopping issues were also in part caused by the lack of national uniformity in patent law jurisprudence, which led to unfair and varied doctrinal developments across circuit courts.[84]

The Federal Circuit has been predominately hailed as a success by legal scholars.[85] Congress created the Federal Circuit in 1982, which is a conglomeration of two older courts: the Court of Claims and the Court of Customs and Patent Appeals.[86] The addition of the Federal Circuit as the newest federal court has gained attention as "perhaps the single most significant institutional innovation in the field of intellectual property in the last quarter-century."[87] It is also commonly thought that the Federal Circuit has unified many disparate patent laws across the country and increased consistency in patent law rulings.[88]

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80. *See infra* Part III.B.

81. *See* 28 U.S.C. § 1295 (2006). The Federal Circuit also has appellate review over the following courts' decisions: the Court of International Trade, International Trade Commission, Merit Systems Protection Board, Court of Veterans Appeals, Court of Federal Claims, and United States Patent and Trademark Office. *Id*.

82. *See* H.R. Rep. No. 97-312, at 20–22 (1981).

83. *See id.*

84. *See id.*

85. *See, e.g.*, Peter Lee, *Patent Law and the Two Cultures*, 120 Yale L.J. 2, 75 (2010) (reviewing the Supreme Court's hands off approach within the Federal Circuit created patent law jurisprudence). *But see* Jeanne C. Fromer, *Patentography*, 85 N.Y.U. L. Rev. 1444, 1446–47 (2010) (arguing that the Federal Circuit has not shown enough deference to federal district courts and has promoted too much judicial activism).

86. Federal Courts Improvement Act of 1982, Pub. L. No. 97–164, 96 Stat. 25 (1982).

87. William M. Landes & Richard A. Posner, The Economic Structure of Intellectual Property Law 7 (2003).

88. *See, e.g.*, Rochelle Cooper Dreyfuss, *Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. Rev. 1, 8 (1989) (surveying the Federal Circuit case law and finding that its rules are "consistent with the underlying philosophy of patent law" and that they are "easy" for the lower courts and the research community to apply); R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, U. Pa. L. Rev. 1105, 1110–11 (2004) (highlighting the successful trajectory of the Federal Circuit's progress).

B. The Authority of the Federal Circuit in Patent Cases

The Federal Circuit is the appellate court for all patent infringement cases. The Federal Circuit differs from the other federal appellate courts in that its jurisdiction is over cases involving specific subject matter as opposed to cases originating within certain geographical areas.[89] The Federal Circuit is presided over by twelve judges, and an odd-numbered panel consisting of at least three judges hears its cases.[90] Any patent case that reaches the Federal Circuit has either passed through litigation in a U.S. district court or prosecution appeals within the PTO administrative system.[91] After the Federal Circuit decides a case, the decision is presumed to be valid unless it is modified, vacated, reviewed, set aside, or remanded by the Supreme Court.[92] Review by the Supreme Court is always by certiorari.[93]

The Federal Circuit's procedural law jurisprudence is complicated by its choice of law standards. When a case is captured by a subject matter that removes it to federal district courts and thereafter the Federal Circuit, the Federal Circuit panel has authority to decide the entire case, not strictly issues related to patent law.[94] Although all federal appellate courts are required to adhere to uniform rules of procedure,[95] there are some significant differences between the procedural standards for a certain regional circuit court and the Federal Circuit.[96] To provide guidance to litigants on the law that will be applied in these circumstances, the Federal Circuit has stated that it will defer to regional circuit law for procedural questions that are not sufficiently "unique" or "related" to patent law or a question that does not "bear [] an essential relationship to" patent law.[97] Therefore, the Federal Circuit has devel-

89. 28 U.S.C. §§ 1295, 1338(a) (2006). Section 1338(a) provides federal district courts with original jurisdiction over patent cases. 28 U.S.C. §1338(a) (2006). Section 1295 grants the Federal Circuit appellate jurisdiction over many different suits from different courts. 28 U.S.C.A. §1295 (2006). Pursuant to section 1295(a)(1), the Federal Circuit has exclusive jurisdiction over appeals from final decisions of the U.S. district courts relating to patents. 28 U.S.C. §1295(a)(1) (2006).

90. 28 U.S.C. § 46 (2006); FED. R. APP. PROC. 47(a)(1) (allowing appellate courts to create and distribute their own local rules for governance); FED. CIR. R. 47(a)(2). For information regarding the allocation of judges per individual circuit, see 28 U.S.C. § 44 (2006).

91. Litigation that has been appealed from a district court accesses the Federal Circuit pursuant to 28 U.S.C. § 1295. 28 U.S.C. § 1295(a)(1) (2006). For suits that were initiated in the PTO, Federal Circuit appellate jurisdiction is provided by 28 U.S.C. § 1295(a)(4)(A) (2006); 35 U.S.C.A. § 141 (West 2012).

92. 28 U.S.C. § 2106 (2006).

93. 28 U.S.C. § 1254(1) (2006). There is no longer appeal available under 28 U.S.C. § 1252 (1978) (repealed 1988).

94. *See* Ted L. Field, *Improving the Federal Circuit's Approach to Choice of Law for Procedural Matters in Patent Cases*, 16 GEO. MASON L. REV. 643, 648 (2009) (addressing the *Panduit* standard that initially articulated a choice of laws context for the federal circuit for issues that were not related to patent law but that yet were to be determined by the Federal Circuit).

95. *See, e.g.*, FED. R. CIV. P.; FED. R. EVID.

96. *See generally* Field, *supra* note 94.

97. Panduit Corp. v. All States Plastic Mfg. Co., 744 F.2d 1564, 1574–75, 1575 n.14 (Fed. Cir. 1984) (per curiam).

oped procedural law that intermingles regional circuit rules with its own precedent, and the choice of law doctrine can be fairly unpredictable.[98]

IV. Standards for Admissibility of Scientific Expert Testimony in Patent Cases

The Supreme Court, the Federal Circuit, and several other regional circuit courts have each created unique standards that govern when scientific expert testimony is admissible.[99] The Supreme Court has analyzed the Federal Rules of Evidence and developed the *Daubert* Standard to govern the admissibility of scientific testimony, which is discussed in Section A below.[100] The *Daubert* Standard sets a fairly low bar for the admission of scientific testimony. The Federal Circuit has approached the admissibility of scientific testimony with considerations specific to patent law and developed the *Koito* Standard, which is discussed below in Section B.[101] The *Koito* Standard imposes significant restrictions on the admission of scientific expert testimony as it relates to patent law. Regional circuit courts have also adopted varying standards for the admissibility of scientific expert testimony, which are occasionally used by the Federal Circuit pursuant to its procedural choice of law doctrine, and one example is discussed below in Section C.[102] The regional circuit court standards vary significantly.[103] Federal district courts handling patent infringement cases are faced with several complex challenges: they must follow Supreme Court precedent on the matter, they must determine whether the evidentiary standard to be applied should be addressed in the same manner as the Federal Circuit or as their regional circuit court, and they must apply the evidentiary standard without deviating from the Supreme Court precedent.

A. Evidentiary Standard One: Daubert *and the Supreme Court*

In *Daubert v. Merrell Dow Pharmaceuticals*, the Supreme Court drastically altered and clarified the law regarding the admissibility of scientific expert testimony.[104] Prior to the Supreme Court's decision, several lower courts had adopted a test of their own: scientific expert testimony was admissible if the theory on which it was based had "gained general acceptance in [its] particular field."[105] This older test be-

98. *See* Sean M. McEldowney, *The Essential Relationship Spectrum: A Framework for Addressing Choice of Procedural Law in the Federal Circuit*, 153 U. Pa. L. Rev. 1639, 1652–53 (2005) (expressing concern that the procedural law for patent cases is unpredictable as a result of the Federal Circuit's inconsistent application of its choice of law rules).

99. *See infra* Part IV.A–IV.C.

100. *See infra* Part IV.A.

101. *See infra* Part IV.B.

102. *See infra* Part IV.C.

103. *See infra* Part V.C.

104. 509 U.S. 579, 587 (1993).

105. Frye v. United States, 293 F. 1013, 1014 (D.C. Cir. 1923).

came known as the *Frye* Standard.[106] The *Frye* Standard was extremely administrable given that the presiding judge did not need to understand the theories supporting the scientific testimony at hand; he only needed to determine whether the scientific community had accepted the supporting theories as valid.[107] However, when the Federal Rules of Evidence were enacted in 1975, courts were provided with new standards for admission of scientific expert testimony that largely discarded the *Frye* Standard.[108]

Given these new rules, the Supreme Court used *Daubert* as an opportunity to provide trial judges with a directive: to take a more active role in determining the admissibility of scientific expert testimony. The Court held that Federal Rule of Evidence 702[109] requires judges to review the reliability of the methods supporting scientific expert testimony and the qualifications of the expert.[110] To assist the district courts in their reliability inquiries, the Court issued several factors that must be considered:[111]

1) Whether the theory or technique can be (and has been) tested,[112]

2) Whether the theory or technique has been subjected to peer review and publication,[113]

3) Whether there is a known or potential rate of error involved in a particular scientific technique,[114]

4) Whether there exists or are maintained standards controlling the technique's operation, and[115]

5) Whether there is "general acceptance" of the theory or technique.[116]

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106. *See, e.g.*, United States v. Stifel, 433 F.2d 431, 436 (6th Cir. 1970); United States v. Amaral, 488 F.2d 1148, 1152 (9th Cir. 1973); United States v. Bruno, 333 F. Supp. 570, 574 (E.D. Pa. 1971).

107. *See* David E. Bernstein, Frye, Frye, *Again: The Past, Present, and Future of the General Acceptance Test*, 41 JURIMETRICS J. 385, 386–87 (2001) (presenting significant evidence that the *Frye* Standard is alive and still in use throughout many jurisdictions).

108. Act to Establish Rules of Evidence for Certain Courts and Proceedings, Pub. L. 93–595, 88 Stat. 1926 (1975). Although the Federal Rules of Evidence do not explicitly retain the *Frye* Standard, the *Daubert* factors in part require the trial judge to still consider whether there is "general acceptance" of the theory — the essence of the *Frye* Standard. *See Frye*, 293 F. at 1014.

109. FED. R. EVID. 702.

110. Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 589–90 (1993).

111. *See id.* at 593–94. In some literature and judicial opinions, factors 3 and 4 are combined and represented as a single factor.

112. *Id.* at 593.

113. *Id.*

114. *Id.* at 594.

115. *Id.*

The *Daubert* factors may, at minimum, be summarized as charging the courts with addressing testability, peer review, likelihood of error, controlling standards, and general acceptance in their review of the applicable scientific expert testimony.[117] Courts have interpreted the *Daubert* factors to provide a comprehensive yet low bar for the admissibility of scientific expert testimony.[118]

No other rule among the Federal Rules of Evidence raises the bar for the admission of scientific expert testimony.[119] In fact, the language of Rule 705 further emphasizes the low admissibility bar promoted by the *Daubert* Standard.[120] Rule 705 prescribes that an expert may "testify in terms of opinion or inference" even if the expert does so "without first testifying to the underlying facts or data."[121] The Supreme Court has continued to apply the *Daubert* Standard in more recent decisions, and it is still valid law.[122]

B. Evidentiary Standard Two: Koito *and the Federal Circuit*

Although the Federal Circuit has stated that extrinsic expert testimony is secondary in nature to the intrinsic nature of a patent application itself,[123] many Markman

116. *Id.*

117. *Id.* at 593–94. The four *Daubert* factors must be reviewed, but courts are encouraged to look to any other relevant factors in determining the reliability of the scientific testimony. *Id.* at 594. All evidence reviewed must be relevant pursuant to Rule 402. FED. R. EVID. 402. "Relevant" is defined to be any evidence that has "any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence." FED. R. EVID. 401.

118. *See, e.g.*, Harvard Law Review Ass'n, *Reliable Evaluation of Expert Testimony*, 116 HARV. L. REV. 2142, 2162 (2003) (finding that there is some support in *Daubert* for "liberalizing" the standard for admissibility); *see also* Edward K. Cheng & Albert H. Yoon, *Does* Frye *or* Daubert *Matter? A Study of Scientific Admissibility Standards*, 91 VA. L. REV. 471, 478 (2005) (considering that some courts continue to effectively adhere to the *Frye* Standard while claiming that they are performing the *Daubert* review). *But see* Victor E. Schwartz & Cary Silverman, *The Draining of* Daubert *and the Recidivism of Junk Science in Federal and State Courts*, 35 HOFSTRA L. REV. 217, 242 (2006) (countering that some courts have been overemphasizing the "flexible" approach language, which detracts from the Supreme Court's intent to limit evidence to only reliable evidence).

119. The only other applicable standard for scientific expert testimony may be found in Rule 104(a). FED. R. EVID. 104(a). Rule 104(a) merely requires the trial judge to determine "whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." *Daubert*, 509 U.S. at 592.

120. FED. R. EVID. 705.

121. *Id.* "The expert may testify in terms of opinion or inference and give reasons therefor without first testifying to the underlying facts or data, *unless the court requires otherwise*. The expert may in any event be required to disclose the underlying facts or data on cross-examination." *Id.* (emphasis added).

122. *See, e.g.*, Gen. Elec. Co. v. Joiner, 522 U.S. 136, 151 (1997) (applying the relevance plus reliability standard from *Daubert*); Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141 (1999) (expanding the *Daubert* Standard to all types of expert testimony, not just "scientific" expert testimony, which was later codified in an amendment to Rule 702); *see also* FED. R. EVID. 702 advisory committee's note (citing *Kumho Tire Co.*, 526 U.S. at 156–57).

123. *See* Phillips v. AWH Corp., 415 F.3d 1303, 1317–18 (Fed. Cir. 2005) (stating that expert testimony may be helpful in patent cases in the following ways: "to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is con-

Hearings and patent infringement suits frequently introduce some form of scientific expert testimony.[124] Scientific expert testimony is regularly introduced in patent suits according to the particular district's local rules,[125] and then the sufficiency and relevancy of the testimony must be determined.

In *Koito Mfg. Co., Ltd. v. Turn-Key-Tech, LLC*,[126] the Federal Circuit held that the unsupported opinion of even the most qualified expert is simply not "substantial evidence" adequate to support a jury verdict.[127] In district court, Koito Manufacturing had initially filed a complaint for declaratory judgment of non-infringement due to the invalidity of U.S. Patent No. 5,045,268 (the "'268 patent") and succeeded in pleading its case of anticipation before a jury.[128] On appeal, patentee Turn-Key-Tech attacked the scientific testimony of Koito's expert witness, Dr. Kazmer, as conclusory and insufficient to prove patent invalidity.[129] Dr. Kazmer was brought to the stand to testify that the '268 patent was anticipated by Japanese Unexamined Application No. 148,082 (JP '082).[130] Dr. Kazmer's sole testimony on the matter was limited to a few conclusory lines: he stated that '268 was anticipated by five different prior art patents that included JP '082.[131] Needless to say, the Federal Circuit was unimpressed with the Defense's attempt to invalidate the '268 patent.[132] The court explained that Dr. Kazmer's testimony was general and conclusory because he did not set forth evidence that discussed how the mentioned references anticipated the particular patent at hand.[133]

The Federal Circuit went even further than the particular facts of the case and announced in *Koito* that its decision is not merely limited to issues of anticipation

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sistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field").

124. *See generally* Molly Treadway Johnson et al., *Expert Testimony in Federal Civil Trials: A Preliminary Analysis*, FED. JUDICIAL CTR., 1 (2000) (ranking patent cases as one of the top three types of civil cases frequently requiring expert testimony).

125. *See, e.g.*, E.D. TEX. P.R. 4-2(b) (2012) (providing the Eastern District of Texas' local patent rule regarding the admissibility of expert testimony and the associated procedural requirements).

126. Koito Mfg. Co. v. Turn-Key-Tech, LLC, 381 F.3d 1142 (Fed. Cir. 2004).

127. *See id.* at 1152.

128. *See id.* at 1144–45.

129. *See id.* at 1151–52.

130. *Id.*

131. *Id.* at 1152. Testimony provided by Dr. Kazmer was provided as follows:

> All these prior art patents provide for products and ways of making products with thick and thin sections. The gate locations are shown, and they all have inherently crossing flows in sections of the product, sometimes substantial sections of these products, such that they all would have a cross-laminated section as Turn-Key is applying that term to the accused lenses.

Id.

132. *See id.*

133. *Id.*; *see also* Minn. Mining & Mfg. Co. v. Chemque Inc., 303 F.3d 1294, 1305–08 (Fed. Cir. 2002).

in patent cases.[134] The court specifically stated that it requires "substantial evidence" for jury verdicts involving issues of anticipation, obviousness, and the doctrine of equivalents.[135]

C. Evidentiary Standard Three: Choice of Law Doctrine and the Federal Circuit Court

Although the Federal Circuit has favored its *Koito* Standard, the court has applied, particularly in recent times, the *Koito* Standard sporadically.[136] Instead of providing a consistent evidentiary standard, the Federal Circuit has revealed that it is willing to apply its aforementioned procedural choice of law doctrine in situations regarding the admissibility of scientific expert testimony.[137] In *Uniloc v. Microsoft*,[138] the Federal Circuit held that the district court had "improperly rejected" an expert's testimony as "incomplete, oversimplified and frankly inappropriate."[139] In reaching these conclusions, the Federal Circuit expressly stated that it had applied the First Circuit's evidentiary standard to determine the admissibility of scientific expert testimony.[140] The First Circuit had adopted a special relevance version of *Daubert* as its evidentiary standard,[141] so the Federal Circuit reviewed the scientific expert testimony for admissibility pursuant to the First Circuit's altered *Daubert* Standard.[142] Overall, pursuant to the choice of law doctrine, the Federal Circuit may apply the regional circuit court's evidentiary standard for the admissibility of scientific expert testimony, wherein the regional circuit court jurisprudence to be applied is determined by the initial location of the suit in federal district court.[143]

134. *See Koito Mfg. Co.*, 381 F.3d at 1152–53.

135. *See id.* at 1152 & n.4. The Federal Circuit has continued to apply the expert testimony standard from *Koito* to its current docket. *See, e.g.*, AquaTex Indus., Inc. v. Techniche Solutions, 419 F.3d 1374, 1380 (Fed. Cir. 2005) (applying the *Koito* Standard to defenses involving the doctrine of equivalents); Innogenetics, N.V. v. Abbott Labs., 512 F.3d 1363, 1373–74 (Fed. Cir. 2008) (further extending the *Koito* Standard to determining validity matters of obviousness).

136. *See, e.g.*, i4i Ltd. Partnership v. Microsoft Corp., 598 F.3d 831, 841 (Fed. Cir. 2010) (applying the procedural law of the Fifth Circuit for admission of evidence relating to anticipation); Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1301 (Fed. Cir. 2011) (using the procedural law of the First Circuit for determining the admission of evidence relating to claim construction).

137. *See, e.g.*, *Uniloc USA, Inc.*, 632 F.3d at 1305–06 (applying regional circuit law, which governed the admissibility of expert testimony); NTP, Inc. v. Research in Motion, Ltd., 418 F.3d 1282, 1324–25 (Fed. Cir. 2005) (holding that JMOL was a procedural issue, and therefore applied the Fourth Circuit's law, which approved denial of invalidity on the grounds that scientific expert testimony was conclusory).

138. *Uniloc USA, Inc.*, 632 F.3d at 1292.

139. *Id.* at 1305 (internal citations omitted).

140. *Id.* at 1305–06.

141. *See* Gibson v. City of Cranston, 37 F.3d 731, 735 (1st Cir. 1994) (directing courts in the First Circuit confronted with a motion for judgment as a matter of law to "not consider the credibility of witnesses, resolve conflicts in testimony, or evaluate the weight of evidence").

142. *Uniloc USA, Inc.*, 632 F.3d at 1305–06.

143. *See* NTP, Inc. v. Research in Motion, 418 F.3d 1282, 1324 (Fed. Cir. 2005) ("The grant or denial of a motion for judgment as a matter of law is a procedural issue not unique to patent law, reviewed under the law of the regional circuit in which the appeal from the district court would usually lie." (quoting Summit Tech., Inc. v. Nidek Co., 363 F.3d 1219, 1223 (Fed. Cir. 2004))).

V. The Need for Intervention

There are too many standards that govern scientific expert testimony evidentiary jurisprudence, and the Federal Circuit has not provided guidance as to when a specific set of evidentiary standards must be followed for patent law cases.[144] Such uncertainty prevents patent cases in federal district courts from maintaining consistency across rulings regarding the admissibility decisions.[145] Unsurprisingly, regional circuit courts have already adopted laws that in many circumstances disregard the *Daubert* Standard and instead complicate federal district court patent law jurisprudence pursuant to the choice of law doctrine.[146] Even beyond the regional circuit court jurisprudence, other branches of law have recognized the need to depart from the *Daubert* Standard and create more particularized standards.[147] The need for intervention in patent law jurisprudence is exemplified further by these instances of self-preservation: other regional circuit courts are willing to definitively depart from the *Daubert* Standard for scientific expert testimony and other complex areas of law have been quick to implement unique evidentiary standards to suit their specific purposes.

A. Patent Validity Is Uncertain in Federal District Courts with the Current Expert Testimony Admission Standards

1. Anticipation

Several federal district courts, provided with merely conclusory scientific expert testimony, have expressed concern about sufficiently following all binding legal precedent when asked to resolve issues of patent invalidity relating to anticipation. In the United States District Court for the District of Delaware, the court was provided with scientific expert testimony that "did not provide any basis for [the] conclusion," and as a result the court first reviewed both the *Daubert* and the *Koito* Standards.[148] The court found that the expert had skipped "the second required step of comparing claim elements to the prior art" by making "naked conclusions of anticipation."[149] Some courts, like the United States District Court for the Northern District of Illinois, have decided to follow the *Koito* Standard and now require that testimony disclose particular aspects of the prior art of all the relevant patent's claims.[150] The United States District Court for the Western District of Wisconsin has

144. *See infra* Part V.A.
145. *See infra* Part V.B.
146. *See infra* Part V.C.
147. *See infra* Part V.D.
148. Oxford Gene Tech. Ltd. v. Mergen Ltd., 345 F. Supp. 2d 431, 434–35 (D. Del. 2004).
149. *Id.* at 435.
150. Black & Decker Inc. v. Robert Bosch Tool Corp., 476 F. Supp. 2d 887, 894–95 (N.D. Ill. 2007).

also followed suit in *General Electric Co. v. SonoSite, Inc.*,[151] and more or less disregarded the *Daubert* Standard by holding that even a conclusory "claim by claim analysis" is no more than conclusory testimony as to the existence of a particular claim element.[152]

2. Obviousness

The federal district courts have also faced confusion in attempts to resolve issues of patent invalidity pertaining to obviousness when experts submit only conclusory scientific testimony. In some jurisdictions, courts are faced to cope with testimony similar to that provided in *NewRiver, Inc. v. NewKirk Prods. Inc.*,[153] wherein the following exchange occurred between Dr. Szymanski, an expert witness for NewKirk, and opposing counsel:

> Q: Do you have an opinion as to the validity of that claim?
>
> [Dr. Szymanski]: Yes, I do.
>
> Q: And what is your opinion?
>
> [Dr. Szymanski]: My opinion [is] that it would be obvious for the person of ordinary skill in the art, this invention would be obvious to the person of ordinary skill in the art [sic]."[154]

The *NewRiver* court then reviewed the different evidentiary standards promoted by the Federal Circuit and the Supreme Court and reviewed the major discrepancy between these standards for how to deal with conclusory testimony in obviousness proceedings.[155] The court found that *Daubert* disallows lower district courts to "engraft additional hurdles on the admissibility of evidence beyond those found in the Rules themselves," while that is "exactly what [the] Federal Circuit jurisprudence does."[156] Judge Young then found himself in the tough position of having to follow both evidentiary standards.[157]

151. Gen. Elec. Co. v. SonoSite, Inc., 641 F. Supp. 2d 793 (W.D. Wis. 2009).

152. *Id.* at 812–13 (citing CytoLogix Corp. v. Ventana Med. Sys., Inc., 424 F.3d 1168, 1176 (Fed. Cir. 2005) (stating that "general and conclusory testimony" cannot suffice as substantial evidence of invalidity)).

153. NewRiver, Inc. v. NewKirk Prods., Inc., 674 F. Supp. 2d 320 (D. Mass. 2009).

154. *Id.* at 331. Under the *Daubert* Standard, the court was required to accept Dr. Syzmanski's conclusory statements without further explanation for reaching such a conclusion. *Id.*

155. *Id.* at 333–34.

156. *Id.* at 333.

157. *Id.* at 334. Since the time of NewRiver, Inc. v. NewKirk Prods., Inc., Justice Young has attempted to resolve his understanding of the disparate standards for the admissibility of scientific expert testimony. Ambit Corp v. Delta Airlines, Inc., 707 F. Supp. 2d 74, 77 (D. Mass. 2010) (citing Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141 (1999)) (declaring that he would no longer rule sua sponte on the adequacy of testimony and in-

Judge Young is not alone; there are many other federal district court judges facing similar issues with conclusory scientific expert testimony in settling matters of obviousness. In *Alloc, Inc. v. Norman D. Lifton Co.*,[158] the court had difficulty reaching a decision on the invalidity of a patent because of dueling experts.[159] In another situation, a court was left uncertain of what to do with twelve paragraphs of "concluding summaries" provided by an expert witness, and for which, the witness conceded he provided no analytical basis.[160]

B. Resolutions Vary Across the Federal District Courts

As a predictable result of the two disparate standards from courts with binding authority, federal district courts with patent dockets have not managed the admissibility of conclusory scientific expert testimony in a consistent manner. Some district courts, realizing that the gap between the *Daubert* Standard and the *Koito* Standard has created confusion among litigants, remand and order new trials on issues related to invalidity.[161] Alternatively, another court has insisted that two experts dueling over the invalidity of a patent be subjected to cross-examination so that the court could reach a legal conclusion of obviousness.[162] Some courts have provided a more harsh perspective and excluded conclusory scientific expert testimony in its entirety,[163] while others have allowed but disregarded the evidence.[164]

C. Regional Circuit Courts Have Already Begun to Disregard the Daubert *Standard, and these* Daubert *Variations Have Become Part of the Patent Law Evidentiary Jurisprudence*

Many regional federal circuit courts have not remained faithful to the binding reliability review of expert testimony required by the *Daubert* Standard.[165] As an unfor-

stead now rationalizes the *Koito* Standard as part of the relevancy requirement of Rule 402, and therefore a part of the *Daubert* Standard).

158. Alloc, Inc. v. Norman D. Lifton Co., 653 F. Supp. 2d 469 (S.D.N.Y. 2009).

159. *Id.* at 478.

160. Sprint Communications Co. LP v. Vonage Holdings Corp., No. 05-2433-JWL, 2007 WL 2572417 at *2 (D. Kan. Sept. 4, 2007).

161. *NewRiver, Inc.*, 674 F. Supp. 2d at 335.

162. *Alloc, Inc.*, 653 F. Supp. 2d at 478. By requiring the two experts submit to cross-examination, the court inherently limited the admissibility of expert testimony that was required to reach the legal conclusion of obviousness. *Id*.

163. *See, e.g.*, Oxford Gene Tech. Ltd. v. Mergen Ltd., 345 F. Supp. 2d 431, 435–37 (D. Del 2004) (refusing to admit into evidence conclusory statements made by a technical expert).

164. *See, e.g.*, Black & Decker Inc. v. Robert Bosch Tool Corp., 476 F. Supp. 2d 887, 894–98 (N.D. Ill. 2007) (quoting Abbott Labs. v. Andrx Pharm. Inc., 452 F.3d 1331, 1336 (Fed. Cir. 2006) (internal citations omitted)); Gen. Elec. Co. v. SonoSite, Inc., 641 F. Supp. 2d 793, 812–13 (W.D. Wis. 2009) (citing CytoLogix Corp. v. Ventana Med. Sys., Inc., 424 F.3d 1168, 1176 (Fed. Cir. 2005)) (stating that "general and conclusory testimony. . . does not suffice as substantial evidence of invalidity"); *see also* FED. R. CIV. P. 26(a)(2)(B).

165. *See generally* Ruth Saunders, *The Circuit Courts' Application of* Daubert v. Merrell Dow Pharmaceuticals, Inc., 46 DRAKE L. REV. 407 (1997).

tunate side effect of the Federal Circuit's procedural choice of law doctrine for patent law cases, these variations of the *Daubert* Standard have also joined the original *Daubert* and *Koito* Standards in the patent law evidentiary standard jurisprudence. These new standards complicate matters further for patent law litigants depending on the geographic region where a suit may be brought.

Each of the circuits has taken a different approach to the *Daubert* Standard.[166] The United States Court of Appeals for the Second Circuit has often reviewed the admissibility of expert testimony per the broad relevancy requirement found in Rule 401[167] and not addressed the *Daubert* factors.[168] The United States Court of Appeals for the Tenth Circuit has on occasion reviewed only whether or not there is "a logical relationship between the evidence proffered and the material issue that the evidence is supposed to support."[169] Other circuit courts, such as the First Circuit and Third Circuit have tweaked the *Daubert* reliability standard and created their own versions respectively referred to as a "special relevance requirement"[170] and the "higher than bare relevance"[171] standards. The United States Court of Appeals for the Eighth Circuit has created a standard that weighs whether 1) the expert has considered and ruled out other alternative explanations and 2) whether the expert drew sufficient connections between given testimony with the facts of the case.[172] Moreover, the Sixth and Ninth Circuits have sometimes introduced the temporal context of when the testimony was provided as a factor to determine the admissibility of evidence.[173] However, some circuits, like the Fifth and Eleventh, seem to apply the

166. *See generally id.* (reviewing in turn each of the individual regional circuit standards for the admissibility of expert testimony).

167. FED. R. EVID. 401.

168. *See, e.g.*, Amorgianos v. Nat'l R.R. Passenger Corp., 303 F.3d 256, 265–66 (2d Cir. 2002) (quoting Campbell *ex rel.* Campbell v. Metro. Prop. & Cas. Ins. Comm., 239 F.3d 179,184–85 (2d Cir. 2001)).

169. *See, e.g.*, Bitler v. A.O. Smith Corp., 400 F.3d 1227, 1234 (10th Cir. 2004) (reviewing the admissibility of the testimony by merely determining whether or not the information was pertinent to the determination at hand and without requiring the experts to validate theories).

170. *See, e.g.*, Ruiz-Troche v. Pepsi Cola of P.R. Bottling Co., 161 F.3d 77, 81 (1st Cir. 1998). Testimony is admissible if it is relevant, "not only in the sense that all evidence must be relevant, but also in the incremental sense that the expert's proposed opinion, if admitted, likely would assist the trier of fact to understand or determine a fact in issue." *Id.*

171. *See, e.g.*, *In re* Paoli R.R. Yard PCB Litig., 35 F.3d 717, 745 (3d Cir. 1994) (allowing generalizations related to liver cancer to apply to the case despite specific examples that were explicitly outside of the generalization); Oddi v. Ford Motor Co., 234 F.3d 136, 145 (3d Cir. 2000) (noting that bare relevance is "not intended to be a high [standard]"); Heller v. Shaw Indus., Inc., 167 F.3d 146, 152–53 (3d Cir. 1999) (maintaining that the expert's conclusions need only "reliably follow" the facts used by the expert). Third Circuit doctrine admits testimony but distinguishes between testimony that is admissible and testimony that is significant by relying on the judge's belief as to whether the conclusions made by the expert are the correct conclusions. The doctrine adopted by the Third Circuit also incorporates all of the Standards promoted by *Daubert*. *See also* Saunders, *supra* note 165, at 417.

172. *See* Lauzon v. Senco Prods., Inc., 270 F.3d 681, 687–88 & n.2 (8th Cir. 2001).

173. *See, e.g.*, Clausen v. M/V New Carissa, 339 F.3d 1049, 1056 (9th Cir. 2003) (adding to what the court titles the "non-exclusive" list of *Daubert* factors the question of whether the expert's opinion had been developed "expressly for the purposes" of providing testimony before the court); Nelson v. Tenn. Gas Pipeline Co.,

original *Daubert* Standard more consistently.[174] It is readily apparent that many regional Circuit Courts have used *Daubert* as more of a set of general guidelines that can be supplemented by rules particular to the circuit.[175]

D. Courts Have Found the Daubert *Standard Insufficient When Applied to Other Legal Issues*

Several other legal avenues aside from patent law have found the *Daubert* Standard insufficient for their particular evidentiary needs. Some scholars have found the *Daubert* Standard insufficient for criminal trials.[176] These scholars state that it is common for scientific experts presenting testimony to overstate the accuracy and validity of forensic results, and that in front of a jury, there is particular vulnerability to miscarriages of justice.[177] By allowing this "inaccurate but persuasive evidence," judges had satisfied the Supreme Court's mandate in *Daubert* but abdicated a responsibility to justice.[178] However, scholars have begun to address issues with the *Daubert* Standard; they argue that it is 1) hard for attorneys to rebut conclusory forensic evidence, 2) likely that juries will place unfounded emphasis on forensic evidence, and 3) proven that there is inconsistent application of the *Daubert* Standard across varying jurisdictions.[179]

The insufficiency of the *Daubert* Standard is also evident in litigation regarding climate change.[180] Due to the prong of the *Daubert* Standard that measures the testability of theories before considering them sufficiently reliable to measure up to Rule 702, climate research infrequently reaches the stand in the form of admissible expert testimony.[181] Climate change evidence is particularly susceptible in that although it is generally accepted as being valid and "widely peer reviewed and published," there is no way to test a model.[182]

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243 F.3d 244, 252 (6th Cir. 2001) (considering whether or not an expert's study was "conducted" for "purposes of litigation").

174. *See, e.g.*, Bocanegra v. Vicmar Servs., Inc., 320 F.3d 581, 584 (5th Cir. 2003) (applying the heightened Rule 702 reliability requirement); Metabolife Int'l, Inc. v. Wornick, 264 F.3d 832, 841 (9th Cir. 2001) (citing Daubert v. Merrell Dow Pharms., Inc., 43 F. 3d 1311, 1317–19); McDowell v. Brown, 392 F.3d 1283, 1298 (11th Cir. 2004) (applying the heightened Rule 702 reliability requirement beyond the Rule 401 relevance requirement).

175. *See generally* Harvard Law Review Ass'n, *supra* note 118, at 2144.

176. *See generally* Munia Jabbar, *Overcoming* Daubert*'s Shortcomings in Criminal Trials: Making the Error Rate the Primary Factor in* Daubert*'s Validity Inquiry*, 85 N.Y.U. L. Rev. 2034 (2010).

177. *See id.* at 2035.

178. *See id.*

179. *See id.* at 2036.

180. *See generally* Brooks E. Harlow & Roy W. Spencer, *An Inconvenient Burden of Proof? CO2 Nuisance Plaintiffs Will Face Challenges in Meeting the* Daubert *Standard*, 32 Energy L.J. 459 (2011).

181. *See id.* at 485–86.

182. *See id.*

Additionally, *Daubert* has left scholars in the environmental-tort litigation realm searching for alternative evidentiary standards.[183] Due to the fact that environmental-tort litigation depends on model-driven evidence, which is often too overly technical to be understood by a typical juror, the general *Daubert* Standard applies an inadequate threshold.[184] These branches of law that struggle with the insufficiency of the *Daubert* Standard's evidentiary requirements are but a sample of many other specialty branches that need a more specific and administrable approach to govern the admissibility of scientific expert testimony.[185]

VI. The Proposed Solution

A solution to the aforementioned evidentiary problem must be able to satisfy a collection or a subset of specific objectives. The following interests have particular significance in determining an appropriate evidentiary standard for the admission of scientific expert testimony in patent law:

- Encourage consistent rules regarding admissibility across all federal districts[186]
- Create special heightened standards for patent cases[187]
- Eliminate juror or judicial bias[188]
- Decrease confusion regarding the standard for admitting expert testimony[189]
- Defer to the guidance of the Federal Circuit for developing an admissibility standard[190]

183. *See generally* Matthew W. Swinehart, *Remedying* Daubert*'s Inadequacy in Evaluating the Admissibility of Scientific Models Used in Environmental-Tort Litigation*, 86 Tex. L. Rev. 1281 (2008).

184. *Id.* at 1299–1300.

185. *See, e.g.*, Michael B. Kent Jr., Daubert, *Doctors and Differential Diagnosis: Treating Medical Causation Testimony as Evidence*, 66 Def. Couns. J. 525, 530–32 (1999) (arguing that there are at least three different ways that differential diagnosis have been treated as scientific evidence); Neal C. Stout & Peter A. Valberg, *Bayes' Law, Sequential Uncertainties, and Evidence of Causation in Toxic Tort Cases*, 38 U. Mich. J.L. Reform 781, 785 (2005) (finding that courts have never sufficiently addressed the reliability of causation testimony in a toxic tort case by ignoring evidence of "1) the intrinsic accuracy of the tests used by the experts to reach their opinions. . . and 2) the extrinsic rate of the agent-induced disease among those with the disease").

186. *See supra* Part V.B.

187. *See supra* Part I.

188. *See supra* Part II.B.

189. *See supra* Part V.A.

190. *See supra* Part III.

- Tailor a standard to resolve the disparate standards for admission of expert testimony advanced by the Federal Circuit and the Supreme Court[191]

There are sizable incentives for courts, individual litigants, and the U.S. economy to have both the courts and Congress make changes that will resolve the evidentiary issues discussed in Part V. For courts, the average patent case is considered significantly more difficult and time consuming than the typical civil case.[192] Individual litigants in patent cases face high stakes: the typical damage award in a patent case is around $10.7 million for jury trials and $700,000 for panel trials.[193] Additionally, in times of a faltering economy it is important to remember that among the United States' strongest exports are our technological innovations.[194] By addressing the aforementioned objectives, patent cases can be decided expeditiously, a greater number of litigants will spend less money, and a strong U.S. patent system will be seen as an asset among many faltering aspects of the U.S. government.[195]

A. Long Term Solution: Adopt the Koito *Standard for Use in All Patent Infringement Cases*

The Federal Circuit's *Koito* Standard is the most appropriate method for maintaining a proper heightened standard for admissibility of scientific expert testimony necessitated by patent law. The major complication with the proposed solution is that the *Koito* Standard in its current form is incompatible with the Supreme Court's *Daubert* mandate.[196] *Koito* bars a great deal of conclusory testimony that would otherwise be allowed by *Daubert*,[197] but if patent law decisions were based merely on

191. *See supra* Part IV.

192. *See, e.g.*, JOEL MOKYR, LEVER OF RICHES 248–49 (1990) (claiming historical evidences proves that "litigation over patent infringement could sap the creativity of great technical minds, and ruin inventors financially").

193. CHRIS BARRY ET AL., PRICEWATERHOUSECOOPERS, LLP, *2010 Patent Litigation Study: The Continued Evolution of Patent Damages Law*, 11 (2010).

194. *See* CHRISTIAN E. WELLER & LUKE REIDENBACH, CTR. FOR AM. PROGRESS, THE CASE FOR STRATEGIC EXPORT PROMOTION 3 (2011), *available at* http://www.americanprogress.org/wp-content/uploads/issues/2011/02/pdf/high_tech_trade.pdf (reciting that the U.S. is still the "largest exporter of high-technology manufactured goods among major industrialized economies"); Andrea L. Johnson, *Transborder Licensing: A New Frontier for Job Creation*, 13 TUL. J. TECH. & INTELL. PROP. 103, 104 (2010) (citing that the U.S. exports high demand goods including "biotech, bio-fuels, and information technology"); Lucas Osborn, *Globalization, Intellectual Property, and Prosperity*, 34 CAMPBELL L. REV. 517, 521 (2012) (stating that the United States is a "leading innovation exporter").

195. *See generally* Matthew B. Lowrie, *Critical Issues in Managing Patent Litigation*, 44 IDEA 267, 268 (2004) ("One judge on the U.S. Court of Appeals for the Federal Circuit . . . has referred to the patent system as the 'backbone' of our country's economic system.").

196. *See supra* Part IV.

197. *See supra* Part V.A.

conclusory testimony then the foundations of various patent criteria would be at risk from unsavory scientific experts willing to sell their conclusory opinions.

However, in continued implementation of the *Koito* Standard, the Federal Circuit will not be breaking new ground. The Federal Circuit will not be the first Circuit Court of Appeals to permanently modify the *Daubert* mandate.[198] Patent law also has the advantage of not being the first specialized legal category to take issue with *Daubert*'s low standard for the admissibility of scientific expert testimony; advocates for several other legal subject areas have already begun voicing *Daubert*'s evidentiary inadequacies.[199]

However, in maintaining solely the *Koito* Standard, patent law, legal codes, and the judiciary must submit to several drastic changes. First of all, Congress needs to amend the Federal Rules of Evidence to provide specialized exceptions for scientific expert testimony in patent law proceedings.[200] Second, the judiciary must be willing to mandate that the *Koito* Standard, without exception, is now the law for all decisions regarding the admissibility of scientific expert testimony in patent cases.[201] Third, the Federal Circuit needs to clarify that it will not defer to other regional circuit court law by the procedural choice of law doctrine as it pertains to scientific expert testimony in patent law decisions.[202] By clarifying the role of the judiciary in limiting scientific expert testimony for patent cases, the judiciary will provide necessary support to supplement Congress's and the President's patent related initiatives.[203]

1. Amend the Federal Rules of Evidence

Congress or the Supreme Court must amend the Federal Rules of Evidence (Rules) to create an exception for the patent law scientific expert testimony jurisprudence.[204] Specifically, I propose amending the Rules to avoid patent law scientific expert testimony being subjected to Rule 705 and limited by Rule 702. Rule 705 in its current form allows opinions and inferences without underlying support "unless the court requires otherwise."[205] The addition of a new rule would provide: "All scientific ex-

198. *See supra* Part V.C.

199. *See supra* Part V.D.

200. *See infra* Part VI.A.1.

201. *See infra* Part VI.A.2.

202. *See infra* Part VI.A.3.

203. *See supra* Part I; *see also* Arti K. Rai, *Patent Validity Across the Executive Branch: Ex Ante Foundations for Policy Development*, 61 Duke L.J. 1237, 1244–49 (2012) (discussing both the expanding role of the PTO before and in light of the America Invents Act and also the ways that the executive and legislative branches have increasingly challenged the judiciary in its interpretation of patent law).

204. *See generally* United States v. Mitchell, 397 F. Supp. 166, 170 (D.D.C. 1974), *aff'd*, 559 F.2d 31 (D.C. Cir. 1976), *cert. denied*, 431 U.S. 933; Rules Enabling Act, 28 U.S.C. §§ 2071–2077 (2006); *see also* James C. Duff, *The Federal Rules of Practice and Procedure Administrative Office of the U.S. Courts* (Oct. 2010), *available at* http://www.uscourts.gov/RulesAndPolicies/FederalRulemaking/RulemakingProcess/SummaryBenchBar.aspx.

205. Fed. R. Evid. 705.

pert testimony necessary for patent-related subject matter must meet: 1) at *least* the reliability standards of Rule 702 and ***also*** 2) any evidentiary standards promulgated for patent law by the Court of Appeals for the Federal Circuit." Such a rule should ***never*** be bound to the standards promoted in Rule 705.

Prompting Congress or the federal judiciary to propose and pass an amendment to the Federal Rules of Evidence would not be a simple task.[206] The Rules operate to provide consistent evidentiary proceedings throughout the courts of the United States, the United States bankruptcy judges, and the United States magistrate judges.[207] As all patent cases are held in federal courts, patent cases are always subject to the Rules.[208] To amend the Rules, there are two options.[209] The first option would require Congress to enact legislation amending the Rule.[210] Alternatively, Congress has authorized the federal judiciary to promulgate changes to the Rules, which are thereafter subject to review by Congress.[211] The processes to change the Rules are extremely unpredictable and time-consuming.[212]

2. Implementation by Judicial Mandate

To successfully adopt the *Koito* Standard in patent related cases involving scientific expert testimony, the federal judiciary must mandate that the lower federal district courts adhere to its precedent and stop reexamining the issue. This may be done on either the Federal Circuit level or the Supreme Court level. The Federal Circuit may mandate lower federal district courts to meet the *Koito* Standard, but it has hesitated to make such mandates in the past unless there has been severe frustration of the appellate jurisdiction of the Federal Circuit.[213] The increase of forum shopping as a result of differing evidentiary standards may indeed provide the requisite frustra-

206. *See, e.g.*, Thomas W. Merrill, *The Common Law Powers of Federal Courts*, 52 U. CHI. L. REV. 1, 3 (1985) (discussing the federal judiciary's proclivity to work through judicial review as opposed to through its preemptive lawmaking power).

207. *See* FED. R. EVID. 101.

208. *See* 28 U.S.C. § 1295 (2006); *see also* 28 U.S.C. § 1338 (2006).

209. *See* Merrill, *supra* note 206.

210. FED. R. EVID. 501.

211. *See* Rules Enabling Act, 28 U.S.C. §§ 2071–2077 (2006). The federal judiciary forms a special committee, the Judicial Conference, to discuss and propose changes to the code generally. *See* 28 U.S.C. § 331 (2006). By May 1 of the year the proposed Rule is to become effective, the judiciary is charged with submitting the proposed Rule to Congress for review. *See* The Rules Enabling Act, 28 U.S.C. § 2074 (2006).

212. *See generally* Edward R. Becker & Aviva Orenstein, *The Federal Rules of Evidence After Sixteen Years—The Effect of "Plain Meaning" Jurisprudence, the Need for an Advisory Committee on the Rules of Evidence, and Suggestions for Selective Revision of the Rules*, 60 GEO. WASH. L. REV. 857, 859 (1992) (posing the theory that the "relative inactivity" in successful amendments to the Federal Rules is directly related to the inefficiencies of the rulemaking process).

213. *See, e.g.*, C.P.C. v. Nosco Plastics, Inc., 719 F.2d 400, 401 (Fed. Cir. 1983) (holding that the Federal Circuit does not have "supervisory authority" over district courts); *In re* Intern. Med. Prosthetics Research Assocs., Inc., 739 F.2d 618, 619 (Fed. Cir. 1984) (finding that the Federal Circuit is "devoid" of supervisory authority over district courts). *But see In re* Snap-on Tools Corp., 720 F.2d 654, 655 (Fed. Cir. 1983) (providing supervisory authority when to do otherwise would frustrate the appellate jurisdiction of the Federal Circuit).

tion of appellate purpose. If the Federal Circuit is unwilling or unable to mandate lower federal courts to adhere to the *Koito* precedent, the Supreme Court should revisit the issue.

3. Clarification of the Procedural Choice of Law Doctrine for Scientific Expert Testimony

The adoption of the *Koito* Standard must be absolute if it is to be successful. One of the objectives of adopting the *Koito* Standard is to increase consistency and predictability in patent decisions throughout various districts.[214] If litigants are uncertain as to whether *Daubert*, *Koito*, or a regional circuit court variation of *Daubert* will govern the admissibility of expert testimony, then no progress will have been made. The Federal Circuit needs to clarify the scope of the procedural choice of law doctrine,[215] particularly in light of its recent tendencies to use the choice of law doctrine as opposed to its own *Koito* Standard in cases such as *Uniloc*.[216]

B. Short Term Solution: Admissibility Decisions Should Be Ordered by Judges Sua Sponte

Given that the previous long-term goals are unlikely to be met in the immediate future, there are some actions that courts can take to limit scientific expert testimony on an immediate basis. Overall, the most important and accessible objective is to prevent juror and judicial bias.[217] Given the complex technical issues that are inherently linked to patent law, jurors and judges alike often find themselves confused, particularly when there are two partisan experts providing conflicting testimony.[218] To solve this issue, judges should: 1) hear or require the submission of testimony with all relevant underlying support prior to experts presenting before a jury,[219] and 2) take greater advantage of opportunities to hear court-appointed expert witnesses.[220] In addition, those in charge of making judicial appointments should more of-

214. *See, e.g.*, Bilski v. Kappos, 130 S. Ct. 3218, 3231 (2010) (Stevens, J., concurring) (stating that "in the area of patents, it is especially important that the law remain stable and clear").

215. *See* McEldowney, *supra* note 98, at 1639.

216. *See supra* Part IV.C.

217. *See generally* Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 Harv. J.L. & Tech. 1, 11 (2001).

218. *See generally* Megan A. Yarnall, Comment, *Dueling Scientific Experts: Is Australia's Hot Tub Method a Viable Solution for the American Judiciary?*, 88 Or. L. Rev. 311, 317–21 (2009) (discussing the inherent bias in providing testimony in exchange for cash).

219. *See infra* Part VI.B.1.

220. *See infra* Part VI.B.2; *see also* Fed. R. Evid. 706; John Shepard Wiley, Jr., *Taming Patent: Six Steps for Surviving Scary Patent Cases*, 50 UCLA L. Rev. 1413, 1431 (2003) (providing that the role of a Rule 706 expert is sufficiently neutral because even these special experts may be subjected to the cross-examination process).

ten consider appointing judges who specialize in patent law or who have a technical background.[221]

1. Judges Should Hold an Invalidity Testimony Hearing Prior to Submission to a Jury

To provide clarity to decision-makers in patent infringement cases, federal district court judges need to hold initial hearings strictly for the purpose of determining the sufficiency of scientific expert testimony. Such an approach is similar to that taken in *Sprint Communications Co. v. Vonage Holdings Corp.*,[222] wherein an expert had an opportunity to cure deficiencies on the record by providing a factual basis for previously made conclusory statements.[223] By holding an initial hearing, judges decrease the chance of exacerbating juror bias, and by allowing a period to cure deficiencies, judges avoid penalizing litigants for their confusion regarding the current state of law on the admissibility of expert testimony.

2. Judges Should Actively Use Rule 706 in Cases with Dueling Experts

Judges need to take advantage of the Rules' allowance for court appointed experts. Rule 706 states that "the court may appoint any expert that the parties agree on and any of its own choosing."[224] Given the tendency of each party in patent invalidity hearings to provide opposing scientific testimony regarding a single technical term at hand, a third party would provide an efficient and less cumbersome method to sort through the jargon.[225] The Federal Circuit has even expressly stated that a lower federal district court has not abused its discretion in hiring a Rule 706 technical expert to help elucidate a complicated patent.[226] In addition, the Advisory Notes for Rule 706 explicitly provide "the trend is increasingly to provide for [the] use" of court appointed experts and that a judge's power to make such an appointment is "virtually unquestioned."[227]

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221. *See infra* Part VI.B.3.

222. Sprint Communications Co. v. Vonage Holdings Corp., No. 05-2433-JWL, 2007 WL 2572417 (D. Kan. Sept. 4, 2007).

223. *Id.* at *2.

224. Fed. R. Evid. 706.

225. *See* Dolly Wu, *Patent Litigation: What About Qualification Standards for Court Appointed Experts?*, 2010 B.C. Intell. Prop. & Tech. F. 91501, at 3–7 (2010) (discussing the Federal Circuit's and the legislative history's support for appointing Rule 706 experts); *see also* Wiley, *supra* note 220, at 1413 (stating that although 80% of judges have never tried using a court appointed expert, those who have appointed an independent expert found the appointment process to be extremely effective in trial management). *But see* Harvard Law Review, *Improving Judicial Gatekeeping: Technical Advisors and Scientific Evidence*, 110 Harv. L. Rev. 941, 946 (1997) (expressing concern that there is not significant guidance on how to prevent judges from merely handing over their gatekeeping role to a technical advisor).

226. *See* Monolithic Power v. O2 Micro Int'l Ltd., 558 F.3d 1341, 1348 (Fed. Cir . 2009) (validating a lower federal district court's decision to use a Rule 706 expert testimony on: 1) the nature of technology at hand, 2) the obviousness of the claimed invention, and 3) infringement of the patent).

227. Fed. R. Evid. 706 (2006) advisory committee's note.

3. Patent Cases Should be Presided Over by Specialty Judges

Patent cases should be presided over by judges either with backgrounds in a science or applied math field or with specialized experience. Part of the reason that the Federal Circuit is so effective in elucidating complex technical patent litigation is that several of its members have that necessary technical background.[228] The fact that few patent cases actually end up reaching the courtroom should simplify this modest goal.[229] Districts that are more likely to maintain a heavy patent docket should be highlighted as courts to receive judges with more technical experience.[230]

The concept of specialized courts and judges for patent law is not a new one. Recently, the U.S. court system began a "Patent Pilot Program."[231] In this program, fourteen federal district courts were selected to participate for a ten-year duration.[232] Participation in the program was limited to courts in districts that has had a high volume of patent cases or courts that adopted local rules for patent and plant variety protection cases.[233] Within each court, at least one judge is designated to receive patent cases, in the event that the initial randomly designated judge declines to hear the case.[234]

In the short term, the Patent Pilot Program would be an ideal place to implement specific evidentiary rules regarding the admissibility of expert testimony. The Program is being implemented in part by the Judicial Conference Committee on Court Administration and Case Management, and it, or the Federal Judicial Center,

228. *See* History of the Federal Judiciary, Federal Judicial Center (Nov. 15, 2011 10:00 AM), http://www.fjc.gov/history/home.nsf/page/judges.html (revealing that of the 11 currently occupied seats on the Federal Circuit, 6 Judges, including Judges Rader, Newman, Lourie, Linn, Prost, and Moore, had either a technical background or extensive experience in a patent related field prior to becoming Federal Circuit Judges). However, of the nine Supreme Court Justices, four majored in History, with the remaining Justices holding undergraduate degrees in English, Philosophy, Public Policy, Political Science, and Government. *Id.*

229. *See* Kimberly A. Moore, *Judges, Juries, and Patent Cases — An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 374 (2000) (finding that only around 100 out of 2000 filed patent cases actually reaching trial).

230. *See* ADMIN. OFFICE OF THE U.S. COURTS, JUDICIAL BUSINESS OF THE U.S. COURTS TBL. C11 (2009). These patent "rocket dockets" include the Central District of California, the District of Delaware, the District of New Jersey, the Eastern District of Texas, and the Northern District of California. *Id.*

231. The Program began in most selected courts in July 2011. The courts that have been selected to participate in the patent pilot project courts include the: Eastern District of New York; Southern District of New York; Western District of Pennsylvania; District of New Jersey; District of Maryland; Northern District of Illinois; Southern District of Florida; District of Nevada; Eastern District of Texas; Northern District of Texas; Western District of Tennessee; Central District of California; Northern District of California; and the Southern District of California. *See* Pub. L. No. 111–349; *see also* USCOURTS, *District Courts Selected for Patent Pilot Program*, *available at* http://www.uscourts.gov/News/NewsView/11-06-07/District_Courts_Selected_for_Patent_Pilot_Program.aspx.

232. *See* Pub. L. No. 111–349; *see also* USCOURTS, *District Courts Selected for Patent Pilot Program*, *available* at http://www.uscourts.gov/News/NewsView/11-06-07/District_Courts_Selected_for_Patent_Pilot_Program.aspx.

233. *See* USCOURTS, *District Courts Selected for Patent Pilot Program*, *available at* http://www.uscourts.gov/News/NewsView/11-06-07/District_Courts_Selected_for_Patent_Pilot_Program.aspx.

234. *Id.*

could be the ideal creator of a set of administrable and straightforward rules.[235] At the very least, these governing authorities could facilitate a collective conversation for best practices regarding the admission of expert testimony.

C. Evaluation of Proposed Solution Against Stated Goals

The proposed long-term and short-term solutions would assist the federal judiciary in meeting several of the objectives discussed above. My proposed long-term solution would assist courts in encouraging consistency across federal districts by creating a heightened evidentiary standard for the admissibility of expert testimony, decrease confusion regarding the applicable standard for admitting expert testimony, defer to Federal Circuit guidance for the admissibility standard, and resolve the disparate standards currently employed by the Federal Circuit and Supreme Court. My proposed short-term solution would assist to create special heightened standards in patent cases and to eliminate jury or judicial bias. Overall, a combination of both long-term and short-term proposals would adequately address all of the problems discussed in Section V.

VII. Conclusion

After reviewing the current evidentiary standards for technical experts in patent infringement cases, it is evident that the Federal Rules of Evidence and the *Daubert* Standard[236] are not immediately reconcilable with the better suited and more logical standard evinced by the Federal Circuit in *Koito*.[237] Due to the preferred alignment of the heightened evidentiary burden required by the court in *Koito* with the instituted legal requirements in proving invalidity of a patent, many federal district courts have ignored the *Daubert* Supreme Court precedent and instead adopted rules more similar to *Koito*.[238]

A preferred solution[239] was presented that would maintain the integrity of the legislative history surrounding the creation of the Federal Circuit and continue to promote favorable social and economic policy consistent with express support for patent reform from both the Legislative and Executive branches. In the long term, this solution would require amending or editing the Federal Rules of Evidence to create a heightened exception to evidentiary standards consistent with modern patent law jurisprudence, and it would also require promotion of the *Koito* Standard as the preferred method of dealing with technical expert testimony in patent in-

235. *See id.*
236. *See supra* Part IV.A.
237. *See supra* Part IV.B.
238. *See supra* Parts V.A–B.
239. *See supra* Part V.

fringement cases.[240] On the other hand, and more realistically, the method would in the short-term require judges to rule sua sponte of the adequacy of scientific expert testimony in a hearing that is not available to the jurors, and therefore decrease the risk of juror bias.[241]

240. *See supra* Part VI.A.
241. *See supra* Part VI.B.