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Patent Claim Obviousness in Jury Trials: Where's the Analysis?

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I. INTRODUCTION

THERE IS NO DOUBT THAT THE DRAMATIC INCREASE IN THE USE OF JURIES in patent trials has affected the patent litigation landscape. Over the last thirty-five years, the percentage of patent cases using jury trials has risen from 12 percent in 1975 to 69 percent in 2009.[1] The disparity between damages awards by jury trials and bench trials has also skyrocketed from $1.1 million for jury trials versus $900,000 for bench trials in the 1980s to a staggering $10.7 million for jury trials and $700,000 for bench trials in the 2000s.[2] In most of these lucrative patent infringement cases, the defendant challenges the patent's validity in order to escape liability.[3] While patent validity hinges on multiple factors, the non-obviousness requirement, codified

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1. *See* ADMIN. OFFICE OF THE U.S. COURTS, JUDICIAL BUSINESS OF THE U.S. COURTS tbl. C4 (1975) (where 15 of 111 cases terminated at trial in U.S. district courts utilized a jury); ADMIN. OFF. OF THE U.S. CTS., JUD. BUS. OF THE U.S. CTS. tbl. C4 (2009) (where 79 of 114 patent cases that terminated at trial in U.S. district courts utilized a jury).

2. CHRIS BARRY ET AL., PRICEWATERHOUSECOOPERS, LLP, 2010 PATENT LITIGATION STUDY: THE CONTINUED EVOLUTION OF PATENT DAMAGES LAW 11 (2010) (reporting amounts in 2009 dollars, adjusted for inflation). According to a recent ABA study, juries are twice as likely to award enhanced damages. J. SHAWN MCGRATH & KATHLEEN M. KEDROWSKI, *Trends in Patent Damages*, 2007 A.B.A. SEC. OF LITIG.10–11. Commentators have provided many reasons for the large jury damage awards in patent cases. These reasons include the premises that juries are more willing to reward innovation, more likely to over-estimate damages involving complex technologies, and more likely to think in terms of punitive damages. *See generally* Martha K. Gooding & William C. Rooklidge, *The Real Problem with Patent Infringement Damages*, 91 J. PAT. & TRADEMARK OFF. SOC'Y 484 (2009).

3. *See* JANICE M. MUELLER, PATENT LAW 403 (3d ed. 2009) (stating that non-infringement and invalidity are almost always asserted as defenses).

at 35 U.S.C. § 103, commonly serves as the basis for invalidity claims.[4] In fact, the obviousness issue is by far the most frequently litigated patent validity issue.[5]

The Supreme Court in *Graham v. John Deere Co.*[6] established that the ultimate determination as to patent obviousness is a matter of law based on four underlying factual inquiries.[7] In 2007, the Court in *KSR International Co. v. Teleflex, Inc.*[8] reaffirmed the *Graham* analysis and the principle that obviousness is a matter of law.[9] The Court added that "[t]o facilitate review, [the obviousness] analysis should be made explicit."[10]

However, contrary to the Court's instructions in *KSR*, district courts routinely employ a non-explicit analysis of obviousness during jury trials.[11] In these trials, the jury returns a verdict with a simple "yes" or "no" on whether a patent claim is obvious, but it does not make any explicit factual findings regarding the individual *Graham* factors.[12] In addition to being out of sync with the Court's instructions, this procedure is extremely problematic because (1) the courts are abdicating their duty to decide matters of law; (2) it creates an obstacle to meaningful appellate review; and (3) it places the ultimate obviousness decision in the hands of a jury that may not be capable of making sound and unbiased decisions in patent cases.[13] Although the Federal Circuit recognizes these problems, it has only gone so far as to *ask* dis-

4. *See* Lee Petherbridge & R. Polk Wagner, *Federal Circuit and Patentability: An Empirical Assessment of the Law of Obviousness*, 85 TEX. L. REV. 2051, 2071–72 (2007) (studying Federal Circuit opinions from 1995 to 2005 and finding 362 of 900 patent cases raised an issue as to obviousness).

5. Gregory N. Mandel, *Patently Non-Obvious: Empirical Demonstration that the Hindsight Bias Renders Patent Decisions Irrational*, 67 OHIO ST. L.J. 1391, 1398 (2006); *see* John R. Allison & Mark A. Lemley, *Empirical Evidence on the Validity of Litigated Patents*, 26 AIPLA Q.J. 185, 209–10 (1998) (presenting a study that found 160 of 300 patent validity decisions involved a question as to obviousness).

6. 383 U.S. 1 (1966).

7. The four factors are: (1) the level of ordinary skill in the 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. *Id.* at 17–18.

8. 550 U.S. 398 (2007).

9. *Id.* at 416–17. *See infra* Part II.B.

10. *KSR*, 550 U.S. at 418.

11. *See infra* Part III.B.

12. *See infra* Part III.B.

13. *See infra* Part IV.

trict courts to change the process.[14] In fact, the Federal Circuit allows the flawed process to continue by finding that it is not in error.[15]

Part II of this Comment outlines the non-obviousness inquiry, including the decisions in *Graham* and *KSR*.[16] Part III reviews the current district court treatment of obviousness in jury trials.[17] Part IV discusses the three major problematic areas involving the current procedures.[18] Finally, Part V proposes a solution comprising: (1) using detailed jury interrogatories in district courts; and (2) creating specialized patent courts.[19]

II. Non-Obviousness: A Question of Law Based on Underlying Factual Findings

A. The Graham *Framework*

The Patent Act of 1952 made non-obviousness a statutory requirement for patent validity.[20] This requirement, codified at 35 U.S.C. § 103, serves to ensure that exclusivity is granted only to those inventions that advance a subject matter with some innovative step.[21] Pursuant to section 103(a), a patent claim is invalid if "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art."[22] By enacting section 103, Congress intended to enhance "uniformity and definiteness" in the patent arena and felt that it would "have a stabilizing effect and minimize great departures

14. *See infra* Part IV.B.

15. *See* Callaway Golf Co. v. Acushnet Co., 576 F.3d 1331, 1341 (Fed. Cir. 2009) ("The district court did not err in concluding that substantial evidence supports the jury's *implicit* resolution of that factual issue in Callaway's favor." (emphasis added); Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1547 (Fed. Cir. 1983) ("We hold that it is not error to submit the question of obviousness to the jury.").

16. *See infra* Part II.

17. *See infra* Part III.

18. *See infra* Part IV.

19. *See infra* Part V.

20. Patent Act of 1952, ch. 950, § 103, 66 Stat. 792, 798 (1952) (codified as amended at 35 U.S.C. § 103 (2006)).

21. The non-obviousness requirement emerged from case law stemming most notably from *Hotchkiss v. Greenwood*, 52 U.S. 248 (1850), involving a patent claim to door knobs with its only difference over the prior art being the substitution of a material. There, the Supreme Court stated that patentability requires more than just novelty and represents a realistic advancement over existing technology. *Id.* at 265–67. *See generally* MUELLER, *supra* note 3, at 191–233 (discussing the history of the non-obviousness requirement).

22. 35 U.S.C. § 103(a) (2006).

which have appeared in some cases."[23] Congress' other goal was to expedite dispositions of patent obviousness matters.[24]

The Supreme Court first interpreted the non-obviousness standard in its 1966 *Graham v. John Deere Co.* decision.[25] The Court outlined four factors for determining whether a patent claim is obvious over the prior art: (1) the scope and content of the prior art; (2) the differences between the claimed invention and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of non-obviousness, such as "commercial success, a long-felt but unsolved need, failure of others," copying, and unexpected results.[26] The *Graham* test essentially disqualifies patent claims if they cover subject matter that would have been obvious to one skilled in the art at the time of the invention, even though the precise invention was new.[27] In this seminal case, the Court clearly stated that the ultimate question of obviousness is a matter of law.[28]

B. The KSR *Analysis*

In *KSR International Co. v. Teleflex, Inc.*,[29] the Supreme Court reaffirmed the four-factor *Graham* analysis.[30] However, *KSR* also served to broaden the Federal Circuit's existing method for determining whether it is appropriate to combine prior art ref-

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23. S. REP. NO. 82-1979, at 5 (1952). In particular, Congress sought to formally adopt the patentability test presented in *Hotchkiss v. Greenwood*, 52 U.S. 248 (1850), as opposed to other tests circulating at the time. Graham v. John Deere Co., 383 U.S. 1, 17 (1966) ("We conclude that [section 103] was intended merely as a codification of judicial precedents embracing the *Hotchkiss* condition, with congressional directions that inquiries into the obviousness of the subject matter sought to be patented are a prerequisite to patentability."). Because the *Hotchkiss* non-obviousness requirement was somewhat vague, courts prior to 1952 took varying approaches to defining "invention" and were not uniform in its application. *See generally* MUELLER, *supra* note 3, at 192–95.

24. *See Graham*, 383 U.S. at 18–19.

25. *Id.*

26. *Id.* at 17–18. Other secondary considerations identified by courts include whether others licensed the subject matter from the patentee and the reaction of experts in the field. *See* 2-5 DONALD S. CHISUM, CHISUM ON PATENTS § 5.05 (2010) (discussing secondary considerations).

27. *Graham*, 383 U.S. at 15 ("[Section 103] refers to the difference between the subject matter sought to be patented and the prior art, meaning what was known before as described in section 102."). In *Graham*, a patent claimed a shock-absorber system for agricultural plow shanks. *Id.* at 19–20. A prior patent claimed a shock-absorber system with its hinge plates in different locations. *Id.* at 22. The Court applied the four-factor test to determine whether the change in location of hinge plates was obvious and therefore not patentable. *Id.* at 13–26. Its opinion focused on the differences between the claimed invention and prior art and concluded that the hinge plate location change was not a substantial difference from the prior patent. *Id.* at 26. As a result, the Court found Graham's patent claims obvious. *Id.*

28. *Id.* at 17.

29. 550 U.S. 398 (2007).

30. *Id.* at 426 (applying the *Graham* analysis).

erences in an obviousness analysis.[31] Prior to the 2007 *KSR* decision, the Federal Circuit used the self-developed teaching, suggestion, or motivation test ("TSM test"), which required a "clear and particular" motivation in the prior art demonstrating that a person of ordinary skill would have been motivated to combine multiple prior art references to create the invention in question.[32] For example, in the 2000 Federal Circuit case *Winner International Royalty Corp. v. Wang*,[33] a patent claimed a vehicle steering wheel anti-theft device that self-locks using a keyless ratcheting system.[34] A prior art patent disclosed a steering wheel device using a deadbolt system that requires a key.[35] Three other prior patents disclosed anti-theft devices with a variety of locking mechanisms that secure either a steering wheel to a brake pedal or a brake pedal to the floorboard.[36] The *Winner* court addressed whether it was appropriate to combine the locking mechanism in one patent with the steering wheel device in another when conducting the obviousness analysis.[37] The court concluded that the specification of one patent discussed the disadvantages of another patent and therefore there was not a clear and particular motivation to combine these references.[38]

The Federal Circuit developed the TSM test to limit the amount of hindsight bias that naturally exists when a judge or jury considers after the fact whether a claim is obvious.[39] However, the Court in *KSR* rejected the Federal Circuit's application of

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31. *Id.* at 419 ("The flaws in the analysis of the Court of Appeals relate for the most part to the court's narrow conception of the obviousness inquiry reflected in its application of the TSM test.").

32. *See* Winner Int'l Royalty Corp. v. Wang, 202 F.3d 1340, 1348–49 (Fed. Cir. 2000) ("Evidence of a suggestion, teaching, or motivation to combine prior art references may flow, *inter alia*, from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved."); *see generally* Steven J. Lee & Jeffrey M. Butler, *Teaching, Suggestion and Motivation:* KSR v. Teleflex *and the Chemical Arts*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 915, 916–17 (2007) (discussing the TSM test).

33. 202 F.3d 1340.

34. *Id.* at 1344.

35. *Id.*

36. *Id.*

37. *Id.*

38. *Id.* at 1350 (Using the TSM test, "the district court did not clearly err in finding that [Patent A] taught away from [Patent B], and therefore was not shown to be combinable with [Patent B].").

39. *In re* Kahn, 441 F.3d 977, 986 (Fed. Cir. 2006) ("The 'motivation-suggestion-teaching' requirement protects against the entry of hindsight into the obviousness analysis, a problem which § 103 was meant to confront."). By requiring a clear and particular motivation, usually present in a written source at the time of invention, the Federal Circuit used an objective measure of motivation as opposed to subjective speculation. *See In re* Lee, 277 F.3d 1338, 1343 (Fed. Cir. 2002) ("The factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record." (internal quotation om tted)).

the TSM test as too rigid.[40] Instead, it instructed courts to also consider "common sense" issues, such as the fact that familiar items often have obvious uses beyond their ordinary purpose[41] and whether there are a finite number of options present that yield predictable results.[42] Thus, the Court made the obviousness inquiry more flexible and subjective than with solely the TSM test.[43]

In addition to broadening the obviousness inquiry, the *KSR* Court reaffirmed the principle in *Graham* that the "ultimate judgment of obviousness is a legal determination."[44] The Court stated that "[t]o facilitate review, [the obviousness] analysis should be made explicit."[45]

III. Current State of Jury Obviousness Determinations

The Federal Circuit generally recognizes that the Seventh Amendment's guarantee of a right to trial by jury applies to patent infringement cases.[46] Historically, patent litigants seldom exercised this right.[47] However, starting in the mid-1980's, the pop-

40. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 427–28 (2007) ("[T]he Court of Appeals analyzed the issue in a narrow, rigid manner inconsistent with § 103 and our precedents.").

41. *Id.* at 420 ("Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle."). In *KSR*, the Court addressed the obviousness of a patent claiming an electronic sensor and height adjuster for a vehicle's accelerator pedal. *Id.* at 415–26. A prior art patent disclosed a mechanical pedal adjustor designed to provide the same amount of pedal resistance at any height setting. *Id.* at 410–11. The CAFC found the patent claims non-obvious because they addressed a different problem than the prior art patent and there was no explicit motivation to combine multiple prior art references. *Id.* at 413–14. However, the Supreme Court found that mounting a sensor to the prior art mechanical design was common sense. *Id.* at 424–25. Similarly, in *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, the court applied the *KSR* analysis and found a claim to a method for managing bulk email obvious because the only difference between the claim and the prior art was a step involving repeating previous steps. 587 F.3d 1324, 1330 (Fed. Cir. 2009) ("[C]ommon sense dictates that one should try again.").

42. *KSR*, 550 U.S. at 421 ("When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.").

43. *See generally* Ashley Houston, KSR International Co. v. Teleflex Inc.*: The Supreme Court Declines the Opportunity to Finally Set the Record Straight and Articulate One Clear Standard for Determining Obviousness in Patent Cases*, 4 J. Bus. & Tech. L. 219, 231–32 (2009) (discussing the flexibility of the *KSR* analysis compared to the more objective TSM test).

44. *KSR*, 550 U.S. at 427.

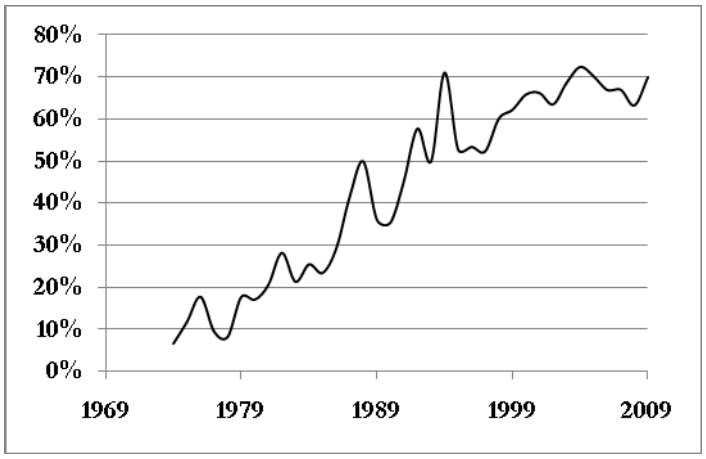
45. *Id.* at 418.

46. *See infra* Part III.A. (discussing the Seventh Amendment right in patent cases).

47. *See infra* Figure 1.

ularity of patent jury trials rapidly increased.[48] In 1975, only twelve percent of all patent trials were heard by a jury, but this gradually increased to nearly seventy percent by 2009.[49]

Figure 1. Percentage of Patent Cases Terminated at Trial in U.S. District Courts Utilizing Juries (Years 1974-2009)[50]



The reason for this increase in popularity has been attributed to the perceived juror bias that favors patent holders,[51] the fact that juries return significantly larger damages awards than judges for patent infringement,[52] and many other reasons related to juror competency.[53] A Department of Commerce Advisory Commission report in 1992 warned that juries were being used to "avoid the substantive merits of

48. *See infra* Figure 1.

49. *See infra* Figure 1; ADMIN. OFFICE OF THE U.S. COURTS (1975), *supra* note 1, at tbl. C4; ADMIN. OFF. OF THE U.S. CTS. (2009), *supra* note 1, at tbl. C4.

50. Data obtained from ADMIN. OFFICE OF THE U.S. COURTS, JUDICIAL BUSINESS OF THE U.S. COURTS tbl. C4 (Fiscal Years Ending 1974–2009).

51. *See infra* Part IV.C.2.

52. BARRY ET AL., *supra* note 2, at 11 (reporting that the median damages award for the years 2000-2009 was $10.7 million for jury trials, compared to $700,000 for bench trials).

53. *See* Kimberly A. Moore, *Judges, Juries, and Patent Cases—An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 369–74 (2000) (discussing the various perceptions of patent juries).

a patent dispute."[54] Of the cases that involve the substantive issue of patent validity, the obviousness issue is by far the most frequently litigated.[55]

A. The Right to a Jury Trial in Patent Cases

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."[56] While some scholars believe that the Seventh Amendment may not apply to patent cases since patents were historically heard in suits in equity, the courts have interpreted this right to generally apply.[57] Nevertheless, courts have carved out several areas of patent law not falling within the Seventh Amendment's guarantee and therefore may be decided solely by a judge.[58]

Most notably, in *Markman v. Westview Instruments, Inc.*,[59] the Supreme Court held that patent claim construction is the responsibility of the judge, not a jury.[60] The Court reasoned that it looks to whether the judge or jury is best positioned to make a mixed fact/law determination.[61] It determined that the judge was best positioned to determine claim construction issues, even though the findings are based

54. ADVISORY COMM'N ON PAT. L. REFORM, U.S. DEP'T. OF COM., REPORT TO THE SEC'Y OF COMMERCE 107 (1992).

55. *See* Mandel, *supra* note 5, at 1398 ("[Based on empirical studies,] the non-obvious requirement is both the most commonly litigated patent validity issue and is the patent validity requirement most likely to result in a patent being held invalid.").

56. U.S. CONST. amend. VII.

57. There is a two-step analysis to determine whether a suit is based in common law or in equity. *See* Tull v. United States, 481 U.S. 412, 417–18 (1987). It involves first looking at how the suit was treated in 18th-century courts in England and then second examining the nature of the remedy sought. *See id.*; *see also* Gary M. Hnath & Timothy A. Molino, *The Roles of Judges and Juries in Patent Litigation*, 19 FED. CIR. B.J. 15, 17–18 (2010).

58. *See generally* Hnath & Molino, *supra* note 57, at 18–38 (identifying situations where no jury is required, situations where issues must be separated between judge and jury, and the treatment of affirmative defenses).

59. 517 U.S. 370 (1996).

60. *Id.* at 372 ("[T]he construction of a patent, including terms of art within its claim, is exclusively within the province of the court.").

61. *Id.* at 388 ("[W]hen an issue 'falls somewhere between a pristine legal standard and a simple historical fact, the fact/law distinction at times has turned on a determination that, as a matter of the sound administration of justice, one judicial actor is better positioned than another to decide the issue in question.'") (quoting Miller v. Fenton, 474 U.S. 104, 114 (1985)).

on underlying evidentiary findings.[62] The Court highlighted the importance of providing certainty and uniformity in the patent arena.[63]

In *Tegal Corp. v. Tokyo Electron American, Inc.*,[64] the Federal Circuit held that the Seventh Amendment does not apply to patent invalidity determinations when the patent holder seeks only an injunction, rather than monetary damages.[65] Likewise, in *In re Technology Licensing Corp.*,[66] the Federal Circuit held that no jury trial right exists when a patent case is based on declaratory judgment of invalidity.[67]

Neither the Supreme Court, nor the Federal Circuit sitting en banc has addressed whether the right applies to patent invalidity decisions in the common scenario where the plaintiff seeks infringement damages.[68] In 1995, the Supreme Court granted certiorari in *American Airlines, Inc. v. Lockwood*,[69] which dealt with the Seventh Amendment in relation to invalidity determinations.[70] However, Lockwood withdrew the jury demand before the Court analyzed the case and the issue became moot.[71] Thus, there is not a definitive answer from the Supreme Court to whether the Seventh Amendment applies to invalidity decisions.[72]

Nevertheless, based on the Federal Circuit's reasoning in *Lockwood* and subsequent cases citing that reasoning, it is likely that the Seventh Amendment's jury trial

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62. *Id.* at 389–90.

63. *Id.* at 390 ("[W]e see the importance of uniformity in the treatment of a given patent as an independent reason to allocate all issues of construction to the court . . . . [Inconsistent treatment of a patent by a jury] would discourage invention only a little less than unequivocal foreclosure of the field . . . ." *Id.* (quoting United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942) (internal quotations omitted))).

64. 257 F.3d 1331 (Fed. Cir. 2001).

65. *Id.* at 1341 ("[A] defendant, asserting only affirmative defenses and no counterclaims, does not have a right to a jury trial in a patent infringement suit if the only remedy sought by the plaintiff-patentee is an injunction.").

66. 423 F.3d 1286 (Fed. Cir. 2005).

67. *Id.* at 1290–91.

68. *See* Hnath & Molino, *supra* note 57, at 17–20 (discussing the Seventh Amendment in relation to patent cases).

69. 515 U.S. 1121 (1995).

70. *Id.* The district court denied Lockwood's demand for a jury trial because the patent invalidity claims were purely equitable in nature. *In re* Lockwood, 50 F.3d 966, 968–69 (1995). The Federal Circuit granted Lockwood's writ of mandamus, although not en banc, and directed the district court to carry out Lockwood's jury demand. *Id.* at 980.

71. The Supreme Court vacated the Federal Circuit's decision and remanded to the district court for further proceedings. American Airlines, Inc. v. Lockwood, 515 U.S. 1182, 1182 (1995).

72. *See* Hnath & Molino, *supra* note 57, at 17–20; *see generally* Brian D. Coggio & Timothy E. DeMasi, *The Right to a Jury Trial in Actions for Patent Infringement and Suits for Declaratory Judgment*, 13 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 205 (2002) (discussing the various scenarios when there is a right to a jury trial in a patent case).

right applies to infringement cases where patent holders seek monetary damages.[73] Unlike the reasoning in *Markman*, stripping invalidity determinations from the jury will not likely promote uniformity.[74] This is because once a patent claim is found invalid, it cannot be later found valid by a different jury.[75] It may even decrease certainty since judicial determinations are shown less deference on review than jury verdicts.[76]

B. Typical Procedure in Trial and Appeals Courts

A fact-law inquiry such as that with obviousness involves three steps: (1) articulate the legal standards; (2) identify the relevant facts; and (3) apply the law to the facts.[77] In bench trials, the judge performs all three steps.[78] In jury trials, the judge performs the first step and the jury performs the second step.[79] However, district courts are given wide discretion on how to structure jury verdict forms and some courts permit the jury to find the disputed facts in step two, apply the law in step three, and reach an ultimate conclusion as to obviousness without revealing the actual factual findings on which their verdict relies.[80]

In these situations, the verdict form only involves a single answer of "yes" or "no" as to whether the non-obviousness requirement is met and does not elicit any factual findings regarding the individual *Graham* factors or the motivation for combining references under *KSR*.[81] For example, the first question on the verdict form in *Callaway Golf Co.* simply stated:[82]

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73. In general, *Lockwood* distinguished between trials based on equity versus trial based on law. *In re Lockwood*, 50 F.3d at 980. However, Congress could theoretically remove jury trials completely from patent validity determinations. This is because the Seventh Amendment only applies to private rights and patents are matters of public rights. *See generally* Granfinanciera v. Nordberg, 492 U.S. 33 (1989) (explaining that Congress has the ability to prescribe that courts sit without juries on issues of "public rights").

74. *See supra* note 63 and accompanying text (discussing the Court's focus on uniformity and certainty).

75. *See* Blonder-Tongue Labs., Inc. v. Univ. of Ill. Found., 402 U.S. 313, 350 (1971) (establishing that collateral estoppel applies to patent validity).

76. In a bench trial, a judge's factual determinations underlying obviousness are reviewed for clear error. In contrast, a jury's factual findings are reviewed for substantial evidence, regardless of whether the findings are explicit or implicit. *See infra* Part IV.B (discussing the standards of review).

77. *See* CHISUM, *supra* note 26, at § 5.04.

78. *See id.*

79. *See id.*

80. *See id.* ("If the judge adopts a general verdict procedure, the jury performs both the second task (fact identification) and the third task (law application).") (footnotes omitted).

81. *See supra* Part II for a discussion of the *Graham* and *KSR* decisions.

82. Verdict Sheet at 2, 585 F. Supp. 2d 600 (D. Del. 2008) (Civ. No. 06-091-SLR). The *Calloway* case involved patent infringement of a golf ball construction.

Has Acushnet proven, by clear and convincing evidence, that any of the following claims of U.S. Patent No. 6,210,293 (the '293 patent) is invalid due to obviousness?

"Yes" is a finding for Acushnet. "No" is a finding for Callaway.

(A) Claim 1 Yes _____ *No* X

(B) Claim 4 Yes _____ *No* X

(C) Claim 5 Yes X _____ *No* _____

In these cases where a jury returns a simple "yes" or "no," the trial judge will "presume that the jury resolved the underlying factual disputes in favor of the verdict winner and leave those presumed findings undisturbed if they are supported by substantial evidence."[83] If the decision is appealed, the Federal Circuit's procedure is quite similar. The Court of Appeals for the Federal Circuit ("CAFC") reviews the jury's findings for substantial evidence and the legal conclusion as to obviousness de novo "to see whether it is correct in light of the *presumed* jury fact findings."[84]

For example, in *i4i Limited Partnership v. Microsoft*,[85] a jury found i4i's patent claims directed to a method for editing custom computer language as nonobvious.[86] The Federal Circuit reviewed the district court's legal conclusion of nonobviousness by "presum[ing] the jury resolved underlying factual disputes in i4i's favor because the jury made no explicit factual findings."[87] Even though there were no explicit factual findings regarding the *Graham* factors or the *KSR* analysis, the court stated that "the jury must have believed that there were differences between the prior art and asserted claims, and that a person of ordinary skill would not have been motivated to combine the references."[88] In other words, even if the jury applied the law incorrectly, the Federal Circuit has no visibility into the decision-

83. Jurgens v. McKasy, 927 F.2d 1552, 1557 (Fed. Cir. 1991).

84. *Id.* (emphasis added); *see also* Honeywell Int'l v. Hamilton Sundstrand Corp., 370 F.3d 1131, 1145 (Fed. Cir. 2004) ("Since the ultimate issue of validity was submitted to the jury, we assume that all underlying factual issues were resolved in favor of the verdict winner."); Duro-Last, Inc. v. Custom Seal, Inc., 321 F.3d 1098, 1108–09 (Fed. Cir. 2003) ("Because the jury did not make explicit factual findings, we must presume that the jury resolved the underlying factual disputes in Custom Seal's favor. . . . [W]e assume the jury believed that at least one of the prior art corner pieces included a segment conformed to loop shape. . . . [W]e must presume the jury found that a person skilled in the art would have been motivated to [combine references].").

85. 598 F.3d 831 (Fed. Cir. 2010).

86. *Id.* at 839.

87. *Id.* at 846.

88. *Id.*

making process and must assume otherwise.[89] As a result, Microsoft was unable to establish that the asserted claims were obvious in light of the jury's implicit factual findings.[90]

IV. The Need for Intervention

By submitting the ultimate issue as to obviousness to a jury, district courts are abdicating their duty to conduct an independent analysis.[91] This procedure also prevents meaningful review of the determination on appeal at the CAFC.[92] Further, the use of lay juries has proven problematic in the patent law context.[93] Therefore, any potential modification to the current procedures should address all three of these issues.

A. The District Courts are Abdicating Their Duty to Conduct an Independent Analysis

As stated in *Graham* and *KSR*, the ultimate conclusion of obviousness is a matter of law.[94] It is the duty of the judge, as opposed to the jury, to render decisions on legal conclusions.[95] While the Federal Circuit has held that it is not in error to submit the question of obviousness to the jury,[96] the district courts have a responsibility to conduct an independent review of the jury verdict to ensure the statutory standards are appropriately met. Both the policy of uniformity embedded in the Patent Act of 1952 and case law dictate this duty.[97]

Several pre-Federal Circuit decisions explicitly highlight the judge's duty to conduct an independent analysis. For example, in *Pederson v. Stewart-Warner Corp.*,[98] the Seventh Circuit recognized that even though a judge may submit a general or specific verdict form to a jury regarding the obviousness inquiries, the judge retains

89. *Id.* at 849–50 ("We will uphold such a verdict if there was sufficient evidence to support *any* of the plaintiff's alternative factual theories; we assume the jury considered all the evidence and relied upon a factual theory for which the burden of proof was satisfied.") (emphasis in original).

90. *Id.* at 846.

91. *See infra* Part IV.A.

92. *See infra* Part IV.B.

93. *See infra* Part IV.C.

94. *See supra* Part II.

95. Herron v. S. Pac. Co., 283 U.S. 91, 95 (1931) ("In a trial by jury in a federal court, the judge is not a mere moderator, but is the governor of the trial for the purpose of assuring its proper conduct and of determining questions of law.").

96. *See supra* note 15 and accompanying text (citing the *Connell* decision).

97. *See supra* note 23 and accompanying text (describing Congress' intent).

98. 536 F.2d 1179 (7th Cir. 1976).

the responsibility to make his own analysis.[99] In the Eighth Circuit's *Span-Deck, Inc. v. Fab-Con, Inc.*,[100] the court took a similar approach, but noted that other jurisdictions such as the Fifth and Tenth Circuits did not necessarily include independent review as a requirement.[101]

Shortly after Congress created the Federal Circuit, it addressed the obviousness issue in *Structural Rubber Products Co. v. Park Rubber Co.*[102] The court chose to continue the Seventh and Eighth Circuit independent analysis requirement:

> The introduction of a jury cannot change the nature of the obviousness decision. It continues to be a legal issue for the court. Indeed, the role of a trial court should not be significantly different in a patent jury trial from its role in a patent bench trial with respect to legal issues.[103]

Even though this decision seemingly provided uniformity by resolving the circuit split and presented district courts with ample guidance, it has not proven effective. There is currently a lack of uniformity between bench and jury trials from both the application of law to facts perspective as well as from the appellate review perspective.[104]

With regards to applying the law, the district courts have strayed from the early Federal Circuit precedent by presenting the jury with a single "yes" or "no" option on obviousness and then simply reviewing that answer for substantial evidence.[105] This was the method taken by the Fifth and Tenth Circuits and rejected by the Federal Circuit in *Structural Rubber*.[106] The method lacks an adequate independent analysis because the judge has no insight into the jury's actual factual findings and must presume that every fact in dispute fell in favor of the verdict.[107] This is an im-

99. *Id.* at 1180 ("On the basis of the facts so determined [by the jury], the *court* must then decide the issue of obviousness." (emphasis added)).

100. 677 F.2d 1237 (8th Cir. 1982).

101. *Id.* at 1241 (referencing Control Components, Inc. v. Valtek, Inc., 609 F.2d 763, 767 (5th Cir. 1980) and Norfin, Inc. v. Int'l Bus. Mach. Corp., 625 F.2d 357, 365 (10th Cir. 1980)); *see* Dual Mfg. & Eng'r., Inc. v. Burris Indus., Inc., 619 F.2d 660, 663–67 (7th Cir. 1980) (en banc) (requiring an independent analysis).

102. 749 F.2d 707 (Fed. Cir. 1984).

103. *Id.* at 718–19.

104. *See infra* Part IV.B. (discussing the appellate review issue).

105. *See supra* Part III.B. (discussing the forms of jury verdicts).

106. 749 F.2d at 718–19.

107. Jurgens v. McKasy, 927 F.2d 1552, 1557 (Fed. Cir. 1991).

portant distinction because a jury's factual findings do not necessarily lead to only one conclusion as to obviousness. As the Supreme Court stated in *Graham*, "[w]hat is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context."[108] Thus, the legal conclusion is highly dependent on the specific factual findings and a judge could reach a different conclusion from a jury based on the same facts.[109] Given this, it is not proper for the judge to defer to the jury's analysis.[110]

B. Current Procedures Do Not Provide for Meaningful Appellate Review

The CAFC performs a de novo review of the ultimate obviousness determination.[111] On appeal from a bench trial, the CAFC reviews the underlying findings of fact, including the *Graham* factors, for clear error.[112] On appeal from a jury trial, the CAFC reviews the factual findings using the more deferential substantial evidence standard.[113] Regardless of which standard of review the CAFC applies, the Supreme Court in *KSR* clearly stated that "to facilitate review, [the obviousness] analysis should be made explicit."[114] However, the current procedure lacks any explicit analysis since disputed factual findings are never revealed outside of the jury room.[115] Thus, when the Federal Circuit reviews a district court's decision de novo, it is left to once again use implied factual findings.[116] This procedure deprives the Federal

108. Graham v. John Deere Co., 383 U.S. 1, 18 (1966).

109. For example, secondary considerations, which are factual findings, are weighed against other evidence to determine whether a claim is obvious. However, the weight given to the secondary considerations is subjective.

110. In the current situation where there is enough evidence favoring both plaintiff and defendant, regardless of the jury verdict, the judge is forced to simply affirm because of the substantial evidence standard applied to the review process. Thus, in this scenario, the judge plays no role in the obviousness analysis.

111. *See* Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337, 1343 (Fed. Cir. 2008) ("[A]s the ultimate conclusion of obviousness is a question of law, it remains our duty as the appellate court to ensure that the law has been correctly applied to the facts."); PharmaStem Therapeutics, Inc. v. ViaCell, Inc., 491 F.3d 1342, 1359 (Fed. Cir. 2007).

112. *See* Alza Corp. v. Mylan Labs., Inc., 464 F.3d 1286, 1289 (Fed. Cir. 2006).

113. *See* Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 719 (Fed. Cir. 1984) ("Findings of fact by the jury are more difficult to set aside (being reviewed only for reasonableness under the substantial evidence test) than those of a trial judge (to which the clearly erroneous rule applies)").

114. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007) ("Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explic t.").

115. *See supra* Part III.B.

116. *See supra* Part III.B.

Circuit from adequately reviewing the obviousness determination at the trial level and is counter to the Supreme Court's instructions in *KSR*.[117]

In *McGinley v. Franklin Sports, Inc.*,[118] the CAFC reviewed a judgment as a matter of law ("JMOL") following a jury verdict on obviousness.[119] There, a patent claimed an instructional baseball pitching device and a jury returned a verdict that the patent claims were not obvious based on a combination of two prior patents.[120] As is typical, the verdict form did not elicit any explicit factual findings underlying the obviousness determination.[121] However, the district court judge felt so strongly that the jury got it wrong that the judge issued a JMOL, concluding that no reasonable jury could find the claims not obvious.[122] However, on appeal, the Federal Circuit concluded that since the jury verdict provides "no insight as to the jury's findings with respect to the underlying factual underpinnings," as long as evidence was supplied during trial to support the verdict, "that is the end of the matter."[123] The Federal Circuit reversed the JMOL and reinstated the jury verdict.[124]

This case exemplifies the lack of meaningful appellate review because even when the district court judge conducts his own quasi-independent analysis, the Federal Circuit is still confined to reviewing implied facts. The CAFC appears handcuffed when it states that it cannot compel district courts to change their procedures to remedy the issue and that it must "respect the verdict reached, notwithstanding what may seem to some to be an invention of little novelty."[125] In his dissenting opinion, Judge Michel criticizes the Federal Circuit's stance on the matter and is "concerned that . . . trial courts and [the Federal Circuit] will hereafter consider such general verdicts on obviousness *immune from meaningful review* and that *serious legal errors* by juries will thus go uncorrected."[126]

In contrast to the CAFC's review of jury verdicts, the Federal Circuit requires an explicit analysis of the obviousness inquiry when hearing an appeal from the Board

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117. *See* Allan N. Littman, *The Jury's Role in Determining Key Issues in Patent Cases:* Markman, Hilton Davis *and Beyond*, 37 IDEA 207, 246 (1997) ("The Federal Circuit's present practice which permits general jury verdicts on an issue of law reserved to the judge invites arbitrariness and lack of meaningful review on appeal.").

118. 262 F.3d 1339 (Fed. Cir. 2001).

119. *Id.*

120. *Id.* at 1346–47.

121. *Id.* at 1356 (referencing the "black box" nature of the jury verdict).

122. *Id.* at 1346–47 (discussing the procedure in the district court).

123. *Id.* at 1350, 1355.

124. *Id.* at 1358.

125. *Id.* at 1356.

126. *Id.* at 1363 (Michel, J., dissenting) (emphasis added).

of Patent Appeals.[127] In *In re Zurko*,[128] the Federal Circuit explained that "the Board must point to some concrete evidence in the record in support of these [obviousness] findings. To hold otherwise would render the process of appellate review for substantial evidence on the record a meaningless exercise."[129] Further, the court requires more than just evidence in the record that *could* support a particular finding; it requires the Board to identify the actual evidence relied upon.[130] In this case, the court reversed the Board's conclusion of obviousness because the Board misread the prior art references it relied upon, even though a combination of other references could have independently invalidated the patent for obviousness.[131] Thus, the CAFC mandates explicit factual findings when reviewing the Board's decision, which is inconsistent with its approach to jury trials.

Following the same reasoning as in *Zurko*, the Federal Circuit should require a jury to make explicit findings of fact in order to reveal those relied upon by the court to make its obviousness determinations. The Federal Circuit recognizes this problem and has repeatedly called for a more explicit analysis by the jury in order to provide factual findings for appellate review.[132] However, the Federal Circuit is either unable or unwilling to *require* district courts to change their procedures.[133]

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127. *See, e.g.*, *In re* Vaidyanathan, 381 F. App'x. 985, 993 (Fed. Cir. 2010) ("With respect to core factual findings in a determination of patentability, . . . the Board cannot simply reach conclusions based on ts own understanding or experience-or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings. To hold otherwise would render the process of appellate review for substantial evidence on the record a meaningless exercise." (quoting *In re* Zurko, 258 F.3d 1379, 1386 (Fed. Cir. 2001))).

128. 258 F.3d 1379.

129. *Id.* at 1386 (internal citations omitted).

130. *Id.* at 1386 n.2 ("[W]e cannot accept the Commissioner's invitation to now search the record for references in support of the Board's general conclusions concerning the prior art. Even if any such references could support these conclusions, it would be inappropriate for us to consider references not relied upon by the Board.").

131. *Id*. at 1386.

132. *See* Wyers v. Master Lock Co., 616 F.3d 1231, 1248 (Fed. Cir. 2010) (Linn, J., concurring) ("To facilitate review and reveal more clearly the jury's underlying factual findings, this Court has encouraged trial court judges to provide juries with special interrogatories on obviousness. . . . However, we set forth no hard and fast rule, and it must be left to the sound discretion of the trial court what form of verdict to request of a jury.") (internal quotations omitted); *see also* Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337, 1343 n.3 (Fed. Cir. 2008); Richardson-Vicks, Inc. v. Upjohn Co., 122 F.3d 1476, 1484–85 (Fed. Cir. 1997); Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 720 (Fed. Cir. 1984); Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893 (Fed. Cir. 1984).

133. *Wyers*, 616 F.3d at 1248.

C. Juries May Not Be Capable of Making Sound Unbiased Decisions Regarding Patent Invalidity

Some patent practitioners describe jury decisions as "unreliable," "unpredictable," and "irrational."[134] Jury verdicts with contradictory findings are evidence of jurors' inability to grasp the complex concepts involved in patent litigation.[135] Some point to an inherent juror bias that is pro-patentee.[136] Regardless of their reasoning for disfavoring juries, there is a large body of skepticism of a jury's ability to comprehend patent issues and fairly decide disputed matters.[137] As a result, this increased unpredictability and uncertainty when using juries conflicts with Congress' goals of uniformity and definiteness in the patent system.[138]

1. Juries Struggle with Complex Issues

Many practitioners believe that juries are unable grasp the complex technical issues involved in patent cases.[139] Further, juries are unable to fully understand and apply the patent validity determination process.[140] A recent empirical analysis of juror competency reveals that juror comprehension of legal issues decreases with the complexity of the case without regard to whether the jurors are well-educated or have prior jury experience.[141] Sentiments of practitioners mirror this perception.[142]

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134. *See, e.g.*, Paul R. Michel & Michelle Rhyu, *Improving Patent Jury Trials*, 6 FED. CIR. B.J. 89, 105 (1996) (identifying the "perceived unpredictability, irrationality, and unreliability of many jury decisions"); Littman, *supra* note 117, at 209 ("Jury verdicts are less specific than judicial findings, less susceptible to review for consistency, uniformity or correctness and less predictable than the results of bench trials.").

135. *See infra* Parts IV.C.1 and C.3.

136. *See infra* Part IV.C.2.

137. *See generally Fourth Biennial Patent System Major Problems Conference*: *Abolition of Jury Trials in Patent Cases*, 34 IDEA 77 (1994); Gregory D. Leibold, *In Juries We Do Not Trust: Appellate Review of Patent- Infringement Litigation*, 67 U. COLO. L. REV. 623 (1996).

138. *See* Parts IV.C.1–3 (discussing how juror bias and lack of comprehension of complex technical matters leads to unpredictable and inconsistent results.)

139. *See* Moore, *supra* note 53, at 369–74 (discussing the various perceptions of patent juries).

140. *See id.*

141. *See* Matthew A. Reiber & Jill D. Weinberg, *The Complexity of Complexity: An Empirical Study of Juror Competence in Civil Cases*, 78 U. CIN. L. REV. 929, 944–68 (2010). The authors surveyed individuals called for jury service in Washington and provided the participants with three hypothetical scenarios with varying procedural and factual complex ty. *Id.* at 946–51. The survey tested comprehension rates across the sample pool. *Id.* at 951. The results indicate that jurors encounter more difficulty with procedurally complex scenarios than with factually complex scenarios. *Id.* at 960–63. Surprisingly, there are no significant trends based on juror education or prior jury experience. *Id.* at 960. Further, juror comprehension declines when there are multiple parties, multiple legal claims, affirmative defenses, or independent legal assertions that do not depend on the success/failure of other assertions. *Id.* at 960–61.

Their counterparts argue that the average juror is no less competent then a general judge in a district court and obviousness is no more complex than other areas of law.[143] For example, in negligence claims, a jury is asked to determine what a reasonable person would do in a given situation.[144] This may be analogous to determining what a person having ordinary skill in the art ("PHOSITA") would think is obvious.[145] Thus, they argue that obviousness and patent law in general deserve no special treatment.[146]

However, there is a significant difference between negligence claims and patent obviousness claims. In patent obviousness, the juror is much farther removed from the fictional person in intellectual capacity, experience, knowledge, and time than he is from the "reasonable person."[147] The PHOSITA is likely a scientist or other technically trained employee with a specific educational background.[148] For example, in *Carnegie Mellon University v. Marvell Technology Group, Ltd.*,[149] the PHOSITA for an invention directed toward hard disk drive sequence detectors had a Master's degree in electrical engineering.[150] The PHOSITA is also specified as hav-

142. *See, e.g.*, B.D. Daniel, *Heightened Standards of Proof in Patent Infringement Litigation: A Critique,* 36 AIPLA Q. J. 369, 412 (2008). According to B.D. Daniel, a litigator with thirty years of experience, "any lawyer with even minimal jury trial experience knows that jurors have a difficult time understanding any of the technical issues in a patent case. . . . Lawyers for patentees certainly argue their cases as if this proposition were true." *Id.* at 413 n. 252.

143. *See* Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1547 (Fed. Cir. 1983) ("The obviousness issue may be in some cases complex and complicated, on both fact and law, but no more so than equally complicated, even technological, issues in product liability, medical injury, antitrust, and similar cases. Indeed, though the analogy like most is not perfect, the role of the jury in determining obviousness is not unlike its role in reaching a legal conclusion respecting negligence, putting itself in the shoes of one 'skilled in the art' at the time the invention was made in the former and in the shoes of a 'reasonable person' at the time of the events giving rise to the suit in the latter.").

144. *See* Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir. 1987) (stating that "a person having ordinary skill in the art [is] not unlike the reasonable man and other ghosts in the law") (internal quotations omitted).

145. A person having ordinary skill in the art is the standard for determining whether an invention was obvious at a particular time. 35 U.S.C. § 103(a). Wh le this is a fictional person, juries hear expert testimony and review evidence regarding what others in the field considered knew at the time of invention.

146. *See Panduit*, 810 F.2d at 1566.

147. *See* Env'tl. Designs, Ltd. v. Union Oil Co. of Cal., 713 F.2d 693, 696 (Fed. Cir. 1983) (stating that the PHOSITA factors include "(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.").

148. *See generally* MUELLER, *supra* note 3, at 194, 197–202 (discussing the PHOSITA and cases demonstrating that the PHOSITA possesses specialized skills in the areas of medical technologies).

149. No. 09-290, 2010 WL 3937157 (W.D. Pa. Oct. 1, 2010).

150. *Id.* at *6.

ing a minimum number of years experience in a particular field.[151] In *Carnegie Mellon*, the PHOSITA had at least two years of experience in data detection and signal processing.[152] In addition, the obviousness analysis places the PHOSITA in the time period in which the invention is said to have taken place.[153] Thus, the jury may be asked to place the PHOSITA back in time by ten to fifteen years.[154] Finally, the PHOSITA is charged with having knowledge of every piece of literature, patent, and other prior art.[155] Thus, it is nearly impossible to realistically meet the PHOSITA's knowledge standard. Given these differences, it is proper to treat the obviousness inquiry with greater care than with the negligence analysis.

2. Juror Bias May Play a Role

The general belief within patent litigation is that juries are pro-patentee, pro-small inventor, and anti-foreigner.[156] The pro-patentee reasoning is that juries give significant deference to the PTO's allowance of the patented subject matter and the fact that they cannot wrap their heads around the issues enough to invalidate a patent.[157] When in doubt, they defer to the PTO.[158] The pro-small inventor reasoning is that juries favor the lone inventor, with whom they can identify more than with a large business.[159] Finally, a study of patent infringement cases revealed that juries discriminate against foreign patentees.[160]

In 2001, an empirical study revealed that patent holders are more successful in jury trials, as opposed to bench trials, especially on the question of validity.[161] The study also revealed that juries more frequently decide patent case as "all-or-

151. *See generally* MUELLER, *supra* note 3, at 194, 197–202 (discussing the PHOSITA).

152. *Carnegie Mellon*, 2010 WL 3937157 at *6.

153. *See* Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir. 1987) ("[The jury] must step backward in time and into the shoes worn by that 'person' when the invention was unknown and just before it was made.").

154. With some exceptions, patents expire twenty years after application filing date. 35 U.S.C. § 154(a)(2) (2006). Thus, the date of invention of an unexpired patent could be a significant number of years in the past.

155. *See* Std. Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 454 (Fed. Cir. 1985) (stating that the hypothetical person is "presumed to be aware of all the pertinent prior art").

156. *See* Moore, *supra* note 53, at 369–74 (discussing the various perceptions of patent juries).

157. *See id.*

158. *See* Allison & Lemley, *supra* note 5, at 213; Moore, *supra* note 53, at 372–73.

159. *See* Moore, *supra* note 53, at 372.

160. Kimberly A. Moore, *Xenophobia in American Courts*, 97 NW. U.L. REV. 1497, 1504 (2003).

161. Moore, *supra* note 53, at 408. On appeal, patent cases in bench trial and jury trials were affirmed with equal frequency. *Id.* at 408–09. However, Moore recognizes that using appellate data is problematic because of the black-box style jury verdicts and the standard of review. *Id.* at 409.

nothing," and favor the patentee significantly more when the patentee brings the suit.[162]

3. Problematic Jury Verdicts Evidence the Lack of Jury Comprehension

Many jury verdicts regarding obviousness have been met with criticism. These instances illustrate the need for better review of jury findings in order to flesh out errors. For example, in *Comaper Corp. v. Antec, Inc.*,[163] the jury found two independent claims not obvious, but several of their dependant claims as obvious.[164] Since patent claims are in a hierarchical structure with independent claims having a broader scope that includes their dependents, if a dependant claim is obvious, then so must be the independent claim.[165] This blatant contradiction illustrates a jury's lack of comprehension of the basic structure of patent claims, much less the complex technology described therein.[166]

V. The Proposed Solution

Any potential solution to the problems discussed in Part IV must be evaluated based on specific objectives. The following objectives have been extracted from the discussion above:

- Provide for meaningful appellate review[167]
- Clearly separate the legal and factual issues[168]
- Eliminate any jury bias[169]
- Eliminate any confusion emanating from the complexity of patent cases[170]
- Accommodate the Seventh Amendment's guarantee of right to a jury trial[171]
- Provide for an expedited disposition process[172]

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162. *Id.* at 408–09.

163. Civ. No. 05-1103, 2008 WL 4140384 (E.D. Pa. Sept. 8, 2008) ("JMOL Order").

164. *Id.* at *2.

165. *Id.* at *5 ("A finding that any of the dependent claims are obvious without a finding that the corresponding independent claim is obvious, is inconsistent.").

166. The Federal Circuit ultimately vacated the jury verdict and remanded for a new trial. Comaper Corp. v. Antec, Inc., 596 F.3d 1343, 1355 (Fed. Cir. 2010).

167. *See supra* Part IV.B.

168. *See supra* Part IV.A.

169. *See supra* Part IV.C.

170. *See supra* Part IV.C.

171. *See supra* Part III.A.

Although the current procedure contains several problematic areas as discussed in Part II, there are benefits to resisting change. First, change does not impose additional costs in time and money. Second, the existing procedure is a familiar system where everyone knows the rules and change may introduce uncertainty. Third, the existing process's simpler verdict form and lack of full independent judicial analysis may result in a speedier litigation process since disputes over the form and instructions are kept to a minimum. In addition, the rubber-stamp appeals process may dissuade many potential appellants from ever raising an issue.[173] As a result, any proposed change to the existing system must be measured against these benefits.

Two changes to the existing procedures substantially resolve the major problems identified in Part IV. The first requires that trial courts use detailed jury interrogatories for the factual findings in an obviousness analysis.[174] This will provide adequate information for a trial judge to conduct an independent obviousness analysis.[175] The second involves establishing specialized patent courts where judges are specially trained in patent law matters and jurors are selected based on their educational background.[176] The combination of these two approaches effectively addresses the six objectives.[177]

A. Use of Detailed Interrogatories Should Be Mandatory in Trial Courts

As discussed in Part III, courts typically send the ultimate question of obviousness to the jury with a simple "yes" or "no" question.[178] While this is technically considered a special verdict, it is nowhere near the level of detail necessary for a court to fulfill its duties.[179] Only the level of specificity contained in detailed interrogatories is sufficient to enable a court to properly rule on obviousness and provide for mea-

172. *See supra* Part II.A.

173. *See supra* Part IV.B.

174. *See infra* Part V.A.

175. *See infra* Part V.A.

176. *See infra* Part V.B.

177. *See infra* Part V.C.

178. *See supra* Part III.

179. *See* Agrizap, Inc. v. Woodstream Corp., 520 F.3d 1337, 1343 n. 3 (Fed. Cir. 2008) ("While a special verdict that asks a jury whether a patent claim is obvious provides more insight than one which simply asks whether the patent is invalid, the former still does not provide any detail into the specific fact findings made by the jury.").

ningful appellate review.[180] Compare the verdict form in *Callaway Golf Co.* in Part III.B with the following detailed interrogatories from *Hologic, Inc. v. Senorx, Inc.*:[181]

> *Question No. 8a:*
>
> *SenoRx asserts that there is no difference between what is contained in various prior art references or combinations of references and Claim 8 of the '142 patent. Has SenoRx proven that it is highly probable that claim 8 of the '142 is invalid because the invention would have been obvious to one of ordinary skill in the art at the time of the application?*
>
> *Yes* X _____ *No* _____
>
> *Question No. 8b:*
>
> *If you answer "Yes" to Question 8a, please identify the combinations of prior art references from the list below that would have rendered claim 8 of the '142 patent obvious to one of skill in the art (check those that apply):*
>
> X *The Ashpole article (TX-1007) plus knowledge of a person of ordinary skill in the art.*
>
> X *Ashpole (TX-1007) and Hirschberg disclosure.*
>
> X *Ashpole (TX-1007) and Johannesen (TX-1015).*
>
> X *Ashpole (TX-1007) and Friedman 1958 (TX-1009).*
>
> X *Williams '315 (TX-1027) plus knowledge of a person of ordinary skill in the art.*
>
> *Question No. 8c:*
>
> *Which of the following factors has been established by the evidence with respect to claim 8 of the '142 (check those that apply):*
>
> _____ *commercial success of a product due to the patentable features of the claimed invention;*

180. *See* Paul J. Zegger et al., *The Paper Side of Patent Jury Trials: Jury Instructions, Special Verdict Forms, and Post-Trial Motions*, 910 PLI/PAT 701, 716 (2007) ("By compelling a jury to consider factual issues individually, special verdicts and interrogatories may improve the consistency of jury verdicts as well as the underlying decision-making processes that produce them."); Am. Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1361 (Fed. Cir. 1984) ("The use of special interrogatories, as noted by the Fifth Circuit, facilitates appellate review (and review by the trial court on any motion for judgment notwithstanding the verdict), for such use frees the court from having to survey every possible basis for the jury's decision.").

181. Verdict Form at 3–4, Hologic, Inc. v. SenoRx, Inc., 2009 WL 4572718 (N.D. Cal. 2009).

a long felt but unmet need for the solution provided by the claimed invention;

_X_ copying of the claimed invention by others;

_X_ acceptance by others of the claimed invention as shown by praise from others in the field or from the licensing of the claimed invention;

other evidence tending to show nonobviousness;

_X_ independent invention of the claimed invention by others before or at about the same time as the named inventors thought of it; and

_X_ other evidence tending to show obviousness.

These interrogatories elicit explicit findings on each of the underlying factual inquiries. When compared to a bare "yes" or "no" on obviousness, the interrogatories allow a trial judge to understand the jury's findings, review the findings for error, and make an independent determination as to the ultimate legal conclusion. In Question 8c of the jury verdict above, the jury indicated that it found secondary considerations supporting both sides of the obviousness inquiry.[182] For example, it found copying by others, which supports a conclusion that the claim is not obvious.[183] However, it also found independent invention by others around the same time, which supports a conclusion that the claim is obvious.[184] This is valuable information to a trial judge when performing an independent analysis. Without this level of insight, reviewing judges are forced to assume that all secondary considerations favor one party.[185]

1. A New Procedure and Verdict Form

Ideally, district courts would follow the procedure suggested by Allan Littman in his 1997 article discussing the role of juries in patent cases.[186] There, Littman explains that the court should identify the specific factual disputes requiring jury resolution and include them as detailed jury interrogatories.[187] The jury's answers to these in-

182. *Id.*

183. *Id.*

184. *Id.*

185. *See supra* Part III.B. (discussing the current process by which district judges review a jury verdict).

186. Littman, *supra* note 117, at 246.

187. *Id.*

terrogatories are taken as fact as long as substantial evidence supports them.[188] The judge, using these factual findings along with the findings not submitted for jury resolution, then performs the obviousness analysis to reach the ultimate legal conclusion.[189] On appeal, the CAFC reviews factual findings for clear error and the ultimate obviousness determination de novo.[190] As a result, these procedures do not permit the implicit factual findings currently allowed by district courts.[191]

Several prominent model/pattern jury instruction guides include sample detailed interrogatories for obviousness.[192] The guides currently offer the interrogatories as alternative language to the more general verdict structure.[193] Since this language has already been approved by the issuing bodies, and the Federal Circuit has endorsed their use,[194] there should not be much objection to their use.

The U.S. District Court for the Northern District of California Model Patent Jury Instructions provides an excellent example that meets the requirements stated herein.[195] It presents two alternative formulations for the jury verdict form relating to obviousness. The first alternative asks the jury to make specific factual findings underlying the *Graham* factors.[196] These are similar to the questions in the verdict form discussed above in Part V.A.[197]

The guide also provides an alternative formulation adding a question whereby the jury indicates its opinion on the ultimate conclusion as to obviousness.[198] This alternative is the ideal structure as it elicits explicit findings and still permits the jury

188. *Id.*

189. *Id.*

190. *Id.*

191. *See infra* Part III (discussing current procedures).

192. *See, e.g.,* MARTIN FLIESLER ET AL., MODEL PATENT JURY INSTRUCTIONS FOR THE NORTHERN DISTRICT OF CALIFORNIA, (rev. 2007) [hereinafter *ND Cal. Instructions*]; AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, AIPLA'S MODEL PATENT JURY INSTRUCTIONS, 27–31, 2008; THE FEDERAL CIRCUIT BAR ASSOCIATION, MODEL PATENT JURY INSTRUCTIONS, 43–52, Jan. 12, 2008.

193. *See, e.g., ND Cal. Instructions*, *supra* note 192, at 32–36.

194. *See* Wyers v. Master Lock Co., 616 F.3d 1231, 1248 (Fed. Cir. 2010) (Linn, J., concurring) ("To facilitate review and reveal more clearly the jury's underlying factual findings [regarding obviousness], this Court has encouraged trial court judges to provide juries with special interrogatories on obviousness."); Sys. Div., Inc. v. Teknek LLC, 59 F. App'x. 333, 345 (Fed. Cir. 2003) ("[W]hile the ultimate issue of obviousness is a legal issue for the court, the subsidiary factual questions must be submitted to the jury where there are genuine issues of material fact. We have concluded that such genuine issues exist here. On remand, the district court may wish to present these fact issues to the jury in the form of special interrogatories.").

195. *See ND Cal. Instructions*, *supra* note 192.

196. *Id.* at 32–33. Alternative 1 addresses when a jury decides the underlying factual issues only.

197. *See supra* Part V.A.

198. *ND Cal. Instructions*, *supra* note 192, at 34–35 Alternative 2 addresses when a jury decides underlying factual issues and renders advisory verdict on obviousness.

to issue an advisory verdict on the analysis, which helps flesh out any inconsistencies and helps the court determine the weight of the factual findings in comparison to one another.[199] For example, the *Graham* factor regarding secondary considerations includes multiple considerations.[200] However, the weight of those considerations, not just simply their presence, may play an important role in the analysis.[201] By indicating whether the jury believes the secondary considerations properly rebut an obviousness determination in the other three *Graham* factors, the jury can indicate the strength of those considerations.[202] The judge presiding over the ultimate legal determination can use this information in his analysis to better reflect the jury's findings.

2. Selecting an Implementation Method: Judicial Mandate vs. Amending the Federal Rules of Civil Procedure

Two different approaches can accomplish across-the-board detailed interrogatory use.[203] First, either the Federal Circuit or the Supreme Court can mandate their use in district courts.[204] Second, the Federal Rules of Civil Procedure can be modified so as to mandate interrogatories in certain situations.[205]

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199. However, this advisory verdict approach may encounter problems. The Federal Circuit has rejected the use of advisory juries. In the pre-Federal Circuit case of *Sarkisian v. Winn-Proof Corp.*, the Ninth Circuit sitting en banc endorsed using a jury to render an advisory decision on the legal conclusion as to obviousness, with the judge making the ultimate determination. 688 F.2d 647 (9th Cir. 1982) (en banc) ("[W]e hold . . . [t]he court may submit the ultimate fact of obviousness to the jury for a nonbinding advisory opinion. . . . The court must, in all cases, determine obviousness as a question of law independent of the jury's conclusion."). But, the Federal Circuit rejected this approach in *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 895 n.5 (Fed. Cir 1984) (stating that the "use of an advisory jury is limited to actions not triable of right by a jury"). If the Federal Circuit rejects this approach, the first alternative formulation in the U.S. District Court for the Northern District of California, Model Patent Jury Instructions is the fallback.

200. *See supra* Part II.A.

201. *See* McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1356 (Fed. Cir. 2001) ("Due to the 'black box' nature of the jury's verdict, it is impossible to determine which of the above pieces of evidence, alone or in combination, carried the day in the jury room, and how much weight was assigned to each piece.").

202. For example, if the jury finds that secondary considerations are present and favor validity, but enters an advisory verdict that the patent is invalid, this signals that those secondary considerations are weak when compared to other *Graham* factors.

203. While individual trial courts may choose to independently use detailed interrogatories, across-the-board adoption is not likely without a uniform procedure covering all districts.

204. *See infra* Part V.A.2.I.

205. *See infra* Part V.A.2.II.

3. Judicial Mandate

First, the Federal Circuit may mandate interrogatories. Such mandate would take the form of the Federal Circuit finding that a trial court abused its discretion in it use of a particular verdict form.[206] However, the CAFC has shown a lack of willingness to go beyond making mere recommendations to the district courts.[207] The Federal Circuit's refusal to mandate special verdicts may be tied to its holding in *C.P.C. v. Nosco Plastics, Inc.*[208] There, the Federal Circuit stated that it lacks "supervisory authority over any district court."[209] Without this supervisory authority, the Federal Circuit does not believe it can mandate procedural matters such as the type of verdict form to use, as Judge Michel explained:

> [T]he Federal Circuit has exhorted the district courts to use special verdicts or interrogatories and has even intimated that, in many cases, failure to use interrogatories would constitute an abuse of discretion. Despite such hortatory language, however, I do not recall any case in which the court has reversed for refusal to submit requested special verdicts or interrogatories.[210]

Although the Federal Circuit may lack supervisory authority, it can mandate procedures if they are "unique to patent issues."[211] While "unique to patent issues" has not been defined, the Federal Circuit in *Biodex Corp. v. Loredan Biomedical, Inc.*[212] clarified that such a mandate is not appropriate if it creates "unnecessary conflicts and confusion in procedural matters."[213] According to former Chief Judge Michel and other scholars, obviousness determinations only exist in patent law and therefore a mandate tailored to them would not cause confusion with any other

206. *See* Michel & Rhyu, *supra* note 134, at 96 (discussing jury verdict forms and the standard of review). The Federal Circuit reviews verdict forms for abuse of discretion. *Id.*

207. *See supra* Part II.B.

208. 719 F.2d 400 (Fed Cir. 1983).

209. *Id.* at 401 (referencing the Federal Court Improvements Act that created the Federal Circuit).

210. Michel & Rhyu, *supra* note 134, at 96 (internal citations omitted).

211. *See* Gerald J. Massinghoff & Donald R. Dunner, *Increasing Certainty in Patent Litigation: The Need for Federal Circuit Approved Pattern Jury Instructions*, 83 J. PAT. & TRADEMARK OFF. SOC'Y 431, 436, 436 n. 19 (2001) (citing several cases where the Federal Circuit has exercised supervisory authority).

212. 946 F.2d 850 (Fed. Cir. 1991).

213. *Id.* at 856 ("Since our mandate is to eliminate conflicts and uncertainties in the area of patent law, we must not, in doing so, create unnecessary conflicts and confusion in procedural matters.").

procedural issues in the district courts.[214] Nevertheless, the Federal Circuit has not shown an interest in changing its precedent or exercising the "unique to patent law" exception.[215] This approach is therefore not likely to happen under the Federal Circuit's own initiative.

Alternatively, the Supreme Court can direct its authority towards the Federal Circuit. In this approach, the Supreme Court requires that the Federal Circuit conduct an independent review of the ultimate obviousness question. This will inevitably lead to the Federal Circuit mandating that the district courts use detailed jury interrogatories because the current procedures will not permit the Federal Circuit to independently review the obviousness determination without understanding the underlying factual findings.[216]

The Supreme Court recently had the opportunity to weigh in on similar issues in *Medela AG v. Kinetic Concepts, Inc.*[217] and in *Acushnet Co. v. Callaway Golf Co*.[218] In *Medela*, the Supreme Court was asked to determine whether district court judges have the obligation to conduct an independent obviousness analysis separate from the jury.[219] The petitioners noted a pre-Federal Circuit split in the circuit courts on whether obviousness was a matter for the judge or jury.[220] The petitioners also noted the conflict between current procedures and *KSR*'s instructions for courts to conduct an explicit analysis.[221]

In *Acushnet*, the Supreme Court was asked to determine whether a court's role in reviewing a jury's obviousness decision requires an independent analysis by the judge based on the jury's factual findings.[222] The petitioners argued that a jury's legal conclusion as to obviousness (1) should never be reviewed with prejudice favoring

214. *See* Michel & Rhyu, *supra* note 134, at 103–04; Massinghoff & Dunner, *supra* note 211, at 436, 436 n. 19 (citing several cases where the Federal Circuit has exercised supervisory authority).

215. *See supra* Part IV.B. (discussing how the Federal Circuit may be "handcuffed").

216. *See supra* Part IV.B. (discussing the current problems with appellate review).

217. Petition for Writ of Certiorari, Medela AG v. Kinetic Concepts, Inc., 130 S. Ct. 624 (2009), (No. 09-198), 2009 WL 2509227.

218. Petition for Writ of Certiorari, Acushnet Co. v. Callaway Golf Co., 130 S. Ct. 1525 (2009), (No. 09-702), 2009 WL 4875838.

219. Petition for Writ of Certiorari at i, *Medela*, 130 S. Ct. 624.

220. *Id.* at 13–16 (citing conflicting approaches in the Fifth, Seventh, and Ninth Circuits prior to the creation of the Federal Circuit).

221. *Id.* at 9–10.

222. Petition for Writ of Certiorari at 21, *Acushnet*, 130 S.Ct. 1525.

the verdict, (2) should not be reviewed using a reasonable jury standard, and (3) does not need to be proven by clear and convincing evidence.[223]

The Supreme Court denied both writs of certiorari.[224] However, the denials may not be an indicator that the Supreme Court does not wish to take up the issue. It may be that in both cases, the petitioner did not object to the general verdict form during the trial.[225] Thus, all that may be needed is a proper controversy for the Supreme Court to hear.[226] This would likely require a party to object to the use of a general verdict form at the trial level with the court nevertheless moving forward with the form.[227]

4. Modify the Federal Rules of Civil Procedure

The second approach requires a change to the Federal Rules of Civil Procedure ("Rules"). The Rules govern judicial procedures in all civil actions in district courts.[228] Currently, district courts have wide discretion in the form of the jury verdict.[229] The Rules permit a general verdict where the jury simply finds in favor of one party.[230] But, pursuant to Rule 49, a court may also use special verdicts or general verdicts in combination with detailed interrogatories.[231] Under Rule 49(a),

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223. *Id.* at 22.

224. Denial of Writ of Certiorari, *Medela*, 130 S.Ct. 624; Denial of Writ of Certiorari, *Acushnet*, 130 S.Ct. 1525.

225. *See* Respondent's Brief in Opposition to Petition for Writ of Certiorari at 7, Medela, 130 S.Ct. 624 ("At no point during the trial did Medela ever object to the instructions on obviousness. In fact, at the Federal Circuit, Medela readily admitted that it *stipulated* to the instructions.").

226. If a party fails to object to the form of the jury verdict, it waives the ability to later challenge to form's use. FED. R. CIV. P. 51(d) (requiring a proper objection for a court to find error in jury instructions unless if the error effect substantial rights).

227. *See* Michel & Rhyu, *supra* note 134, at 96 (explaining that "[c]ounsel have seldom objected when the district court refused some of their [jury verdict] requests. Thus, our clarification of whether such procedures can ever be required will depend on counsel objecting at trial in future cases.").

228. FED. R. CIV. P. 1.

229. *See* Allen Organ Co. v. Kimball Int'l, Inc., 839 F.2d 1556, 1561 (Fed. Cir. 1988) ("District courts have broad discretion in the conduct of jury trials, including the form of the jury verdict.").

230. *See* FED. RULE. CIV. P. 58(b)(1)(A) (requiring a judgment to be entered when a jury returns a general verdict).

231. FED. R. CIV. P. 49 states:

> (a) SPECIAL VERDICT.
>
> (1) *In General.* The court may require a jury to return only a special verdict in the form of a special written finding on each issue of fact. The court may do so by:
>
> (A) submitting written questions susceptible of a categorical or other brief answer;
>
> (B) submitting written forms of the special findings that might properly be made under the pleadings and evidence; or

courts have complete discretion as to the type of jury verdict to be returned.[232] Rule 49 would have to be modified so that special verdicts are no longer discretionary. This appears to be the only option as far as the Federal Circuit is concerned:

When and if Rules 49, 50, and 51, Fed. R. Civ. P., are repealed, there may be room for the restriction of juries to a fact finding role and for prohibition of general verdicts in patent or other types of jury trials. Until that day, a prohibition of general verdicts . . . cannot be accomplished by judicial fiat.[233]

While rule modification is possible, it is an arduous process involving many participants outside the realm of patent law. Congress authorized the federal judiciary to promulgate the Rules, subject to Congressional rejection or modification.[234] The Judicial Conference, comprising of Supreme, Appellate, and District Court judges, collectively makes recommendations for amendments to the Rules.[235] Within the

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(C) using any other method that the court considers appropriate.

(2) *Instructions.* The court must give the instructions and explanations necessary to enable the jury to make its findings on each subm tted issue.

. . .

(b) GENERAL VERDICT WITH ANSWERS TO WRITTEN QUESTIONS.

(1) *In General.* The court may submit to the jury forms for a general verdict, together with written questions on one or more issues of fact that the jury must decide. The court must give the instructions and explanations necessary to enable the jury to render a general verdict and answer the questions in writing, and must direct the jury to do both.

(2) *Verdict and Answers Consistent.* When the general verdict and the answers are consistent, the court must approve, for entry under Rule 58, an appropriate judgment on the verdict and answers.

(3) *Answers Inconsistent with the Verdict.* When the answers are consistent with each other but one or more is inconsistent with the general verdict, the court may:

(A) approve, for entry under Rule 58, an appropriate judgment according to the answers, notwithstanding the general verdict;

(B) direct the jury to further consider its answers and verdict; or

(C) order a new trial.

(4) *Answers Inconsistent with Each Other and the Verdict.* When the answers are inconsistent with each other and one or more is also inconsistent with the general verdict, judgment must not be entered; instead, the court must direct the jury to further consider its answers and verdict, or must order a new trial.

232. *Id. See* Rules Enabling Act, Pub. L. No. 73-415, 48 Stat. 1064 (1934) (codified at 28 U.S.C. §§ 2072-2077).

233. R.R. Dynamics, Inc. v. A. Stucki Co., 727 F.2d 1506, 1514–15 (Fed. Cir. 1984). Rule 50 covers JMOL procedure. Rule 51 covers the jury instructions.

234. *See* JAMES C. DUFF, ADMIN. OFF. OF THE U.S. COURTS, A SUMMARY FOR THE BENCH AND BAR: THE FEDERAL RULES OF PRACTICE AND PROCEDURE (Oct. 2010), *available at* http://www.uscourts.gov/RulesAndPolicies/FederalRulemaking/RulemakingProcess/SummaryBenchBar.aspx. The Rules Enabling Act, 28 U.S.C. §§ 2071-2077, provides the judiciary with its authority.

235. *Id.* The Judicial Conference is authorized by 28 U.S.C. § 331.

Judicial Conference, an advisory committee is tasked with Rule amendments.[236] The Advisory Committee on Civil Rules is comprised of judges, practitioners, professors, state chief justices, and Department of Justice representatives.[237]

A Rule change requires several steps, beginning with the advisory committee. First, the advisory committee receives suggestions for change, the committee reporter screens the submissions, and then the committee discusses the proposals at its next meeting.[238] Changes agreed to by the committee are published for comment.[239] The Standing Committee in the Judicial Conference must then approve the committee's final amendments.[240] Next, the Judicial Conference and Supreme Court must approve the amendments.[241] Finally, Congress is given the opportunity to enact a statute to reject or modify any part of the amendment.[242]

While this may be the most straightforward approach to giving the Federal Circuit the tools to create a mandate, the process demands consent from many participants who may not be sympathetic to the intricacies of patent law. Further, these participants would likely have concerns over the impact on non-patent law areas. Therefore, this approach may be the most lengthy and difficult path to implementation.

B. Obviousness Questions Should Be Decided by Specialized Patent Courts

Congress created the Federal Circuit to promote uniformity and certainty in the application of patent laws.[243] While district courts maintain jurisdiction over trial-level patent cases, Congress in fact recently passed a law creating a pilot program for specialized patent courts.[244] The use of specialized patent courts addresses many of the concerns that patent cases are complex and the subject matter is difficult to comprehend, especially in instances involving multiple claims and affirmative defenses.[245]

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236. *Id.*

237. *Id.*

238. *Id.*

239. *Id.*

240. *Id.*

241. *Id.*

242. *Id.*

243. *See* Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, § 165, 96 Stat. 50 (1982) (codified at 28 U.S.C. § 1295); Howard T. Markey, *The Federal Circuit and Congressional Intent*, 41 AM. U. L. REV. 577, 577 (1992).

244. Pub. L. No 111-349, 124 Stat. 3674 (2011).

245. *See generally* Lawrence M. Sung, *Strangers in a Strange Land: Specialized Courts Resolving Patent Disputes*, 17 BUS. L. TODAY, Mar.–Apr. 2008, at 27 (discussing the need for judges with specialized experience).

Using specialized courts for complex civil cases is not uncommon. At least 28 states have piloted or implemented a specialized business court to hear complex commercial, corporate, or technology cases.[246] For example, Maryland's business court provides for a special docket for complex business and technology cases.[247] These cases are then assigned to one of a group of trial judges who receive ongoing training and education in substantive business and technology matters.[248] By using this process, Maryland's goal is to realize greater efficiency, timelier, rational, legally correct, and predictable rulings, and a higher rate of settlement.[249]

A similarly specialized patent court system can be modeled after these state business courts.[250] The major features are (1) specially trained and educated judges and (2) specially selected juries. Creating specialized patent courts will provide the trial level with increased familiarity with patent law, increased technical capability, and greater efficiency in handling patent cases.

1. Require Specially Trained and Educated Judges

While there is a spotlight on a jury's ability to grasp the complex technical issues in a patent case, general district court judges themselves also have difficulty.[251] This difficulty is likely increased for those judges who hear patent cases infrequently.[252] An empirical study of district court judges' patent claim constructions reveals a Federal

246. *See Overview of State Business, Technology and Complex Courts/Programs*, J. BUS. & TECH. L., http://www.law.umaryland.edu/academics/journals/jbtl/bus_tech_res.html (last visited April 15, 2011) (providing an overview of various state business court developments).

247. *See* IMPLEMENTATION COMM., CONFERENCE OF CIRCUIT JUDGES, MARYLAND BUSINESS AND TECHNOLOGY CASE MGMT. PROGRAM: FINAL REPORT, *available at* http://www.courts.state.md.us/b&t-ccfinal.pdf.

248. *See id.* (proposing new Rule 16-205 governing the assignment of complex business cases).

249. MARYLAND BUSINESS AND TECHNOLOGY COURT TASK FORCE, MARYLAND BUSINESS AND TECHNOLOGY COURT TASK FORCE REPORT 6 (2000), *available at* http://www.courts.state.md.us/finalb &treport.pdf.

250. *See* John B. Pegram, *Should There Be a U.S. Trial Court with a Specialization in Patent Litigation*, 82 J. PAT. & TRADEMARK OFF. SOC'Y 765, 780–81 (2000) (stating similarities with specialized business courts).

251. Michel & Rhyu, *supra* note 134, at 91 ("[B]eyond lacking technical knowledge, many district judges may be unfamiliar with patent law."); Moore, *supra* note 53, at 374 (noting that most judges do not have any special expertise in the underlying technology in patent cases).

252. *See* Moore, *supra* note 53, at 374 ("With only 2000 patent cases being filed each year and only approximately 100 of these reaching trial, a district court judge's exposure to patent cases is very limited.").

Circuit reversal rate of one in three.[253] Judge Friendly's words in 1973 still have truth today:

> [C]ourts . . . deal today with a great number of patents in the higher reaches of electronics, chemistry, biochemistry, pharmacology, optics, harmonics and nuclear physics, which are quite beyond the ability of the usual judge to understand without the expenditure of an inordinate amount of educational effort by counsel and of attempted self-education by the judge, and in many instances, even with it.[254]

To address this problem, a critical feature of the specialized patent court is to maintain a high level of familiarity and competency within the subject matter of patent law. This is accomplished through the selection process for judges and through ongoing training. First, when selecting judges to sit on the patent court, preference may be given to judges who are technically-oriented and therefore more likely to be able to quickly grasp the nuances of certain technologies.[255] That said, a non-technical background need not be a disqualifier. Nine of the sixteen CAFC judges do not have a formal science-related education.[256] Rather, these judges rely on technical law clerks to provide assistance.[257] Nevertheless, technical capability should be a relevant factor when selecting judges because regardless of whether a judge attempts to learn on the fly through self-study or through a law clerk, the process will inevitably lack as thorough of an analysis in a timely manner.

Second, ongoing training must be required to keep judges up to speed on patent law developments and on changes in technology areas. Some scholars note that the CAFC treats certain technology areas slightly differently when adjudicating patent

253. Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 11 (2001). Moore found that "[d]istrict court judges struggled with technically complex terms such as 'memory selection second switch means,' and 'contact arrays being adapted to interchangeably connect' and seemingly simple terms such as 'between', 'a', and 'when.'" *Id.* (footnotes omitted).

254. HENRY J. FRIENDLY, FEDERAL JURISDICTION: A GENERAL VIEW 156–57 (1973) (discussing the need for specialized patent courts).

255. *See* Pegram, *supra* note 250, at 788–89 (discussing the need for technical expertise).

256. The nine judges include Rader, Friedman, Archer, Plager, Clevenger, Schall, Bryson, Dyk, and O'Malley. *See* http://www.cafc.uscourts.gov/ for Federal Circuit judge biographical information.

257. *See* Pegram, *supra* note 250, at 789 (discussing the use of technical law clerks to assist in patent matters).

validity.[258] For example, in an obviousness analysis, the mechanical arts are typically treated as a more predictable field when it comes to routine experimentation.[259] In contrast, the chemical biotechnology areas are said to have a higher degree of unpredictability.[260] This nuance directly impacts the obviousness analysis given the standard set forth in *KSR*.[261] Therefore, as patent law evolves with advances in technology, the judges must also be able to follow suit and anticipate these changes.

Thus, the benefits of specially trained and educated judges are numerous. They include fewer instances of technical miscomprehension involving the complex technologies and a boost in the integrity of the system by providing for more informed determinations on obviousness.[262] Further, a recent empirical study shows that judges more experienced with patent law have higher rates of affirmance at the CAFC.[263] The study concludes that specialized patent courts at the trial level will provide more consistent outcomes across all trial courts.[264] Finally, judicial efficiency is an added benefit. When speaking on the concept of specialized patent courts, former Chief Judge Markey commented that "[i]f I am doing brain surgery every day, day in and day out, chances are very good that I will do your brain surgery much quicker... than someone who does brain surgery once every couple of years."[265]

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258. *See, e.g.*, Dan L. Burk & Mark A. Lemly, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1183–85 (2002) (discussing the different treatment of mechanical, biotechnology, and software inventions).

259. *See* MUELLER, *supra* note 3, at 105–08 (discussing the types of inventions considered more predictable).

260. *Id.*

261. *See supra* Part II.B.

262. *See* Edward V. Di Lello, *Fighting Fire with Firefighters: A Proposal for Expert Judges at the Trial Level*, 93 COLUM. L. REV. 473, 493–503 (1993) (proposing technical expert magistrates in each district and discussing the benefits of technical expertise in the trial courts).

263. Jay P. Kesan & Gwendolyn G. Ball, *The Impact of General and Patent-Specific Judicial Experience On the Efficiency and Accuracy of Patent Adjudication*, SECOND ANNUAL RESEARCH ROUNDTABLE ON THE EMPIRICAL STUDIES OF PATENT LITIGATION 59 (Nov. 18–19, 2010).

264. *Id.* at 59–60.

265. Di Lello, *supra* note 262, at 502 (quoting Chief Judge Howard T. Markey, Court of Customs and Patent Appeals).

2. Require Special Jury Selection

Patent courts may also use a narrow juror pool ("blue ribbon juries") to address the complexity issue.[266] One scholar focused on the decision-making process during jury deliberations and concluded that public choice principles predict cascading, rather than independent, decision-making in the jury room.[267] The result is that those jurors who are less educated, less familiar with the patented technology, or less engaged will follow the lead of those who vocalize their views early on and have perceived knowledge of the subject matter.[268] Thus, jurors who are able to comprehend the issues in a patent case are less likely to simply follow the lead of other jurors. This leads to a more proper jury verdict where each juror makes an independent determination.

Some scholars have proposed methods for constructing relevant patent jury pools.[269] The consensus is that jurors must meet some combination of education, technical training, intelligence, occupation, or other factors relevant to comprehending complex patent issues.[270] Therefore, in district court jury assignments, potential jurors must be asked to provide this information. Qualifying jurors would then be moved to the specialized patent court jury pool.

3. The Courts Should Be Organized by Circuit

The jurisdictional scope of the specialized court must also be considered. One question is whether the specialized patent courts should hear all patent-related cases, or only a subset of cases. While the analysis herein focuses narrowly on the obviousness inquiry, much applies to other patent cases where patent validity is challenged.[271] Thus, the jurisdictional scope of these specialized courts may be limited to only those matters where a party challenges the validity of a patent. However, prac-

266. *See generally* Richard C. Baker, *In Defense of the "Blue Ribbon" Jury*, 35 Iowa L. Rev. 409 (1950) (discussing blue ribbon juries as a solution to jury incompetency and bias). The Supreme Court has found that specialized juries pass constitutional muster. *See, e.g.,* Fay v. New York, 332 U.S. 261, 296 (1947).

267. *See* Beth Z. Shaw, *Judging Juries: Evaluating Renewed Proposals for Specialized Juries from a Public Choice Perspective*, 2006 UCLA J.L. & TECH. 3, ¶¶ 31–80 (2006).

268. *Id.* at ¶¶ 58–62.

269. *See, e.g.*, Leibold, *supra* note 137, at 672 ("The use of special juries would increase the expertise of the fact finder while maintaining the proper balance between the trial and appellate courts."); *Fourth Biennial Patent System Major Problems Conference*, *supra* note 137, at 78, 89, 92 (various panelists discussing specialized juries).

270. *See generally Fourth Biennial Patent System Major Problems Conference*, *supra* note 137, at 78, 89, 92.

271. Validity may be challenged under 35 U.S.C. §§ 101, 102, 103, or 112.

tically speaking, nearly all patent cases involve a validity challenge, meaning the specialized courts will inevitably apply to most patent cases.[272]

While specialized district courts for hearing patent cases do not currently exist, patent litigation is generally clustered in a few venues.[273] Although specialized patent courts may make sense for these venues, it may be less practical for venues that only hear one or two patent cases each year.[274] The time and effort required establishing training programs for judges, administrative procedures, and jury selection processes may simply outweigh the benefits of the system. Thus, a uniform specialized patent court system would likely need to be implemented so as to capture enough volume of cases to make the administration of the courts worthwhile, while still providing adequate access for the parties. Given the large variation in the volume of patent cases by district, it is inefficient to implement such a system in district courts with only one or cases per year. However, if the specialized courts only existed in those high-volume districts, the concept of national uniformity would not be maintained.

Alternatively, the specialized courts may be implemented at the circuit level. In 2009, the number of patent cases filed in district courts by circuit ranged from 45 to 651.[275]

Figure 2. Number of Patent Cases Commenced in U.S. District Courts in FY 2009[276]

First Circuit	76	Fifth Circuit	361	Ninth Circuit	651
Second Circuit	209	Sixth Circuit	174	Tenth Circuit	114
Third Circuit	443	Seventh Circuit	270	Eleventh Circuit	171
Fourth Circuit	155	Eighth Circuit	123	DC Circuit	45

272. The exceptions would include cases where validity is not challenged, such as where the defense only responds with non-infringement, unenforceability, or another affirmative defense.

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

274. For example, only one patent case was filed in the Eastern District of Washington in FY 2009 and none were filed in Vermont. *Id.*

275. *See infra* Figure 2.

276. ADMIN. OFFICE OF THE U.S. COURTS, JUDICIAL BUSINESS OF THE U.S. COURTS tbl. C11 (2009).

Thus, if the specialized courts were implemented at the circuit level, there would be adequate volume of cases to justify the added administrative burden. There will also be a large pool of judges from which to select for patent court duties.

C. Evaluation of Proposed Solution Against Stated Goals

Figure 3 below compares the abovementioned benefits in Part V to the above stated goals. As a result, the proposed solution either matches or exceeds the status quo for each goal.

Figure 3. Status Quo vs. Proposed Solution

	Status Quo	Require Detailed Interrogatories	Specialized District Courts
▪ Meaningful appellate review?	No	**Yes**	**Maybe**
▪ Clear separation of legal and factual issues?	No	**Yes**	**Maybe**
▪ Validity determined by those familiar with the technology/patent system?	No	No	**Yes**
▪ Expedited disposition process?	**Maybe**	**Maybe**	**Yes**
▪ Elimination of jury bias?	No	**Maybe**	No
▪ Accommodate the Seventh Amendment?	**Yes**	**Yes**	**Yes**

VI. Conclusion

The Federal Circuit's current practice of allowing juries to return a single verdict on the conclusion as to obviousness without making explicit factual findings, and then simply reviewing the implicit findings for substantial evidence, is an abdication of duty and does not provide for meaningful appellate review.[277] When combined with the general inadequacies of the jury system in patent cases, the current process produces unfair and unpredictable results.[278] Given that patent jury trials are now more popular than bench trials[279] and the obviousness issue is by far the most frequently

277. *See supra* Parts IV.A–B.

278. *See supra* Part IV.C.

279. *See supra* Figure 1.

litigated patent validity issue,[280] it is well worth the time to evaluate modifications to the current system.

Given the significant need for change, any proposed solution must be evaluated based on clear goals that are used to compare the solution to the status quo.[281] A viable solution that addresses the voiced concerns includes: (1) the district courts using detailed jury interrogatories, and (2) the creation of specialized patent courts in each circuit.[282] The combination of these two approaches provides meaningful appellate review to obviousness determinations and properly separates the duties of judge and jury.[283]

280. *See* Mandel, *supra* note 5, at 1398.

281. *See supra* Part V.A.

282. *See supra* Part V.C.

283. *See supra* Parts V.B–C.