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A PROPOSAL TO VIEW PATENT CLAIM NONOBVIOUSNESS FROM THE POLICY PERSPECTIVE OF FEDERAL RULE OF CIVIL PROCEDURE 52(A)

“When *I* use a word,” Humpty Dumpty said, in rather a scornful tone, “it means just what I choose it to mean—neither more nor less.”

“The question is,” said Alice, “whether you *can* make words mean so many different things.”

“The question is,” said Humpty Dumpty, “which is to be master—that’s all.”¹

Of all complex issues litigated before the federal courts, patent validity ranks as one of the most difficult.² The validity of a

1. L. CARROLL, *Through the Looking Glass*, in THE COMPLETE WORKS OF LEWIS CARROLL 214 (1936). Like Humpty Dumpty, a patent applicant is given the privilege to define the words used in the patent application. See J. LANDIS, MECHANICS OF PATENT CLAIM DRAFTING 25 (2d ed. 1974). The meaning of fact and law for purposes of Federal Rule of Civil Procedure 52(a), however, is constrained by analytical and policy considerations.

2. The proceedings in the United States Patent and Trademark Office (PTO) are generally *ex parte*. The patent applicant submits an application to the patent office consisting of a signed oath, power of attorney and petition form, filing fee, receipt postcard, transmittal letter, claims, specifications and drawings, and an executed assignment, if one has been made. See P. GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES 557-58 (2d ed. 1981). The patent claims are the operative elements of the patent grant because they define the metes and bounds of the invention and separate the public domain from the knowledge sought to be exclusively controlled by the applicant. Due to their significance, the patent office examiner—a representative of the patent office—considers each of the proffered claims submitted by the applicant and rejects the claims considered invalid. The applicant may amend the application to avoid the rejection. When the examiner believes the invention, as described in the application, is valid, a notice of allowance will be issued on the acceptable claims. *Id.* at 562. Except for an interference action in the patent office, where two or more inventors claim an invention at the same time in separate applications, the only test for validity is an *ex parte* proceeding. In this proceeding an examiner may lack an adversary’s resources, initiative, and incentive to test fully an application’s worthiness. Cf. MANUAL OF PATENT EXAMINING PROCEDURE §§ 704, 706.04 (5th ed. 1983) (directing examiners reviewing an application previously processed by another examiner not to take an entirely new approach to a case or to reorient the point of view of the previous examiner’s search of the prior art).

Although the PTO issues a patent on the basis of valid claims, and once issued these claims are presumed valid, 35 U.S.C. § 282 (1982), both the validity and scope of a pat-

patent may be challenged on three fundamental grounds—utility, novelty, or nonobviousness.³ A patent is valid only if it meets each of these conditions. Utility and novelty have always been statutorily based.⁴ Nonobviousness, however, was initially crafted by the Supreme Court,⁵ but was subsequently codified by the Patent Act of 1952.⁶ This condition is by

ent's claims are not scrutinized by the adversarial process until the parties are in a traditional judicial forum. In an infringement action, a district court initially determines validity, then infringement. The alleged infringer may avoid liability by successfully asserting invalidity or noninfringement of the patent's claims. Infringement actions may be heard in federal district court; in the United States Court of Claims for alleged United States government infringement; and also in International Trade Commission adjudications, when the defendant is accused of importing infringing products into the United States.

Patent validity may also be addressed by the district courts in the context of administrative review. Under 35 U.S.C. § 145 (Supp. III 1985), a patent applicant can petition the District Court for the District of Columbia to force the Commissioner of Patents to issue a patent on claims that were held properly rejected by the Board of Patent Appeals and Interferences (the body that applicants appeal to after an examiner's final rejection). An alternative route is also available under the Administrative Procedure Act. 5 U.S.C. § 706 (1982). Once the Commissioner of Patents rejects a petition for a grant of patent claims, the petitioner may seek federal district court review because the Commissioner's actions qualify as a final agency action under the statute. See generally Calvetti & Venturino, *The First West Coast Federal Circuit Continuing Legal Education Conference: Patent and Trademark Workshop Strategies for Appeals from Administrative Agencies and District Courts*, 3 CT. OF APPEALS FOR THE FED. CIRCUIT NEWSL. 162, 164-67 (1987).

3. The condition of utility requires that the subject matter serve some useful purpose. 35 U.S.C. § 101 (1982); see also *Brenner v. Manson*, 383 U.S. 519, 528-29 (1966) ("One may patent only that which is useful."). Novelty, in its rudimentary form, requires the subject matter to be new. 35 U.S.C. § 102 (1982).

The third condition, presently found in 35 U.S.C. § 103 (1982 & Supp. III 1985), shall be termed "nonobviousness" in this Note. Courts and commentators have used various terms including "the § 103 condition," "obviousness," "unobviousness," and "nonobviousness." Because this Note considers issued patents, the presumption of validity, *id.* § 282 (1982), applies and the negative should be used to guarantee proper analysis. As for the choice between negatives, § 103 clearly requires "non-obvious subject matter."

4. The first patent act required the subject matter of a patent to be a "useful art, manufacture, engine, machine, or device" that had "not before [been] known or used." Patent Act of 1790, 1 Stat. 109, § 1 (1790) (repealed 1836). Thomas Jefferson, the first Secretary of State and a noted inventor in his own right, along with the other designated Cabinet members, formulated rules of patentability using concepts analogous to the present day novelty and utility standards. Frederico, *Operation of the Patent Act of 1790*, 18 J. PAT. OFF. SOC'Y 237, 243-44 (1936). See generally Frederico, *The First Patent Act*, 14 J. PAT. OFF. SOC'Y 237 (1932).

5. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851).

6. 35 U.S.C. § 103 (1982 & Supp. III 1985). For an informative article discussing the creation of the Patent Act of 1952, see Rich, *Congressional Intent—Or, Who Wrote the Patent Act of 1952?*, in NONOBVIOUSNESS—THE ULTIMATE CONDITION OF PATENTABILITY 1:1 (J. Witherspoon ed. 1980) [hereinafter NONOBVIOUSNESS].

far the most litigated of the three and is the basis of the greatest number of appeals on the issue of patent validity.⁷

The frequent appeals of the nonobviousness determination and the significance of this determination to the ultimate issue of validity highlight the importance of the scope of review applicable to nonobviousness. The Court of Appeals for the Federal Circuit characterizes this condition as a legal conclusion supported by foundational facts.⁸ By labeling the determination a question of law, the Federal Circuit subjects the nonobviousness conclusion to unrestrained review rather than to review under the clearly erroneous standard.⁹ Despite this position and the Supreme Court's decision to deny certiorari,¹⁰ not all members of the patent bar are convinced that the review of nonobviousness should be so broad.¹¹

This Note analyzes the scope of appellate review that should be accorded to a trial judge's determination of nonobviousness. Part I details the condition of nonobviousness and how it has evolved into the principal obstacle to patentability. Part II analyzes the Supreme Court and appellate precedents on the scope of review on this issue. Part III evaluates the policy underpinnings of Rule 52(a) and applies a two-pronged analysis to the nonobviousness requirement to determine whether the clearly erroneous standard of review is appropriate. This Note concludes that the treatment of the nonobviousness determination as a question of law cannot be justified on either analytical or

7. 3 D. CHISUM, PATENTS § 11.06[3][c], at 11-102 (1987).

8. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

9. *Id.* at 1566.

There is a distinction between a condition and a standard. The patent statute requires conditions of patentability, although some refer to nonobviousness as a standard of patentability. See Rich, *The Vague Concept of "Invention" as Replaced by Section 103 of the 1952 Patent Act*, in NONOBVIOUSNESS, *supra* note 6, at 1:401, 1:409, 1:415. Federal Rule of Civil Procedure 52(a), on the other hand, is a standard because it embodies a definite legal rule applicable to the review of all bench trials in the federal system. The scope of appellate review is defined by the *de novo* standard, allowing for unconstrained review, and the clearly erroneous standard, constraining review. See *infra* notes 92-95 and accompanying text.

10. *Dennison Mfg. Co. v. Panduit Corp.*, 107 S. Ct. 2187 (1987), *denying cert. to* 810 F.2d 1561 (Fed. Cir. 1987).

11. *E.g.*, Goldstein, *Significant Federal Circuit Decisions Concerning the Weight to be Given to the Secondary Consideration Issues of Commercial Success, Long-Felt Need, and Other Objective Indicia for Determining Obviousness*, SECTION OF PATENT, TRADEMARK AND COPYRIGHT LAW 1986 EDUCATION PROGRAM 8, 10-11 (Aug. 12, 1986) (available from the American Bar Association, Section of Patent, Trademark and Copyright Law Education Program).

policy grounds, and should be treated as a question of fact subject to the clearly erroneous standard.

I. NONOBVIOUSNESS—A CONDITION OF PATENTABILITY

The condition of nonobviousness, as it is known today, can be considered the most compelling justification for a patent grant.¹² The Supreme Court initially announced this condition of patentability in 1851 in *Hotchkiss v. Greenwood*¹³ as the concept of "invention."¹⁴ This concept, due to its essential ambiguity,¹⁵ devolved by the early twentieth century into a set of rules called "the negative rules of invention."¹⁶ These rules were sufficiently malleable to allow a court to invalidate nearly all patents—a re-

12.

[T]he unobviousness provision, . . . is the heart of the patent system and the justification of patent grants. Why do I say that? For two reasons: *First*, it is § 103 which brings about statutory compliance with the Constitutional limitation on the power of Congress to create a patent system, assuming novelty of the invention, of course, which is also necessary. . . . *Second*, it is the provision which assures that the patent grant of exclusive right is *not in conflict with the anti-monopoly policy* brought to this country from England by the colonists

. . . .

Rich, *Laying the Ghost of the "Invention" Requirement*, in NONOBVIOUSNESS, *supra* note 6, at 1:501, 1:501.

13. 52 U.S. (11 How.) 248 (1851). The inventor in *Hotchkiss* obtained a patent for a doorknob identical to previous doorknobs except for the substitution of materials. The Court rejected the patentability of such an improvement and held that "there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention. In other words, the improvement is the work of the skilful [sic] mechanic, not that of the inventor." *Id.* at 267.

14. The goal of this condition was to redress a perceived vacuum of obstacles to patentability and to further constitutional aims. *Graham v. John Deere Co.*, 383 U.S. 1, 11 (1966).

15. The ambiguity of "invention" as a legal term of art is apparent in the *Hotchkiss* opinion itself. The dissent argued the test was subjective—whether the machine or device was the result of "ingenuity," rather than the product of experimentation or application of known principles. The majority made the test objective—whether the machine or device was sufficiently advanced over prior inventions. See 2 D. CHISUM, *supra* note 7, § 5.02[1], at 5-8 to -9; see also Mintz & O'Rourke, *The Patentability Standard in Historical Perspective: "Invention" to Section 103 Nonobviousness*, in NONOBVIOUSNESS, *supra* note 6, at 2:201, 2:204; Rich, *Principles of Patentability*, in NONOBVIOUSNESS, *supra* note 6, at 2:01, 2:12.

16. For an encapsulation of the negative rules of invention as of 1929, see generally 1 A. WALKER, *A TREATISE ON THE LAW OF PATENTS* §§ 61-78 (6th ed. 1929) (listing mere skill, excellence of workmanship, substitution of materials, enlargement, change of degree, aggregation, duplication, omission, substitution of equivalents, new combination without new mode of operation, and using old things for new and analogous purposes as not constituting invention).

sult that was reached in almost every case between 1930 and 1950 in the Supreme Court.¹⁷

In the interest of stability and uniformity of decision, Congress added section 103 to the patent statute in the Patent Act of 1952.¹⁸ Congress intended to paraphrase language often used in court decisions¹⁹ to deny patentability in those cases where the differences between the subject matter to be patented and the prior art are "such that the subject matter as a whole would have been obvious at the time to a person skilled in the art."²⁰ Congress believed codification of this condition provided uniformity and definiteness and would "have a stabilizing effect and minimize great departures which have appeared in some cases."²¹

The Supreme Court reviewed the constitutionality of this statute in *Graham v. John Deere Co.*²² Analyzing its previous decisions on patentability, the Court pointed to an underlying constitutional aim, furthering the useful arts,²³ that Congress must observe in enacting conditions for patentability.²⁴ Upon review of the nonobviousness statutory condition, the Court concluded that the level of invention required by the statute was identical

17. See 2 D. CHISUM, *supra* note 7, § 5.02[3], at 5-21. This period culminated with the low-water mark of patent validity cases, *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950). This case provided the impetus for codification of the nonobviousness condition because the Court invalidated patent claims utilizing an improper analysis. Rich, *supra* note 12, at 1:501, 1:507-08.

18. Act of July 19, 1952, Pub. L. No. 593, ch. 950, 66 Stat. 798 (codified as amended in scattered sections of 35 U.S.C.). 35 U.S.C. § 103 (1982 & Supp. III 1985) provides in pertinent part:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

19. H.R. REP. NO. 1923, 82d Cong., 2d Sess. 7 (1952); S. REP. NO. 1979, 82d Cong., 2d Sess. 6, *reprinted in* 1952 U.S. CODE CONG. & ADMIN. NEWS 2394, 2400.

20. H.R. REP. NO. 1923, *supra* note 19, at 7; S. REP. NO. 1979, *supra* note 19, at 6, *reprinted in* 1952 U.S. CODE CONG. & ADMIN. NEWS 2394, 2399.

21. H.R. REP. NO. 1923, *supra* note 19, at 7; S. REP. NO. 1979, *supra* note 19, at 6, *reprinted in* 1952 U.S. CODE CONG. & ADMIN. NEWS 2394, 2400; see H.R. REP. NO. 1923, *supra* note 19, at 18 (revision notes); S. REP. NO. 1979, *supra* note 19, at 18 (revision notes), *reprinted in* 1952 U.S. CODE CONG. & ADMIN. NEWS 2394, 2411.

22. 383 U.S. 1 (1966).

23. "The Congress shall have power . . . [t]o promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." U.S. CONST. art. I, § 8, cls. 1, 8.

24. "Within the limits of the constitutional grant, the Congress may, of course, implement the stated purpose of the Framers by selecting the policy which in its judgment best effectuates the constitutional aim." *Graham*, 383 U.S. at 6.

to the *Hotchkiss* formulation, and that the statute was constitutional.²⁵

Turning to the issue of statutory construction, the Court refined the general test²⁶ of nonobviousness into "definitive tests"²⁷ that squared with the functional formulation of *Hotchkiss*.²⁸ The Court specifically stated the considerations that must be weighed to determine whether the subject matter can be patentable.²⁹ In black letter law form, section 103 requires determination of (1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, and (3) the level of ordinary skill in the pertinent art.³⁰ An additional inquiry is consideration of real world circumstances linked to the patent. Labeled objective indicia of nonobviousness, this evi-

25. "We conclude that the section was intended merely as a codification of judicial precedents embracing the *Hotchkiss* condition . . ." *Id.* at 17.

26. *Id.* at 3. See also *supra* note 18 for pertinent text of 35 U.S.C. § 103.

27. *Graham*, 383 U.S. at 3.

28.

[Use of the word "invention"] as a label brought about a large variety of opinions as to its meaning both in the Patent Office, in the courts, and at the bar. The *Hotchkiss* formulation, however, lies not in any label, but in its functional approach to questions of patentability. In practice, *Hotchkiss* has required a comparison between the subject matter of the patent, or patent application, and the background skill of the calling. It has been from this comparison that patentability was in each case determined.

Id. at 12.

29. For subsequent discussion, the pertinent portion of the opinion is set out below:

Approached in this light, the § 103 additional condition, when followed realistically, will permit a more practical test of patentability. The emphasis on non-obviousness is one of inquiry, not quality, and, as such, comports with the constitutional strictures.

While the ultimate question of patent validity is one of law, *A. & P. Tea Co. v. Supermarket Corp.*, the § 103 condition, which is but one of three conditions, each of which must be satisfied, lends itself to several basic factual inquiries. Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. . . .

This is not to say, however, that there will not be difficulties in applying the nonobviousness test. What is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context. The difficulties, however, are comparable to those encountered daily by the courts in such frames of reference as negligence and scienter, and should be amenable to a case-by-case development. We believe that strict observance of the requirements laid down here will result in that uniformity and definiteness which Congress called for in the 1952 Act.

Id. at 17-18 (citation omitted).

30. *Id.* at 17.

dence can include commercial success, long felt but unsolved needs in the industry for the invention, failure of others to invent the patented subject matter, or any other evidence that can "give light to the circumstances surrounding the origin of the subject matter sought to be patented."³¹ These four inquiries serve as the key to the determination of nonobviousness.³²

The Court of Appeals for the Federal Circuit, having exclusive jurisdiction over patent appeals,³³ follows the *Graham* test.³⁴ The Federal Circuit also gives significant weight to objective indicia of nonobviousness, labeled "secondary considerations" by the *Graham* Court,³⁵ in considering the nonobviousness of the subject matter.³⁶ There are at least ten objective indicia that the Federal Circuit evaluates prior to arriving at a conclusion of nonobviousness.³⁷

31. *Id.* at 17-18.

32. The Supreme Court has reaffirmed these four inquiries in subsequent cases. See *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 810-11 (1986) (per curiam); *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 280 (1976); *Dann v. Johnston*, 425 U.S. 219, 226 (1976); *Anderson's-Black Rock v. Pavement Salvage Co.*, 396 U.S. 57, 62 (1969); see also Rich, *Escaping the Tyranny of Words—Is Evolution in Legal Thinking Impossible?*, in *NON-OBVIOUSNESS*, *supra* note 6, at 3:301, 3:323.

33. 28 U.S.C. § 1295 (1982 & Supp. III 1985).

34. See, e.g., *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1569 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

35. See *supra* note 29.

36. See *Simmons Fastener Corp. v. Illinois Tool Works, Inc.*, 739 F.2d 1573, 1575 (Fed. Cir. 1984) (holding objective indicia of nonobviousness are of equivalent status and may even trump *Graham's* other three considerations), *cert. denied*, 471 U.S. 1065 (1985); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). See generally Note, *Subtests of "Nonobviousness": A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169 (1964).

37.

The use of "etc." in . . . *Graham* makes it clear that the Supreme Court was not expressly "listing" all of the secondary considerations. Expanding (but not necessarily exhausting) the list, secondary considerations comprise commercial success (i.e., sales by the patentee, licensees, and/or infringers); copying by competitors; efforts by latecomers to obtain either their own patent on the invention or a license under, or assignment of, the patent in issue; expressions of acclaim for, disbelief of, or skepticism concerning, the invention; failure of others; industry acquiescence of the patent (i.e., competitors' refraining from infringing, notwithstanding the invention's commercial success; competitors' licensing under the patent); long felt but unsolved need; prior art teaching away from the invention; significant departure from the prior art; and unexpected results.

Goldstein, *supra* note 11, at 9.

II. SCOPE OF REVIEW OF THE NONOBVIOUSNESS DETERMINATION

The scope of review that an appellate court must apply to a district court's nonobviousness determination has never been authoritatively settled by the Supreme Court.³⁸ The Federal Circuit, however, has decisively stated that the conclusion of non-obviousness is one of law, fully reviewable on appeal, whether the issue involves an issued patent³⁹ or a patent application.⁴⁰ Despite this firm stand that nonobviousness is a conclusion of law, the Federal Circuit also holds that the four underlying factual inquiries are facts for purposes of review and are subject to the clearly erroneous standard of Federal Rule of Civil Procedure 52(a).⁴¹ A review of court positions on the scope of review of nonobviousness provides insight into the Supreme Court

38. The Court has favored the application of Rule 52(a) to patent cases: "To no type of case is [Federal Rule of Civil Procedure 52(a)] more appropriately applicable than to the one before us, where the evidence is largely the testimony of experts as to which a trial court may be enlightened by scientific demonstrations." *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 336 U.S. 271, 274 (1949).

Commentators have concluded that the rule of *Graver Tank* may have been replaced by *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950). See Comment, *Appellate Review of Determinations of Patentable Inventions*, 29 U. CHI. L. REV. 185, 188-90 (1961); see also *infra* notes 75-79 and accompanying text. But see 2 D. CHISUM, *supra* note 7, § 5.04[3][c], at 5-145 ("Certainly *Great Atlantic and Pacific* is not sufficient authority for disregarding all the prior cases in which the Supreme Court had stated that the validity was an 'ultimate fact.'"). For a discussion of ultimate facts, see *infra* note 100. Also, commentators question whether the analysis of the *Graver* Court was flawed by the "two court rule" promulgated during this period. The two court rule was a rule of thumb stating that the Court would not review identical holdings by the two lower courts. 2 D. CHISUM, *supra* note 7, § 5.04[3][c], at 5-143 to -144.

39. *Gardner v. TEC Sys.*, 725 F.2d 1338, 1344 (Fed. Cir.), *cert. denied*, 469 U.S. 830 (1984); see also *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568 (Fed. Cir.) ("A determination that an invention would have been obvious when it was made to one of ordinary skill in the art under § 103 is thus a conclusion of law based on fact."), *cert. denied*, 107 S. Ct. 2187 (1987).

40. *In re McCarthy*, 763 F.2d 411, 412 (Fed. Cir. 1985).

41.

A section 103 obviousness determination—whether the claimed invention *would have been . . .* obvious at the time the invention was made is reviewed free of the clearly erroneous standard although the underlying factual inquiries—scope and content of the prior art, level of ordinary skill in the art, and differences between the prior art and the claimed invention—integral parts of the subjective determination involved in § 103, are reviewed under that standard.

Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1379-80 (Fed. Cir. 1986), *cert. denied*, 107 S. Ct. 1606 (1987); see also *Panduit Corp.*, 810 F.2d at 1569 ("Rule 52(a) is applicable to all findings on the four inquiries listed in *Graham*: scope and content of prior art; differences between prior art and claimed invention; level of skill; and objective evidence (secondary considerations).").

precedent that shaped the Federal Circuit's stance and illuminates the weakness of this precedent.

A. Appellate Review of Nonobviousness—A Brief History

Prior to the inception of the Federal Circuit, the circuit courts of appeals and the Supreme Court discussed the standard of review for nonobviousness determinations. The precedent left by these bodies is contradictory and confusing.⁴² The creation of the Federal Circuit has led to a definitive position on the scope of review question, but a review of the precedent left by the Supreme Court and circuit courts of appeals demonstrates that this position rests on an unsatisfactory foundation.

1. *Supreme Court precedent*— Supreme Court precedent on the standard of review for bench decisions is unsettled. In the twentieth century, the Supreme Court reviewed invention as a question of fact, reviewable only when clear error by the trial court was shown or there was a conflict between circuits over the validity of a patent.⁴³ In 1936, the Court reviewed a bench decision by the Court of Claims in *United States v. Esnault-Pelterie*⁴⁴ that awarded damages for infringement by the United States on a mechanical control system for airplanes.⁴⁵ On review of the decision, the Court held that the findings of fact were insufficient,⁴⁶ and characterized the question of validity as an ultimate fact.⁴⁷

The most pertinent decision is *Graham v. John Deere Co.*,⁴⁸ which stated that “the ultimate question of patent validity is one of law.”⁴⁹ Because the Court made this announcement in the

42. See generally 2 D. CHISUM, *supra* note 7, § 5.04[3][a]-[d] (discussing the early Supreme Court view, the two court rule, the effects of *Graham*, and the positions of the Courts of Appeals).

43. For example, in *Thomson Co. v. Ford Motor Co.*, 265 U.S. 445, 446-47 (1924), the Court characterized the question of invention as one of fact and would not overturn the lower court's decision unless clear error was shown. Despite the two court rule, discussed *supra* note 38, the Court granted certiorari because the First and Sixth Circuits disagreed over a patent's validity. See generally 2 D. CHISUM, *supra* note 7, § 5.04[3][a]-[b].

44. 299 U.S. 201 (1936).

45. The Court reviewed the trial court's conclusion of law that the patent was valid, *id.* at 203, and accepted the trial court's conclusion on the question of invention. *Id.* at 204.

46. *Id.* at 206-07.

47. *Id.* at 205. For a discussion of ultimate facts, see *infra* note 100.

48. 383 U.S. 1 (1966). Although there have been four Supreme Court decisions dealing with the nonobviousness issue since *Graham*, all four allude to *Graham* as authority for interpreting 35 U.S.C. § 103. See *supra* note 32.

49. *Graham*, 383 U.S. at 17.

paragraph of the opinion discussing nonobviousness, many infer that this sentence demonstrates that nonobviousness is a legal inquiry.⁵⁰ This inference appears to be buttressed by the Court's behavior in reversing the district court's conclusion on nonobviousness—without stating a standard of review, but simply analyzing the facts *de novo*.⁵¹

Subsequent Supreme Court opinions are silent on whether to review the conclusion of nonobviousness and the underlying factual issues under the clearly erroneous standard of Rule 52(a). *Graham's* companion case, *United States v. Adams*,⁵² does not mention the standard of review necessary to overrule a nonobviousness determination.⁵³ More significantly, in three subsequent cases involving nonobviousness issues the Court reversed appellate court decisions without specifying the degree of deference that the appellate courts should have accorded the trial court

50. In a mock debate before Judges Rich, Davis, and Nies of the Federal Circuit over whether jury verdicts should be limited in patent cases, the pertinent *Graham* paragraph was discussed:

Mr. Tramontine [advocating that nonobviousness is a question of fact for the jury]: *Graham* . . . did not say that obviousness was a question of law. It said patent validity was, and that is the distinction that I was trying to bring out. . . .

Judge Davis: Don't you think it follows that in the very next sentence right after the statement that the issue of validity is a question of law and then they mention Section 103. Do you think they are talking about a wholly different issue?

The Second Annual Judicial Conference of the United States Court of Appeals for the Federal Circuit, Patent and Trademark Breakout Session: Should There Be Limitations on Use of Juries in Patent Cases? (Apr. 26, 1984), reprinted in 104 F.R.D. 207, 379 (1984); see also Zarfes, *Treatment of Technological Issues on Appeal: Scope of Review—Focus on Patent Cases Before the C.A.F.C.*, 66 J. PAT. OFF. SOC'Y 407, 409 (1984); Note, *Nonobviousness in Patent Law: A Question of Law or Fact?*, 18 WM. & MARY L. REV. 612, 619-20 (1977).

51. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567 (Fed. Cir.), cert. denied, 107 S. Ct. 2187 (1987); see 2 D. CHISUM, *supra* note 7, § 5.04[3], at 5-149.

The difficulty with this reasoning is that the Court in *Graham* was creating an analytical framework for the condition. Rule 52(a) could not be applied because the *Graham* Court was not reviewing this framework. Cf. Monaghan, *Constitutional Fact Review*, 85 COLUM. L. REV. 229, 271 n.235 (1985) (noting that the Supreme Court has reviewed lower court judgments *de novo* when an authoritative decision of enormous practical importance requires such action). The post-*Graham* cases implementing the four factors are actually the ones that make Rule 52(a) applicable to the *Graham* inquiries. Subsequent Supreme Court cases, however, may not have directly implicated the Rule because in each case, the Supreme Court was not reversing the district court's determination. See *infra* notes 54-55.

52. 383 U.S. 39 (1966).

53. In this case, however, the Court did not need to decide the standard of review because the Court affirmed the decisions below—the conclusion of nonobviousness was not changed. See *id.* at 52; see also note 74.

determinations of nonobviousness.⁵⁴ In theory, however, the Court did not have to address the issue of review because in each of these cases it agreed with the conclusion of the trial level on the nonobviousness issue.⁵⁵ Lacking any definitive expression on the proper review for nonobviousness, the circuit courts of appeals were split prior to the Federal Circuit's inception.

2. *Precedent of the appellate courts*— The appellate courts have historically followed the Supreme Court's lead in categorizing nonobviousness as an issue of fact or law. Early in the twentieth century, the courts categorized the nonobviousness condition as one of fact.⁵⁶ Largely influenced by the *Graham* decision, the circuits moved in the direction of considering the question as one of law.⁵⁷ Significantly, the *Graham* decision pri-

54. In *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), the Court reversed the Fourth Circuit's holding of validity. Citing *Graham*, the Court found that although the proposed combination of old elements performed a useful function, it did not add to the nature and quality of previously patented articles. *Id.* at 62. The Court further concluded that "to those skilled in the art the use of the old elements in combination was not an invention by the obvious-nonobvious standard." *Id.* at 62-63.

In *Dann v. Johnston*, 425 U.S. 219 (1976), the Court reversed the Court of Customs and Patent Appeals' holding that the subject patent was valid. Emphasizing that the test of nonobviousness involves a comparison between the invention and the prior art, the Court held, "[t]he gap between the prior art and respondent's system is simply not so great as to render the system nonobvious to one reasonably skilled in the art." *Id.* at 230.

In *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976), the Court reversed the Fifth Circuit's holding of validity, agreeing with the district court that the difference between the prior art and the patented invention as a whole was negligible. *Id.* at 280. Noting that the Fifth Circuit had reversed because the facts "clearly do not support the [District Court's] finding of obviousness," the Court held that upon its review, the evidence was sufficiently persuasive to support the district court. *Id.*

55. Unfortunately, none of the cases addressed the question of scope of review. Because the Court was correcting the appellate court and *not* the district court, the clearly erroneous standard was not directly implicated. Compare *Sakraida*, 425 U.S. at 280-82 and *Johnston*, 425 U.S. at 226-29 and *Anderson's-Black Rock*, 396 U.S. at 62-63 with *Ag Pro, Inc. v. Sakraida*, 474 F.2d 167, 173 (5th Cir. 1973) and *In re Johnston*, 502 F.2d 765, 771-72 (C.C.P.A. 1974) and *Pavement Salvage Co. v. Anderson's-Black Rock, Inc.*, 404 F.2d 450, 454 (4th Cir. 1968). The Court obviously believes citation to Rule 52(a) is unnecessary in this context. See *County of Los Angeles v. Kling*, 474 U.S. 936, 938-40 (1985) (Stevens, J., dissenting) (arguing that the majority should mention the clearly erroneous standard when reversing the appellate court, even though the Court agrees with the district court's application of law to the facts).

56. Comment, *supra* note 38, at 186-87.

57. See Ropski, *Constitutional and Procedural Aspects of the Use of Juries in Patent Litigation (Part II-Conclusion)*, 58 J. PAT. OFF. SOC'Y 673, 695 (1976). Although one notewriter attributes the "fact to law" transition to *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147 (1950), see Comment, *supra* note 38, at 189-90, other commentators relate the circuit courts' later views of treating nonobviousness as a question of law to *Graham*. Note, *supra* note 50, at 619-20; see also 2 D. CHISUM, *supra* note 7, § 5.04[3][d], at 5-150 to -151.

Some commentators neglect to highlight that the change was not immediate for some courts of appeals. The District of Columbia Circuit held the conclusion of nonobviousness to be one of fact after the *Graham* decision, *Baenitz v. Ladd*, 363 F.2d 969, 972

marily influenced the Court of Customs and Patent Appeals (C.C.P.A.),⁵⁸ a predecessor of the Federal Circuit.⁵⁹ By the time that the Federal Circuit gained exclusive jurisdiction over patent appeals in 1982, two courts of appeals, the First and Tenth Circuits, continued to review nonobviousness as a question of fact subject to the clearly erroneous standard of review.⁶⁰

The Federal Circuit reasons that treatment of nonobviousness as a legal conclusion is mandated by C.C.P.A. precedent.⁶¹ The Federal Circuit has firmly reiterated this position in the review of jury verdicts⁶² and Patent and Trademark Office decisions on patent applications.⁶³ The most definitive explanation of this position is *Panduit Corp. v. Dennison Manufacturing Co.*,⁶⁴ an opinion responding to the Supreme Court's recommendation on remand to observe Rule 52(a) on the four factual foundations of the nonobviousness inquiry.⁶⁵ On remand, the Federal Circuit

(D.C. Cir. 1966), and the Fourth Circuit oscillated on this issue between 1971 and 1974. See Ropski, *supra*, at 695 n.201.

58. "Prior to the decision in *Graham v. John Deere*, the CCPA had held that obviousness was a factual determination. . . . In the wake of *John Deere*, . . . the CCPA . . . adopted the position that obviousness is a question of law." Zarfes, *supra* note 50, at 409 (citations omitted).

59. The Federal Circuit accords full stare decisis effect to the prior decisions of the C.C.P.A., and the United States Court of Claims. See *South Corp. v. United States*, 690 F.2d 1368, 1370 (Fed. Cir. 1982). These decisions may only be overruled by the Federal Circuit en banc. *Id.* at 1370 n.2.

60. "All of the circuits, except the First and the Tenth, treat the ultimate determination of obviousness as a question of law or a mixed question of law and fact." *Plastic Container Corp. v. Continental Plastics Inc.*, 708 F.2d 1554, 1559 n.8 (10th Cir. 1983). Professor Chisum, in his extensive treatise on patent law, lists the circuit positions on the scope of review of nonobviousness prior to the inception of the Federal Circuit. 2 D. CHISUM, *supra* note 7, § 5.04[3][d].

61. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1535 (Fed. Cir. 1983) (quoting *Stevenson v. International Trade Comm'n*, 612 F.2d 546 (C.C.P.A. 1979)). The court concedes that this statement could be classified as dictum. *Id.*

62. Even in the jury trial context, the Federal Circuit has remained steadfast on the full review of obviousness:

[T]he standard of review of the conclusion on obviousness remains the same—it is a question of law. Thus, it is the duty of the appellate court to be satisfied that the law has been correctly applied to the facts regardless of whether the facts were determined by judge or jury.

Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 719 (Fed. Cir. 1984).

63. The Federal Circuit has scoffed at an assertion by the Commissioner of Patents that rejections should be reviewed under a less exacting "rational basis" standard. *In re McCarthy*, 763 F.2d 411, 412 (Fed. Cir. 1985). "Obviousness is a conclusion of law. It is our responsibility, as for all appellate courts, to apply the law correctly; without deference to Board determinations, which may be in error even if there is a rational basis therefor." *Id.*

64. 810 F.2d 1561 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

65. *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809 (1986) (per curiam), *vacating* 774 F.2d 1082 (Fed. Cir. 1985), *remanded*, 810 F.2d 1561 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

held that the conclusion of nonobviousness is a question of law supported by foundational facts.⁶⁶ In support of its decision, the court cited the nature and process of the inquiry, precedent, and the possible adverse effect on the law if district courts are protected from full review.⁶⁷

B. *Uncertain Precedent or Improper Interpretation of Graham?*

The precedent that the Federal Circuit ultimately rests upon is *Graham*.⁶⁸ This case, however, provides little support for free review of the nonobviousness determination. The *Graham* Court stated that "validity is a question of law," implying that nonobviousness is a question of law.⁶⁹ This interpretation has much authority to support it,⁷⁰ although there are abundant criticisms.⁷¹ One alternative interpretation is that the *Graham* Court, in stating that "validity is a question of law," meant to underscore the constitutional limits of Congress's authority and the Court's judicial review power over Congress.⁷² Because the entire focus of the opinion was to generate the proper analytical framework for the nonobviousness condition, this interpretation is reasonable.⁷³ The issue of reviewing a district court determi-

66. *Panduit Corp.*, 810 F.2d at 1566.

67. *Id.*

68. *Id.* at 1566 n.5; *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 718 (Fed. Cir. 1984); see *supra* notes 48-51 and accompanying text.

69. See *supra* note 50.

70. "*Graham's* statement, 'the ultimate question of patent validity is one of law', has been widely interpreted as meaning that one answering the § 103 question is drawing a legal conclusion." *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

71. See, e.g., Morton, *Some Observations of a Strict Constructionist on the Relationship of the Patent and Copyright Systems of the United States to the Constitution and Congress*, 68 J. PAT. & TRADEMARK OFF. SOC'Y 176, 185-86 (1986); Zarfes, *supra* note 50, at 410.

72. Justice Clark's law clerk responsible for drafting the *Graham* opinion, Charles D. Reed, stated:

[O]ne must recall that the Court has consistently indicated that there is a constitutional issue involved in the grant of a patent. Call it sensitivity to *stare decisis* or be cynical and call it a form of judicial politics necessary to accommodate those on the Court who instinctively equated patent monopoly with other monopolies, but the Court affirmed the existence of constitutional limitations and noted that the "ultimate question of patent validity is one of law." This does not suggest the opinion failed to concede congressional leeway

Reed, *Some Reflections on Graham v. John Deere Co.*, in NONOBVIOUSNESS, *supra* note 6, at 2:301, 2:305 (citation omitted).

73. See *supra* notes 26-32 and accompanying text.

nation based on the *Graham* analytical framework was technically not before the Court.⁷⁴

The sentence in *Graham* that purportedly grants appellate courts full review relies on very weak precedent. The classification of nonobviousness as a legal question is supported by citation to a concurring opinion authored by Justice Douglas in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*⁷⁵ In turn, Justice Douglas supports his opinion with citation to the case of *Mahn v. Harwood*.⁷⁶

Various criticisms have been leveled at Justice Douglas's citation to *Mahn* as authority. In spite of substantial precedent to the contrary, Justice Douglas cited *Mahn*—the only authority available stating that validity was a question of law.⁷⁷ *Mahn*'s applicability to modern litigation can be questioned because the case rested on the former equity practice of free review.⁷⁸ Fur-

74. The location of the "validity is a question of law" sentence in the opinion is deceiving. See *supra* note 72. It could very well mean that the Supreme Court has every right to interpret statutes as it sees fit—even in the patent law—and no more. The placement of this statement before the Court's reading of the definitive inquiries into the statute reasonably establishes the Court's interpretive power.

To read the sentence as answering the future question of scope of review, although flattering to the Court, does injustice to the common law tradition. The *Graham* Court could not possibly have reviewed a determination of the nonobviousness condition because it was in the process of defining the condition into a four part analysis. The Court did not have the question of review properly before it. See *supra* note 51; see also *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 811 (1986) (per curiam) (indicating that the question of review is still an open question in light of *Graham*); 2 D. CHISUM, *supra* note 7, § 5.04[3] n.34, at 5-150.

75. 340 U.S. 147, 155 (1950). Peculiarly, Justice Douglas did not supply any reasoning, but simply asserted that the "validity of a patent is a question of law." *Id.* Justice Douglas's concurrence has been criticized for its improper analysis of the Constitution's patent and copyright clause. See Kayton, *Nonobviousness of the Novel Invention—35 U.S.C. § 103*, in *NONOBTAINABILITY*, *supra* note 6, at 2:101, 2:105; Rich, *supra* note 32, at 3:309.

76. 112 U.S. 354, 358 (1884). The opinion states:

In cases of patents for inventions, a valid defence [sic] not given by the statute often arises where the question is, whether the thing patented amounts to a patentable invention. This being a question of law, the courts are not bound by the decision of the commissioner, although he must necessarily pass upon it.

Id.

77. There were four other Court cases stating that validity was a question of fact. *Dow Chem. Co. v. Halliburton Oil Well Cementing Co.*, 324 U.S. 320, 322 (1945); *Williams Mfg. Co. v. United Shoe Mach. Corp.*, 316 U.S. 364, 367 (1942); *United States v. Esnault-Pelterie*, 299 U.S. 201, 205 (1936); *Thomson Spot Welder Co. v. Ford Motor Co.*, 265 U.S. 445, 446 (1924); see Note, *supra* note 50, at 615. Only three are pertinent to the invention requirement. The Court addressed the issues of novelty and utility, but did not expressly deal with the invention requirement in *Williams Mfg. Co. v. United Shoe Mach. Corp.*, 316 U.S. 364, 367 (1942). The force of the argument remains, however; the cases treating invention as fact outnumber those treating it as law three to one.

78. Note, *supra* note 50, at 615 n.23. The Federal Rules of Civil Procedure have eliminated the past equity practice, although Rule 52(a) incorporates the former equity prac-

thermore, the portion of *Mahn* cited by Justice Douglas may be dictum.⁷⁹

These criticisms may be unnecessary, however. *Mahn* stands for the proposition that the federal district courts may adjudicate the validity of issued and reissued⁸⁰ patents in an infringement action free of the factual determinations made by a patent examiner.⁸¹ This principle comports with present Federal Circuit law.⁸² Because *Mahn* is the precedent for *Graham's* sentence, there is a strong inference that the *Graham* Court intended merely to state a patent law truism: validity is determined in the district court free of the Patent and Trademark Office's determination, except as required by the statutorily imposed presumption of validity.⁸³

The statement in *Graham* that "validity is a question of law" is of limited value to an appellate court, and should not bind the Court of Appeals for the Federal Circuit. When Supreme Court precedent is not definitive, such as on the issue of nonobviousness, the Federal Circuit should look to the underlying policies of Rule 52(a) and develop a framework upon which issues can be

tice of unrestricted review. See Note, *Appellate Review of Finding of Invention*, 20 GEO. WASH. L. REV. 605, 608-09 (1952); Comment, *supra* note 38, at 186 n.16.

79. See Comment, *supra* note 38, at 186 n.16 ("The patent in the *Mahn* case was invalid, not for lack of invention, but for unreasonable delay in the correction of a defect in the patent claim."); Note, *supra* note 50, at 615 n.23 ("Moreover, the statement that invention is an issue of law appears as dictum.").

80. A reissue patent is one that has gone through the examination procedures of the PTO a second time because the patentee believes that the scope of her claims are either too narrow or broad, or that there is a defect in the specification. This reissue procedure is initiated at the insistence of the patentee and is available to amend any issued patent that has some portion of its term remaining. 35 U.S.C. § 251 (1982). See generally P. GOLDSTEIN, *supra* note 2, at 574-75.

81. Professor Chisum approves of this interpretation with little comment in his treatise: "[T]he statement, ['whether the thing patented amounts to a patentable invention is a question of law' in *Mahn*] was merely intended to emphasize that the decision of the Commissioner of Patents to issue a patent is not conclusive or binding on the courts as to the issue of patentability." 2 D. CHISUM, *supra* note 7, § 5.04[3][a], at 5-141. The dissent in *Mahn* also indicates that this is the proper interpretation. *Mahn*, 112 U.S. at 364-65 (Miller, J., dissenting).

82. After receiving an issued patent, the patentee must subject the patent's validity to the adversarial system de novo. See, e.g., *Lindeman Maschinenfabrik GmbH v. American Hoist & Derrick, Co.*, 730 F.2d 1452, 1460 n.5 (Fed. Cir. 1984).

83. In this light, *Graham's* sentence of "validity is a question of law" is consistent with what its author intended. See *supra* note 72. Some courts have interpreted this sentence in just this way. See, e.g., *Plastic Container Corp. v. Continental Plastics, Inc.*, 708 F.2d 1554, 1557 (10th Cir. 1983); cf. Field, *Law and Fact in Patent Litigation: Form Versus Function*, 27 IDEA 153, 158 (1987) (stating that *Mahn* held that courts do not have to defer to determinations of the Commissioner of the Patent Office).

categorized as law or fact for purposes of appellate review.⁸⁴ Part III develops a framework for analysis of the scope of review, an analysis not undertaken by the Federal Circuit in *Panduit Corp. v. Dennison Manufacturing Co.* because it would have unduly lengthened the opinion.⁸⁵

III. THE CLEARLY ERRONEOUS STANDARD AND THE PROPER SCOPE OF REVIEW

The standard of review on an issue necessarily varies with the procedural setting of the appealed final decision, such as a summary judgment⁸⁶ or judgment notwithstanding the verdict.⁸⁷ The standard of review also varies with the decisionmaking body, whether judge or jury.⁸⁸ Federal Rule of Civil Procedure 52(a) limits the scope of review of bench findings of fact, prescribing

84. See *infra* notes 101-10 and accompanying text; see also *Bose Corp. v. Consumers Union, Inc.*, 466 U.S. 485, 501 n.17 (1984) ("Where the line is drawn [between fact and law] varies according to the nature of the substantive law at issue.").

85. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

86. The grant of a summary judgment motion presupposes that there is no triable issue of material fact, and that only questions of law are presented. 6 J. MOORE, W. TAGGART & J. WICKER, *MOORE'S FEDERAL PRACTICE* ¶ 56.02[11], at 56-47 (2d ed. 1987) [hereinafter J. MOORE]; cf. *Hodosh v. Block Drug Co.*, 786 F.2d 1136, 1141 (Fed. Cir. 1986) (reviewing a summary judgment motion). Federal Rule of Civil Procedure 56 does not require written findings of fact or conclusions of law from the district court, although they are permissible. FED. R. CIV. P. 56; J. MOORE, *supra*, ¶ 56.02[11], at 56-48.

87. The standard of review for a granted motion for judgment notwithstanding the verdict (JNOV) is whether there was substantial evidence to support the jury's findings and that those findings can support the jury's legal conclusion. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1571 (Fed. Cir. 1986). Substantial evidence is relevant evidence that, when taken as a whole, might be accepted by a reasonable mind as adequate to support the finding under review. *Id.*

88. The jury trial is protected by the seventh amendment. U.S. CONST. amend. VII. In keeping with the special role of the jury, courts defer to a jury's finding of fact. To overturn a finding requires the appellate court to demonstrate substantial evidence to the contrary. See *supra* note 87. See generally 5A J. MOORE, *supra* note 86, ¶¶ 50.03, 50.07 & 50.13.

The Federal Circuit allows the jury to address the nonobviousness determination in the form of a general verdict. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1547 (Fed. Cir. 1983). This makes a conclusion on nonobviousness much less likely to be overturned on appeal because bench determinations can be scrutinized de novo on appeal but jury determinations are protected by the substantial evidence standard. This difference may lead to an increased use of juries in patent cases. See Hofer, *The CAFC and Fact/Law Questions in Patent Cases: The Jury's Role Burgeons!*, 12 AM. INTELL. PROP. L.A.Q. J. 295, 309 (1984); see also AMERICAN BAR ASS'N SECTION OF PATENT, TRADEMARK & COPYRIGHT LAW, 1987 COMMITTEE REPORTS 195-200 (1987) (implying that *Connell* and *Panduit Corp.* are mutually exclusive holdings although in different procedural settings).

that such findings be set aside only if clearly erroneous.⁸⁹ The review of the conclusion of nonobviousness under Rule 52(a) hinges on whether the conclusion is properly one of law or fact.⁹⁰ Although many have attempted to analyze descriptively the nonobviousness inquiry,⁹¹ the literature fails to develop a framework for analysis of the scope of review question implicit in Federal Rule of Civil Procedure 52(a) for bench trial decisions. This Note attempts to fill the void that has been circumscribed by the descriptive analysis of court and commentator.

This section proposes an analysis for Rule 52(a) when the Supreme Court has not explicitly stated its position on the standard of review. Part A details the two approaches used by courts to distinguish fact from law: the analytical approach and the policy approach. Part B focuses on the policy approach, outlines a framework for analysis under this approach, and applies this framework to nonobviousness. Part C briefly surveys analogous legal constructs to nonobviousness, and suggests that their treatment as facts under Rule 52(a) justifies the policy approach's mandate for nonobviousness—that it should be treated as a fact for purposes of Rule 52(a).

A. Rule 52(a): Guiding Principles

To the appellate advocate, the scope of review given trial court determinations is crucial. As a general proposition, matters of law are fully reviewed by the appellate court; findings of fact are subjected to much more constrained review. Knowledge of the standard of review that the court must apply to each issue

89. FED. R. CIV. P. 52(a).

90. In the 1986 annual meeting of the American Bar Association Section of Patent, Trademark and Copyright Law, the Section approved resolution 401-3: "Resolved, that the Section of Patent, Trademark and Copyright Law approves in principle the proposition that obviousness *vel non* under 35 U.S.C. Section 103 is a question of law (albeit based upon factual inquiries)." AMERICAN BAR ASS'N SECTION OF PATENT, TRADEMARK & COPYRIGHT LAW, 1986 SUMMARY OF PROCEEDINGS 23 (1986). In the debate over the resolution, the procedural context was questioned and rebuffed:

Mr. Fryer asked whether the presentation [of the resolution] deals with the procedure with which the decision is made within the court[.] Mr. Dunner responded that it deals with a concept, and that concept will have certain procedural ramifications. It doesn't deal with procedure as such—it deals with a starting point as a question of law or as a question of fact.

Id. at 79. This logic is unacceptable under the approaches established by recent Supreme Court decisions regarding Federal Rule of Civil Procedure 52(a). See *infra* notes 112-18, 142-49 and accompanying text.

91. 2 D. CHISUM, *supra* note 7, § 5.04[3], at 5-139.

enables the advocate to concentrate on determinations that the court can more easily overturn and also increases the advocate's chances of a favorable disposition.⁹²

Rule 52(a) was created to accommodate the dichotomy that exists in a bench trial where the judge is required to be both factfinder and lawgiver. The Rule requires the judge to state the facts and conclusions of law separately in the opinion.⁹³ The Rule also explains the level of scrutiny necessary to overturn a trial judge's findings of fact: "Findings of fact . . . shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses."⁹⁴ The clearly erroneous standard has eluded exact definition, but one definition promulgated by the Supreme Court in 1948 is widely recognized as the proper formulation: a decision is clearly erroneous when "the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed."⁹⁵

Deciding which issues are fact and which are law has sparked much scholarly debate.⁹⁶ The Supreme Court has characterized the distinction between law and fact as vexing⁹⁷ and readily admits that Rule 52(a) "does not furnish particular guidance with

92. See generally Holcomb & Sullivan, *Standards of Review*, in ABA NATIONAL INSTITUTE: APPELLATE ADVOCACY SOURCE BOOK 7-12 (P. Sandler ed. 1980).

93. FED. R. CIV. P. 52(a) provides in pertinent part:

In all actions tried upon the facts without a jury or with an advisory jury, the court shall find the facts specially and state separately its conclusions of law thereon, and judgment shall be entered pursuant to Rule 58 Findings of fact, whether based on oral or documentary evidence, shall not be set aside unless clearly erroneous, and due regard shall be given to the opportunity of the trial court to judge of the credibility of the witnesses. . . . Findings of fact and conclusions of law are unnecessary on decisions of motions under Rules 12 or 56 or any other motion except as provided in Rule 41(b).

94. *Id.*

95. *United States v. United States Gypsum Co.*, 333 U.S. 364, 395 (1948). The Supreme Court established the scope of appellate review under Rule 52(a) by citing the intent of the Rules Committee in drafting the original version of the Rules, and by noting the distinct absence of any constitutional limitations on judicial review of bench trials, as opposed to review of juries or administrative agencies. *Id.* at 394-95; accord *Zenith Radio Corp. v. Hazeltine Research, Inc.*, 395 U.S. 100, 123 (1969).

96. Methods for categorizing issues before the courts as law or fact for purposes of Rule 52(a) abound in the literature. See Calleros, *Title VII and Rule 52(a): Standards of Appellate Review in Disparate Treatment Cases—Limiting the Reach of Pullman-Standard v. Swint*, 58 TUL. L. REV. 403 (1983); Louis, *Allocating Adjudicative Decision Making Authority Between the Trial and Appellate Levels: A Unified View of the Scope of Review, the Judge/Jury Question, and Procedural Discretion*, 64 N.C.L. REV. 993 (1986); Monaghan, *supra* note 51; Oliver, *Appellate Fact Review under Rule 52(a): An Analysis and Critique of Sixth Circuit Precedent*, 16 U. TOL. L. REV. 667 (1985).

97. See *Baumgartner v. United States*, 322 U.S. 665, 671 (1944).

respect to distinguishing law from fact.”⁹⁸ What makes the distinction problematic is that Rule 52(a) requires courts to use two categories, law and fact, to describe three separate activities of adjudication: law declaration, fact identification, and law application.⁹⁹ The standard of review of the first two activities is clear in the Rule, but the last, law application,¹⁰⁰ requires further analysis.

Courts follow two distinct approaches to distinguish law from fact. One is the analytical or literal approach. This approach uses the layman’s common notions of fact, sometimes termed historical fact,¹⁰¹ and law, the norm and its underlying policy,¹⁰² and characterizes an issue according to which type is more prevalent. The policy approach characterizes an issue only after weighing the practical reasons for labeling it fact or law and estimating the impact this characterization will have on the appellate and trial courts.¹⁰³

The Court of Appeals for the Federal Circuit used both of these approaches in its recent opinion, *Panduit Corp. v. Dennison Manufacturing Co. (Panduit II)*.¹⁰⁴ In *Panduit II*, the Federal Circuit analyzed the nature of the nonobviousness condition

98. *Pullman-Standard v. Swint*, 456 U.S. 273, 288 (1982).

99. Monaghan, *supra* note 51, at 234; H. Hart & A. Sacks, *The Legal Process: Basic Problems in the Making and Application of Law* 374-76 (tent. ed. 1958); *see also* 2 D. CHISUM, *supra* note 7, § 5.04[3], at 5-146.

100. Professors Hart and Sacks consider “law application” to mean “linking up the particular with the general.” H. Hart & A. Sacks, *supra* note 99, at 375. Less generally, “[i]t involves relating the legal standard of conduct to the facts established by the evidence.” Monaghan, *supra* note 51, at 236. It is a process that involves an amount of judgment that varies with the generality of the rule applied. Law application is situation-specific and, by definition, excludes general norm elaboration. *See id.*

The courts use different labels on issues that require this function. One example is “ultimate fact,” which has been used in at least two situations. An ultimate fact may be a statutory and legally determinative consideration that is or is not satisfied by subsidiary facts. The Court believes that this type of ultimate fact is really “fact” for purposes of Rule 52(a). *See Pullman-Standard*, 456 U.S. at 286 n.16, 287-88. An ultimate fact may also be findings that clearly imply the application of a standard of law (such as whether the exacting clear and convincing standard of proof on an issue has been satisfied). This type of ultimate fact is more like “law” and is independently reviewable. *Baumgartner*, 322 U.S. at 671; *see Pullman-Standard*, 456 U.S. at 286 n.16, 287 n.17. In *Pullman-Standard*, the Court stressed that this second type of ultimate fact is termed a “mixed question . . . of law and fact,” *id.* at 286 n.16, and there is substantial authority on either side of the characterization question. *Id.* at 289 n.19.

101. Historical facts are those that “generally respond to inquiries about who, when, what, and where—inquiries that can be made ‘by a person who is ignorant of the applicable law.’” Monaghan, *supra* note 51, at 235.

102. *See id.* at 236.

103. K. DAVIS, *ADMINISTRATIVE LAW TEXT* § 30.02, at 546 (3d ed. 1972); *see also* Monaghan, *supra* note 51, at 237.

104. 810 F.2d 1561 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

and the decisional process required by the statute.¹⁰⁵ Because the determination is an ultimate conclusion based on all the probative facts¹⁰⁶ and requires some steps that are inherently legal,¹⁰⁷ the Federal Circuit held that section 103 obviousness-non-obviousness is a matter of law.¹⁰⁸ The court supported its conclusion with the policy justification—labeled “effect” by the Federal Circuit—that this interpretation would result in a consistent application of the statute in the district courts and in the Patent and Trademark Office.¹⁰⁹

The analytical approach taken by the Federal Circuit is thorough, reviewing both the factual and legal bases in a nonobviousness determination. In *Panduit II*, however, the Federal Circuit overemphasized the analytical approach at the expense of the policy approach. This is unfortunate because the policy approach is determinative of the scope of review question.¹¹⁰

B. The Policy Approach

The following discussion provides a framework for analysis under the policy approach.¹¹¹ This framework is bifurcated into a practical inquiry, which considers the degree of factual content

105. *Id.* at 1566-67.

106. *Id.* at 1566.

107. One inherently legal step is claim interpretation of the invention in question and the definition of the “prior art,” a term designating subject matter considered to be in the public domain under 35 U.S.C. § 102. *Id.* at 1567-68. For a full description of those issues considered law by the Federal Circuit, see Calvetti & Venturino, *supra* note 2, at 167-69.

108. *Panduit Corp.*, 810 F.2d at 1568.

109. *Id.* at 1567.

110. K. DAVIS, *supra* note 103, § 30.01, at 546 (“[T]he Court has often used a practical or policy approach to the law-fact distinction and has often rejected the literal or analytical approach.”); see H. Hart & A. Sacks, *supra* note 99, at 376.

Some posit that the law-fact distinction and the trial-appellate distinction are meaningless and fundamentally incoherent without viewing policy objectives:

In truth, the distinction between “questions of law” and “questions of fact” really gives little help in determining how far the courts will review; and for the good reason that there is no fixed distinction. They are not two mutually exclusive *kinds* of questions, based upon a difference of subject-matter. Matters of law grow downward into roots of fact, and matters of fact reach upward, without a break, into matters of law. The knife of policy alone effects an artificial cleavage at the point where the court chooses to draw the line between public interest and private right.

J. DICKINSON, ADMINISTRATIVE JUSTICE AND THE SUPREMACY OF LAW IN THE UNITED STATES 55 (1927).

111. One commentator suggests that the question of review of nonobviousness is a much “mooted” issue by the amount of literature. See 2 D. CHISUM, *supra* note 7, § 5.04[3], at 5-139. The analytical approach is the truly mooted issue, however, espe-

in the nonobviousness determination, and an allocational inquiry, which considers the effect that a clearly erroneous standard would have on the decisionmaking balance between the appellate and trial levels. The result of this analysis differs from that reached by the Federal Circuit.

1. *Practical considerations*— Rule 52(a) is rooted in the notion that the trial judge is in the best position to evaluate the credibility of witnesses and to weigh the evidence.¹¹² The proximity of the trial judge to the factfinding process also provides an opportunity for making inferences that can only be obtained from firsthand observation.¹¹³ A practical approach to distinguish law from fact focuses on the extent to which the issue is “based ultimately on the application of the fact finding tribunal’s experience with the mainsprings of human conduct to the totality of the facts in each case.”¹¹⁴

In determining whether to apply the clearly erroneous standard of review, courts should consider several crucial factors:¹¹⁵ (1) the nontechnical nature of the statutory standard,¹¹⁶ (2) the close relationship of the factual conclusion to practical human experience,¹¹⁷ and (3) the multiplicity of relevant factual elements needed to make a conclusion.¹¹⁸

cially in light of *Panduit Corp.* The policy approach has not been firmly addressed in this area, however.

112. *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 855 (1982). The Court regards the trial court’s credibility determinations very highly. *Anderson v. City of Bessemer City*, 470 U.S. 564, 575 (1985).

113. *Anderson*, 470 U.S. at 574 (“The trial judge’s major role is the determination of fact, and with experience in fulfilling that role comes expertise.”); see also *Maine v. Taylor*, 477 U.S. 131, 145 (1986) (holding the clearly erroneous standard applicable to nonguilt findings of fact in criminal cases).

114. *Commissioner v. Duberstein*, 363 U.S. 278, 289 (1960).

115. In determining the standard of review on a finding of whether a transaction constituted a gift for purposes of the Internal Revenue Code, the Court listed succinctly these factors. *Id.* at 289; see also *Oliver*, *supra* note 96, at 694-97.

116. The meaning of “technical” in this context is addressed to the *legally* technical nature of the inquiry. For example, in the voluntariness of a criminal confession, this technical nature is found because there is a “complex of values” that must be determined before concluding a confession is voluntary. *Miller v. Fenton*, 474 U.S. 104, 116 (1985) (quoting *Blackburn v. Alabama*, 361 U.S. 199, 207 (1960)). In voluntariness, a court must evaluate “whether the techniques for extracting the statements, as applied to [the] suspect, are compatible with a system that presumes innocence and assures that a conviction will not be secured by inquisitorial means as [well as] whether the defendant’s will was in fact overborne.” *Id.*; see also *United States v. McConney*, 728 F.2d 1195, 1202 (9th Cir.) (holding that concerns of judicial administration favor *de novo* review by appellate courts where social values underlie legal principles), *cert. denied*, 469 U.S. 824 (1984); *Calleros*, *supra* note 96, at 425-26.

117. See *supra* note 113 and accompanying text.

118. The Supreme Court has agreed on this point unanimously when other substantive issues create a split in opinion:

a. *Nontechnical nature of the statutory standard*— It must be emphasized that the term “technical,” as used in this first inquiry, is meant in the vernacular “legal” sense.¹¹⁹ The less legally complex the issue, the more likely the courts will review it under the clearly erroneous standard. Constitutional issues, inherently ambiguous, are of a “technical” nature.¹²⁰ Issues involving statutory language that the courts of appeals or the Supreme Court have not definitively interpreted necessarily involve legal technicalities.¹²¹ Conversely, common issues that have everyday meanings are not “technical”: for example, the definition of a gift,¹²² or the determination of discriminatory intent.¹²³

The conclusion of nonobviousness is a technological question and not a legally technical one.¹²⁴ A conclusion of nonobvious-

Whether actions that produce racial separation are intentional . . . is an issue that can present very difficult and subtle factual questions. . . . Those tasks are difficult enough for a trial judge. The coldness and impersonality of a printed record, containing the only evidence available to an appellate court in any case, can hardly make the answers any clearer.

Columbus Bd. of Educ. v. Penick, 443 U.S. 449, 470-71 (1979) (Stewart, J., dissenting) (citations omitted); see Dayton Bd. of Educ. v. Brinkman, 443 U.S. 526, 534 n.8 (1978) (companion case with *Penick*) (“We have no quarrel with our Brother[’s] general conclusion that there is great value in appellate courts showing deference to factfinding of local trial judges.”); *id.* at 543 (Rehnquist, J., dissenting) (“That this and other appellate courts must defer to the factfindings of trial courts is unexceptionable.”); see also Thornburg v. Gingles, 106 S. Ct. 2752, 2781 (1986) (holding the conclusion of vote dilution to be one of fact); Calleros, *supra* note 96, at 419-20, 426.

119. See *supra* note 116.

120. See *Bose Corp. v. Consumers Union, Inc.*, 466 U.S. 485, 510-11 (1984) (citing the need for full review of false disparagement cases because they directly implicate first amendment concerns); *City of Houston v. Hill*, 107 S. Ct. 2502, 2507 n.6 (1987) (holding that analysis of overbreadth is an inquiry of law and thus justifies independent review of the record).

Professor Monaghan advocates that independent review of factual findings should be limited even in constitutional matters. Monaghan, *supra* note 51, at 276; see also *Maine v. Taylor*, 477 U.S. 131, 145 (1986) (refusing to review broadly factual findings simply because it is a constitutional case).

121. “Several courts have already tended toward the position that a trial judge’s application of ambiguous standards may be fully reviewed.” Comment, *supra* note 38, at 198 (citing *Baumgartner v. United States*, 322 U.S. 665, 670-71 (1944)). The commentator, without the benefit of *Graham*, suggests that a suitable rationale to support full review of nonobviousness is the “desirability of permitting appellate courts to give content to legislative standards that are exceptionally general.” *Id.* at 199. This reasoning is extremely powerful, but the question is whether the circumstances have changed substantially since 1961. See *infra* notes 150-71 and accompanying text.

122. *Commissioner v. Duberstein*, 363 U.S. 278 (1960).

123. *Pullman-Standard v. Swint*, 456 U.S. 273 (1982).

124. Field, *supra* note 83, at 159-60 (concluding that the inquiry is not so innately constitutional or technical as to justify free review). This is a close question and commentators disagree on the level of technical complexity that a conclusion of nonobviousness requires. See Ropski, *supra* note 57, at 697-98; Zarfes, *supra* note 50, at 410. Professor Field’s reasoning, benefitted by recent Court decisions in the constitutional fact area, is more persuasive.

ness is not based on common notions of societal norms, like negligence, nor is it based on technical rules, like the rule against perpetuities. The conclusion of nonobviousness is a synthesis of intricate facts.¹²⁵ The *process* by which a conclusion of nonobviousness is reached is the crucial point. Nonobviousness, like discrimination, is formed on the basis of a number of foundational facts.¹²⁶

Moreover, the appellate court reviews the four foundational issues outlined in *Graham* under the clearly erroneous standard.¹²⁷ For an appellate opinion to be logically cohesive, a nonobviousness conclusion may be reversed only when at least one of the underlying inquiries is overturned.¹²⁸ A conclusion of nonobviousness can barely be termed a legally technical inquiry if all of the determinations underlying the inquiry are objective—including “objective” indicia of nonobviousness¹²⁹—and the final conclusion follows from these determinations.

b. Proximity of the inquiry to practical human experience—A second inquiry is the proximity of the condition to practical human experience.¹³⁰ Those conclusions closely linked to decisions about human conduct are most likely to be reviewed

125. For example, the conclusion on a confession's voluntariness is based on an ad hoc factual foundation and has been held to be fully reviewable. *See supra* note 116. The nonobviousness inquiry, on the other hand, is regimented by *Graham*. *See supra* notes 29-37 and accompanying text.

126. In *Pullman-Standard*, 456 U.S. at 273, the district court followed a four part test in determining whether, under the totality of the circumstances, discriminatory intent existed in an employment context. *Id.* at 279. Under Fifth Circuit precedent, the court was to first “determine whether the system ‘operates to discourage all employees equally from transferring between seniority units.’” *Id.* (quoting *James v. Stockham Valves & Fittings Co.*, 559 F.2d 310, 352 (5th Cir. 1977)). “Second, a court must examine the rationality of the departmental structure.” *Id.* at 280. “Third, . . . whether the seniority system had its genesis in racial discrimination.” *Id.* at 281. “Finally, . . . whether the system was negotiated and has been maintained free from any illegal purpose.” *Id.* These factors would lead to a conclusion on the existence of discrimination. The Supreme Court held the conclusion of intent to be one of fact for purposes of Rule 52(a) review. *Id.* at 288; *see also* *Personnel Adm'r v. Feeney*, 442 U.S. 256, 279 n.24 (1979) (“Proof of discriminatory intent must necessarily . . . rely on objective factors.”).

Compare this analysis to the nonobviousness construct (especially the objective factors). Nonobviousness is based on a number of foundational facts. *See supra* notes 29-37 and accompanying text. The analogy in *Graham*, comparing nonobviousness to scienter, *see supra* note 29, also supports the proposition that the analysis is similar to the conclusion of intent to discriminate.

127. *See supra* note 41 and accompanying text.

128. *See Zarfaz, supra* note 50, at 410; Note, *supra* note 50, at 622; *see also* *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1571 (Fed. Cir.), *cert. denied*, 107 S. Ct. 178 (1986); *Revlon, Inc. v. Carson Prods. Co.*, 803 F.2d 676, 678 (Fed. Cir.), *cert. denied*, 107 S. Ct. 671 (1986).

129. *See supra* note 41.

130. *See supra* notes 113 & 117 and accompanying text.

under the clearly erroneous standard. A nonobviousness determination can be technologically complicated.¹³¹ The determination, however, is as susceptible to judicial disposition as negligence, which virtually all courts of appeals review under the clearly erroneous standard.¹³²

Rather than applying the standard of a reasonably prudent person, a trial court is asked to apply the construct of an infinitely knowledgeable hypothetical person, with ordinary skill in the subject matter of the invention, to a specific technological problem.¹³³ The judge is required to decide the standard of skill

131. The creation of the Federal Circuit may imply that the subject matter is beyond the abilities of normal legal minds. See Marovitz, *Patent Cases in the District Courts—Who Should Hear Them?*, 51 IND. L.J. 374, 377-78 (1976) (arguing that patent cases require a fourth step in the decisional process—besides determining the law, the facts, and applying them—the assimilation of the jargon used in an invention's specific branch of the sciences).

An alternative explanation exists, however. Because appellate courts cannot have the benefit of direct expert testimony, an *appellate* court must have its own resources for the expertise necessary to judge the issues. Trial courts automatically have the benefit of expert testimony because of the adversarial process. No incrimination of the trial court's abilities therefore should be inferred from the creation of a sole appellate tribunal; only the ability of the other 12 appellate courts to judge the issues without the aid of direct expert testimony should be questioned.

The legislative history to the Federal Courts Improvement Act of 1982, enabling the Federal Circuit, supports this reasoning:

Contemporary observers recognize that there are certain areas of Federal law in which the *appellate system* is malfunctioning. A decision in any one of the twelve regional circuits is not binding on any of the others. As a result, our Federal judicial system lacks the capacity, short of the Supreme Court, to provide reasonably quick and definitive answers to *legal questions* of nationwide significance. . . .

Consequently, there are areas of the law in which the *appellate courts* reach inconsistent decisions on the same issue, or in which—although the rule of law may be fairly clear—courts apply the law unevenly when faced with the facts of individual cases. *The difficulty here is structural.* . . .

S. REP. No. 275, 97th Cong., 1st Sess. 3, reprinted in 1982 U.S. CODE CONG. & ADMIN. NEWS 11, 13 (emphasis added); see also Adelman, *The New World of Patents Created by the Court of Appeals for the Federal Circuit*, 20 U. MICH. J.L. REF. 979, 987 (1987).

132. See *infra* notes 209-15 and accompanying text. An analytical distinction between negligence and nonobviousness is very difficult to discern:

With the involved facts determined, the decisionmaker confronts a ghost, i.e., "a person having ordinary skill in the art," not unlike the "reasonable man" and other ghosts in the law. To reach a proper conclusion under § 103, the decisionmaker must step backward in time and into the shoes worn by that "person" when the invention was unknown and just before it was made.

Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1566 (Fed. Cir.), cert. denied, 107 S. Ct. 2187 (1987).

133.

[O]ne cannot help but notice the striking similarity between a "person having ordinary skill in the art" in patent litigation, and the familiar and age-old "reasonably-prudent" man at common law. Since, undisputedly, the determination of whether the performance of a particular act was to be expected of "the rea-

that the hypothetical person has and then decide whether the invention would be obvious to that hypothetical person. This decision is assisted by expert testimony and historical facts involving the research and development of the invention.

The fourth step of analysis in *Graham*, inquiring into any and all objective indicia of nonobviousness,¹³⁴ directly implicates practical human experience. The Court in *Graham* stated that such considerations as commercial success, long felt but unsolved need, and lack of success by others would be helpful in the determination of nonobviousness.¹³⁵ These indicia are inately factual and not overly technical,¹³⁶ and are naturally the province of the factfinder. The Federal Circuit reviews these "objective" indicia of nonobviousness under the clearly erroneous standard¹³⁷ and has stated that inquiry into their existence may be the most probative of all determinations.¹³⁸ The infusion of the objective factors into the analysis supports the contention that practical human experience is inherent in the nonobviousness determination and further supports the application of the clearly erroneous standard to the nonobviousness determination.

c. Multiplicity of factual elements— The final practical inquiry regards the number of factual findings needed to support a conclusion. When the factual patterns are intricately interwoven, the trial court is favored because it will be the most closely attuned level of the judicial system to the facts of a given case.¹³⁹ The multiplicity of relevant factual elements is well documented in patent proceedings and the nonobviousness determination is the insidious culprit of many lengthy patent disputes.¹⁴⁰ The Su-

sonable man" is normally a question of fact, by analogy, the question of whether the differences between the subject matter to be patented and the prior art would have been obvious to a "person having ordinary skill in the art" should likewise be one for the fact finder.

Sherman, *Obviousness: A Question of Law or of Fact?*, 51 J. PAT. OFF. SOC'Y 547, 552 (1969) (footnote omitted). *But see* Colaiani, 35 U.S.C. § 103: *A Quest for Objectivity*, 39 FED. B.J. 23, 28 (1980) (arguing that the reasonable man test is easy to use because a judge can imagine himself to be a reasonable man, but a judge's imagination fails completely when supposing a highly technical field).

134. See *supra* notes 35-37 and accompanying text.

135. See *supra* note 29.

136. See Note, *supra* note 36, at 1175, 1177, 1180.

137. See, e.g., *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309 (Fed. Cir. 1985).

138. "Indeed, evidence of secondary considerations may often be the most probative and cogent evidence in the record. It may often establish that an invention appearing to have been obvious in light of the prior art was not." *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983).

139. See *supra* note 118 and accompanying text.

140. E.g., *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 336 U.S. 271, 274-75 (1949) (noting a three week trial that involved a trial judge's visit to laboratories with

preme Court has explicitly recognized the applicability of Rule 52(a) to patent disputes because of the vast amount of factfinding in the trial court.¹⁴¹

Applying practical considerations, nonobviousness should be fully subject to the clearly erroneous standard of review. Evidentiary concerns, such as credibility and other weight determinations, naturally entail the trial court's application of basic notions of human conduct. The legal technicalities involved in the nonobviousness determination are minimal, although the technological issues may be challenging. The conclusion of nonobviousness relies on the practical experience and judgment for which the federal bench is noted. Finally, the intricate and varied analyses of the facts in a patent suit favor reliance upon the trial court. These conclusions, although drawn from practical considerations that the Supreme Court suggests are important, are insufficient to justify application of the clearly erroneous standard. Analysis must also focus on the second prong of the policy approach—allocational considerations.

2. *Allocational considerations*—Categorization for purposes of review involves more than analyzing whether an issue fits within traditional notions of fact or law—it is a matter of allocation. Recently, the Supreme Court admitted that the 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.”¹⁴² Appellate courts are motivated to categorize issues as “fact” or “law” because the categorization under Rule 52(a) will place decision-making power in the appropriate level of the court system. This motivation distorts the analytic content of the categories of law and fact, a distortion that can be explained by separating the allocative uses of Rule 52(a) from the analytic content of the determination.¹⁴³ In one sense, practical considerations may be allocative because the inquiry is into the lower court's activities. The allocational inquiry, however, may be more theoretical—combining policy considerations of the substantive law with concerns for efficient judicial administration.¹⁴⁴

counsel and experts, and other demonstrative evidence); *Johns-Manville Corp. v. Guardian Indus. Corp.*, No. 84-1177, (Fed. Cir. Apr. 24, 1985) (LEXIS, Genfed library, CAFC file) (noting the trial judge's detailed analysis based on 34 days of trial).

141. See *supra* note 38. See *supra* note 93 for text of Rule 52(a).

142. *Miller v. Fenton*, 474 U.S. 104, 113-14 (1985).

143. Monaghan, *supra* note 51, at 235.

144. The allocative considerations are the heart of the policy approach implicit in Rule 52(a). These considerations make the policy approach much more sophisticated than the analytical approach, and may at first blush appear artificial and unnatural. See

Rule 52(a) is more than a simple procedural device to stipulate the scope of review on issues; it is a means through which the courts can give greater judicial power to the trial level when concerns of efficient judicial administration outweigh risks of minor inconsistencies at the trial level.¹⁴⁵ Potential inconsistencies result from unexplained bias,¹⁴⁶ lack of a controlling body of law,¹⁴⁷ or policy differences between circuit courts of appeals,¹⁴⁸ and can be sufficiently egregious to necessitate de novo review by appellate courts. When none of these elements is present, however, comprehensive review of the lower court may yield slight benefits of consistency at the expense of appellate resources.

The question posited by the allocational consideration is truly one requiring a balance of concerns. In the specific instance of nonobviousness, the Federal Circuit believes the trial level is unable to apply the nonobviousness condition consistently.¹⁴⁹ This perception can only be evaluated properly by balancing the benefits and costs of applying the clearly erroneous standard to nonobviousness. A balance of (1) the judicial administrative efficiencies gained by characterizing the determination as fact, and (2) the slight potential for inconsistencies in the application of the condition of nonobviousness, may favor considering the determination wholly one of fact subject to the clearly erroneous standard of Rule 52(a).

K. DAVIS, *supra* note 103, § 30.02, at 547. The policy approach, however objectionable analytically, is often determinative. *id.* § 30.01, at 546. For a brief discussion of the analytical approach, see *supra* notes 101-09 and accompanying text.

145. *Cf. Anderson v. City of Bessemer City*, 470 U.S. 564, 574-75 (1985) ("Duplication of the trial judge's efforts in the court of appeals would very likely contribute only negligibly to the accuracy of fact determination at a huge cost in diversion of judicial resources.").

146. Monaghan, *supra* note 51, at 271; see *Miller*, 474 U.S. at 114 ("[T]he Court has justified independent federal or appellate review as a means of compensating for 'perceived shortcomings of the trier of fact by way of bias or some other factor'") (quoting Rehnquist, J., dissenting in *Bose Corp. v. Consumers Union*, 466 U.S. 485, 518 (1984)).

147. See *Bose Corp. v. Consumers Union*, 466 U.S. 485, 502 (1984); Calleros, *supra* note 96, at 408, 424; Monaghan, *supra* note 51, at 271.

148. Monaghan, *supra* note 51, at 271 & n.235.

149.

One effect of considering the § 103 question one of law in this court is to facilitate a consistent application of that statute in the courts and in the Patent and Trademark Office (PTO).

To contribute to consistency in construing § 103, this court has affirmed judgments while noting noncontrolling misstatements of law and cautioning counsel that judgments are appealed, not opinion language.

Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987).

a. *The risk of inconsistencies in application*— As the practical considerations highlight, the trial level is favored by fact-intensive analyses because of firsthand familiarity with the record.¹⁵⁰ The difficulty with district court determinations reviewed under the clearly erroneous standard is that there is a natural diversity in application of a prescribed analysis.¹⁵¹ This is a fact of the federal district court system that cannot be eliminated. The issue is not whether there is diversity in application, but whether the range of diversity that results from the use of the clearly erroneous standard is acceptable.¹⁵²

The Federal Circuit has acknowledged this allocational consideration, but has not recognized that inquiry into the allocational consideration requires full analysis of the costs and the benefits.¹⁵³ There is no doubt that the patent law requires uniform and certain interpretation,¹⁵⁴ and that there may be an ele-

150. See *supra* notes 112-18 and accompanying text for a discussion of practical concerns.

151. Professor Louis cites this fear of inconsistency as the motivation for classifying ultimate facts as questions of law. Some mixed questions are so important to society and the court system that even occasional wrong results are arguably unacceptable. See Louis, *supra* note 96, at 1027. Additionally Professor Louis believes classification as law encourages business conduct by ensuring predictability. *Id.* at 1036 (citing the use of the law classification in property, contract, and commercial law).

Professor Monaghan admits this risk, but advances the proposition that this diversity will not spread beyond the specific dispute between the parties. Thus law application, although possibly elaborating on the general norm, is often "situation-specific" and "like a ticket good for a specific trip only." Monaghan, *supra* note 51, at 236. Any inconsistency will be localized to only one court decision.

152. The Supreme Court has discounted such a fear of inconsistency when confronted with the scope of review. The majority in *Commissioner v. Duberstein*, 363 U.S. 278, 290 (1960), held that the risk of inconsistencies in analyzing whether a certain transaction was a gift for federal income tax purposes was outweighed by efficiency concerns. *Id.* at 284. This decision was made despite Justice Frankfurter's vigorous dissent based on the excessive risk to uniformity. *Id.* at 297 (Frankfurter, J., dissenting). The majority believed that the risk was minimal because lower court federal income tax decisions are published, the substantive law had safeguards preventing excessive diversity, and practical concerns weighed heavily in favor of treating the issue as fact. *Id.* at 290. The same can be said of the nonobviousness condition in patent law. See *supra* notes 112-18 and accompanying text.

153. See *supra* note 149 and accompanying text.

154.

The judicial application of *uniform standards* for determining compliance with 35 U.S.C. § 103 is essential, because the technological incentives fostered by the patent system depend on *consistent interpretation* of the law. To this end, faithful adherence to the patent statute and guiding precedent fosters uniformity in result.

Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138 (Fed. Cir. 1985) (emphasis added); see also *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1574 (Fed. Cir.) (discussing the need for certainty in patent law because it fosters investment), *cert. denied*, 107 S. Ct. 2187 (1987); *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 876-77 (Fed. Cir. 1985) (citing the patent system's positive function of encouraging investment-based

ment of uncertainty introduced into the system by applying the clearly erroneous standard to all district court determinations.¹⁵⁵ This risk, however, must be evaluated together with the particular countervailing safeguards of the substantive patent law, Rule 52(a), and the Federal Circuit itself. Only by balancing these factors can the amount of risk of inconsistent application by the trial level be properly assessed.

The Federal Circuit itself stands as a structural guarantee of consistency built into the appeals process for patent litigation. Only the Federal Circuit formulates the substantive law of patent validity. All district courts refer to Federal Circuit precedent, and no conflict of precedent raises doubts and diversity of interpretation at the trial court level.¹⁵⁶

A substantive safeguard also exists in patent law. The statute is explicit in the analytical steps required to determine nonobviousness.¹⁵⁷ The Supreme Court has definitively interpreted the statute and has not changed the analytical framework, despite ample opportunities.¹⁵⁸ The Federal Circuit "religiously"¹⁵⁹ follows this precedent, applying the same analysis to all patentable subject matter.¹⁶⁰ This stability in the law provides an excellent safeguard against inconsistencies.

The final and most important safeguard against inconsistency is the clearly erroneous standard of Rule 52(a). The clearly erroneous rule does *not* prevent correction of improper applications of the nonobviousness condition. Instead, it allows for reversal of factual determinations if the appellate court is firmly convinced

risk). Congress created the Federal Circuit, in part, to ensure doctrinal stability (i.e. the law declaration function), and through this stability, to encourage technological innovation. See S. REP. No. 275, *supra* note 131, at 5-6, reprinted in 1982 U.S. CODE CONG. & ADMIN. NEWS 11, 15-16; see also *supra* note 131.

155. See Monaghan, *supra* note 51, at 236 ("[L]aw application frequently entails some attempt to elaborate the governing norm."); see also *supra* note 151.

156. See 28 U.S.C. § 1295(a) (1982 & Supp. III 1985). Besides being the only appellate court in this area, the Federal Circuit implements an extensive internal decision review system to assure consistency between panel opinions. Rich, *Thirty Years of This Judging Business*, 14 AM. INTELL. PROP. L.A.Q. J. 139, 150-51 (1986).

157. See *supra* note 18 for the pertinent text of 35 U.S.C. § 103.

158. See *supra* note 32.

159. "The [Court of Appeals for the Federal Circuit] today has 'religiously' reiterated the three *Graham v. Deere* underlying fact issues . . ." Pravel, *Issues of Law and Fact at Appellate Level*, 12 AM. INTELL. PROP. L.A.Q. J. 321, 325 (1984).

160. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1573 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987). A clear rule is essential for reducing the rate of reversal. See Becker, Higginbotham & Slate, *Why the Numbers Don't Add Up*, A.B.A. J., Oct. 1, 1987, at 83, 85 [hereinafter Becker].

Some argue that different approaches for different technologies should be developed, however. See Adelman, *supra* note 131, at 991.

that a mistake has been made.¹⁶¹ The "correct" result will not be prevented by the Rule. Legal errors, such as a district court's not recognizing the *Graham* analysis, are freely reviewable and reversible.¹⁶² Rule 52(a) allows for the maintenance and genesis of the law.¹⁶³

Past decisions by the district courts on nonobviousness provides further proof that inconsistency is unlikely. Over a span of five years, the Federal Circuit has directly reviewed the nonobviousness determinations of eighty-four bench trials.¹⁶⁴ Of these eighty-four cases, sixty-six were affirmed yielding an affirmance rate of seventy-nine percent.¹⁶⁵ Table I details the district court affirmance rate for each year of the Federal Circuit's opinions.

161. See *supra* note 96 and accompanying text; see also Oliver, *supra* note 96, at 699.

162. "The Rule does not apply to conclusions of law. The Court of Appeals, therefore, was quite right in saying that if a district court's findings rest on an erroneous view of the law, they may be set aside on that basis." Pullman-Standard v. Swint, 456 U.S. 273, 287 (1982).

Placing nonobviousness fully under the clearly erroneous standard should not change the manner in which appellants may petition the Federal Circuit. Cf. Calvetti & Venturino, *supra* note 2, at 169 ("[O]n the issue of obviousness, the appellant has the burden of showing either that the district court committed reversible legal error or its findings underlying the conclusion were clearly erroneous.").

163. One example of law declaration even under constrained review is Orthopedic Equipment Co. v. All Orthopedic Appliances, Inc., 707 F.2d 1376, 1381-82 (Fed. Cir. 1983). The Federal Circuit listed a number of factors that may be considered in determining the level of ordinary skill in the art (a finding subject to the clearly erroneous standard of review): (1) the educational level of the inventor, (2) the types 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.

164. See *infra* Appendix A for the list of cases referenced. The appendix lists, for each case, the holding by the district court, Federal Circuit disposition, the basis for reversal or vacation, and method of tabulation.

165. 35 U.S.C. § 282 requires courts to scrutinize independently the validity of *each claim* of a patent. 35 U.S.C. § 282 (1982). Any perfect account of whether a district court properly followed the statutory presumption of validity would include the number of claims considered by the Federal Circuit. This is not the purpose of the inquiry. The purpose is to analyze the district court's successful application of the decisional process required by *Graham*, which requires a survey of both published and unpublished opinions. See Becker, *supra* note 160, at 83. Thus, if the Federal Circuit holds even *one claim in any patent in suit* to be improperly analyzed by the district court, the decision will not be counted in the affirmance rate. This rather strict basis of the survey assures the discussion of a significant and understated conclusion.

Table I—District Court Bench Determinations

<u>Year</u>	<u>§ 103 Cases</u>	<u>No. Affirmed by Fed. Cir.</u>	<u>Affirmance Rate (%)</u>
1987	11	8	73
1986	18	15	83
1985	14	9	64
1984	27	22	81
1983	14	12	86
Totals	84	66	79

This record by district courts is in contrast to the affirmance rate of the Board of Patent Appeals and Interferences, the body of the PTO that hears appeals from patent examiner rejections, which is detailed in Table II:¹⁶⁶

Table II—Board of Patent Appeals & Interferences Determinations

<u>Year</u>	<u>§ 103 Cases</u>	<u>No. Affirmed by Fed. Cir.</u>	<u>Affirmance Rate (%)</u>
1987	25	18	72
1986	19	15	79
1985	10	7	70
1984	7	3	43
1983	10	6	60
Totals	71	49	69

This difference in affirmance rates between federal district courts and the Board, a specialized adjudicatory body, indicates that district courts are more than able to apply the *Graham* analysis properly.¹⁶⁷ It is a virtual certainty that this affirmance

166. See *infra* Appendix B for the list of cases referenced.

167. It is difficult to compare fully the impact of this numerical analysis because the literature lacks any statistical definition of an acceptable affirmance rate range in which the clearly erroneous standard should apply. There are two sources of adjudication of nonobviousness that the Federal Circuit reviews—the federal district courts and the Board of Patent Appeals and Interferences. The federal courts are better decisionmakers, despite having to consider the additional legal presumption of validity due an issued patent.

A comparison may also be made from a broader perspective. The cumulative affirmance rate of 79% for district court decisions is comparable to the overall affirmance rate of civil appeals for 1986 of 79.3%. Weakland, *Judging the Judges*, A.B.A. J., June 1,

rate would be higher if all district court determinations were reviewed by the Federal Circuit. Counsel prevents this, however, by not appealing facially correct validity determinations.¹⁶⁸ Also, because successful arguments on issues of enforceability prevents Federal Circuit review of district court validity determinations, correct nonobviousness determinations are not reviewed.¹⁶⁹ With these considerations in mind, the rate of correct application of the nonobviousness analysis is probably higher in the district courts than Table I.

A review of the Federal Circuit's past five years yields a second interesting result. Every reversal of a bench determination of nonobviousness would have occurred even if nonobviousness were reviewable under the clearly erroneous standard. There have been eighteen reversals based partly or wholly on the nonobviousness determination during the Federal Circuit's existence. All were reversed because of either a legal error¹⁷⁰ or an erroneous finding on at least one of the four factual foundations of the nonobviousness conclusion. Rule 52(a) allows for full review of these errors.¹⁷¹ Because all previous Federal Circuit reversals on nonobviousness could have occurred under Rule 52(a), and because there are consistency safeguards, the risk of inconsistent future application under a clearly erroneous standard of review is low.

b. The benefit of greater appellate efficiency— Presumptively favoring the appellate courts for the sake of consistent application of a clearly defined analysis, in the face of a low risk of inconsistency, is irrational without assessing the benefits of Rule 52(a). The countervailing benefits of reviewing nonobviousness under the clearly erroneous standard can be recognized when the appellate function of law declaration is considered.

The appellate level is the best tier of the judicial system for creating and unifying the law.¹⁷² This simple truism is accentuated

1987, at 58, 66 (Table, Civil Appeals for 1986). This figure may include issues subject to the clearly erroneous standard as well as those reviewed *de novo*. From this broad statistical base, however, one can conclude that the nonobviousness determination is *not* a particularly difficult issue in the civil system of adjudication.

168. The losing party, certain that the district court's conclusion is correct, may not appeal the nonobviousness determination, but may appeal another issue. This behavior, unfortunately, cannot be quantified.

169. See, e.g., *Perini Am., Inc. v. Paper Converting Mach. Co.*, 4 U.S.P.Q.2d (BNA) 1621 (Fed. Cir. 1987); *Donaldson Co. v. Pneumafil Corp.*, 824 F.2d 979 (Fed. Cir. 1987); *Gardco Mfg., Inc. v. Herst Lighting Co.*, 820 F.2d 1209 (Fed. Cir. 1987).

170. See *infra* Appendix A.

171. See *supra* notes 92-95 and accompanying text; see also *supra* note 162.

172. Declaration of the law is best done by one court. The Federal Circuit's unique structural position as sole appellate patent court makes it ideal for creating patent

ated by the grant of exclusive jurisdiction of all patent appeals to the Federal Circuit. There is no other appellate source of law. The Supreme Court's intervention in substantive patent law, if past history is any indication, will be minimal.¹⁷³ This lack of judicial pluralism places more demands on the Federal Circuit's decisionmaking and policymaking capacities than *any other* circuit court of appeals. Because of this structural peculiarity, substantial Federal Circuit resources must be used to make the policy choices implicit in its opinions.

Diversion of limited appellate resources away from the law declaration function has implications not only for the parties, but also for the patent system as a whole.¹⁷⁴ Rule 52(a), however, prevents appellate resource diversion away from the policymaking function by deterring marginal appeals and by increasing ef-

law. S. REP. No. 275, *supra* note 131, at 5, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 11, 15 (citing the increase in doctrinal stability in patent law as one benefit of creating the Federal Circuit).

The appellate court is better equipped to perform the law declaration function. Chief Judge Coffin of the Ninth Circuit has noted the structural advantages:

Every important appellate court decision is made by a group of equals. This fact reflects the shrewd judgment of the architects of our state and federal judicial systems that an appellate judge is no wiser than a trial judge. His only claim to superior judgment lies in numbers; three, five, seven or nine heads are usually better than one.

F. COFFIN, *THE WAYS OF A JUDGE* 58 (1980). This numerical advantage applies to the law declaration function alone, however. *Compare* Pravel, *supra* note 159, at 322 ("[T]he . . . Federal Circuit's treatment of issues such as obviousness as issues of law is welcome because of the likelihood of the same standard being applied for all patents, thus making the issue more predictable and its application more equitable.") *with* FED. R. CIV. P. 52(a) advisory committee's notes to 1985 amendments ("To permit courts of appeals to share more actively in the fact-finding function would tend to undermine the legitimacy of the district courts in the eyes of litigants, multiply appeals by encouraging appellate retrial of some factual issues, and needlessly reallocate judicial authority.").

173. *See* Adelman, *supra* note 131, at 985-86. *But see* *Christianson v. Colt Indus. Operating Corp.*, 822 F.2d 1544 (Fed. Cir.), *cert. granted*, 56 U.S.L.W. 3410 (U.S. Dec. 14, 1987) (No. 87-499).

174. The legislative history of the Federal Courts Improvement Act of 1981 emphasized that proper resources must be dedicated to the law declaration function:

[The Federal Circuit's] cases will be extraordinarily time-consuming, and fewer of them will be appropriate for summary disposition than is true of the cases that make up the dockets of the regional courts of appeals. In addition it is important that the newly created court with nationwide jurisdiction not be initially overloaded. Decisions of this court will be precedent nationwide; it is important for the judges of the court to have adequate time for thorough discussion and deliberation.

S. REP. No. 275, *supra* note 131, at 7, *reprinted in* 1982 U.S. CODE CONG. & ADMIN. NEWS 11, 17. Reviewing nonobviousness *de novo* decreases the time to deliberate and discuss questions of policy. *See* Wepner, *Appellate Review of Patentability*, 56 J. PAT. OFF. SOC'Y 216, 229 (1974) ("Appellate review of [nonobviousness and validity in general], then, places severe strains on the courts of appeals, both in terms of time and expertise.").

iciency in opinion preparation. The combination of these potential benefits favors characterizing nonobviousness solely as a fact for the purposes of Rule 52(a).

As a general proposition, characterizing an issue as one of law allows clever appellate counsel to appeal the analysis of the lower court and, in some cases, to reargue the trial court's interpretation of the historical facts of the case. De novo review of an issue, as opposed to review under the clearly erroneous standard, gives the litigants an incentive to appeal marginal cases.¹⁷⁵ This leads to a greater number of appellate cases.¹⁷⁶ An increase in appeals imposes greater burdens on the appellate court and possibly diverts resources away from the court's proper role: making legal principles to meet the inequities of hard cases.¹⁷⁷ The Court of Appeals for the Federal Circuit is potentially susceptible to such diversion with respect to the nonobviousness issue.

Presently, litigants appeal because they will obtain a full review of the legal conclusion of nonobviousness even though the underlying findings are reviewed under the clearly erroneous standard. The probability of reversal when none of the underlying facts are changed on appeal is very low,¹⁷⁸ but counsel, charged with the duty to advocate the client's position zealously, have argued for reversal of the nonobviousness determination even when the *Graham* analysis was properly followed.¹⁷⁹ The Federal Circuit has answered several such appeals with lengthy opinions affirming lower court decisions on nonobviousness.¹⁸⁰

This burden on the Federal Circuit could be alleviated by subjecting the conclusion of nonobviousness to the clearly erroneous standard of Rule 52(a). Appellants would not be able to treat review as a second chance at obtaining a favorable judgment.¹⁸¹

175. See Louis, *supra* note 96, at 1013.

176. *Id.* at 1015.

177. *Id.* at 1013.

178. *E.g.*, Kaufman Co. v. Lantech, Inc., 807 F.2d 970, 975 (Fed. Cir. 1986) (holding that because the appellant did not cite any clear error in the record, the district court's conclusion on nonobviousness would be left intact); see also *supra* note 128 and accompanying text.

179. *E.g.*, Rolls-Royce Ltd. v. GTE Valeron Corp., 800 F.2d 1101 (Fed. Cir. 1986); Kloster Speedsteel AB v. Crucible, Inc., 793 F.2d 1565 (Fed. Cir.), *cert. denied*, 107 S. Ct. 882 (1986); Eaton Corp. v. Appliance Valves Corp., 790 F.2d 874 (Fed. Cir. 1986); Medtronic, Inc. v. Daig Corp., 789 F.2d 903 (Fed. Cir.), *cert. denied*, 107 S. Ct. 402 (1986); Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556 (Fed. Cir.), *cert. denied*, 107 S. Ct. 178 (1986); Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540 (Fed. Cir. 1984).

180. See, *e.g.*, Polaroid Corp., 789 F.2d at 1556-74 (dedicating 15 pages of a 17 page opinion to a discussion of issues ostensibly covered by the clearly erroneous rule).

181. In the similar context of the review of jury findings, appellants often fail in their attempt to gamble for a better judgment on appeal. "[T]he function of the appellate

In other words, counsel would be required to find clear error in the lower court's findings of fact or error in overlooking the law of *Graham*. This is the main benefit of Rule 52(a): it places potential appellants on notice to focus on a specific clear error by the lower court. If none can be found, then an appeal should not be brought.

A secondary benefit could be greater appellate efficiency in rendering decisions. Full review of the record is mandated by Rule 52(a),¹⁸² but a significant amount of time is saved in the preparation of opinions consisting entirely of issues reviewed under the clearly erroneous standard.¹⁸³ The adoption of a clearly erroneous standard of review could improve the efficiency of the Federal Circuit by decreasing the number of appealed cases, and by accelerating the opinion writing process.

The Federal Circuit has attempted to use two mechanisms to obtain appellate decisionmaking efficiency: Federal Circuit court rule 18,¹⁸⁴ allowing the court to render unpublished opinions, and the phrase "judgments are appealed, not opinion language."¹⁸⁵ Neither can be as effective as Rule 52(a) in deterring marginal appeals and speeding the opinion writing process. This is because the clearly erroneous standard of Rule 52(a) is *pro-*

court is to review actions taken by the trial court, not actions of the jury itself. . . . Put somewhat differently, 'a litigant may not gamble on a jury's verdict and then later question that sufficiency of the evidence on appeal' *Tights, Inc. v. Acme-McCrary Corp.*, 541 F.2d 1047, 1058 (4th Cir.) (citation omitted), *cert. denied*, 429 U.S. 980 (1976). The same consideration, denying appellants the right to a free spin on the litigation wheel of fortune, should be applicable to bench trials. *Cf. Rosemount, Inc.*, 727 F.2d at 1544 ("Appeals in patent cases should not be mere games . . .").

182. *Cf. Anderson v. Bessemer City*, 470 U.S. 564, 581 (1985) (Powell, J., concurring) (writing separately to emphasize that Rule 52(a) allows for a comprehensive review of the record).

183. The Ninth Circuit concedes this general point:

It can hardly be disputed that application of a non-deferential standard of review requires a greater investment of appellate resources th[a]n does application of the clearly erroneous standard. Appellate courts could do their work more quickly if they applied the clearly erroneous standard in most circumstances, because the courts then need only determine if the lower court's decision is a reasonable one, not substitute their own judgment for that of the trial judge.

United States v. McConney, 728 F.2d 1195, 1201 n.7 (9th Cir.), *cert. denied*, 469 U.S. 824 (1984).

184. FED. CIR. R. 18 provides in pertinent part:

Disposition of appeals shall be with a published opinion or an unpublished opinion. Opinions which do not add significantly or usefully to the body of law or would not have precedential value will not be published in commercial reports of decisions. Opinions designated as unpublished shall not be employed as precedent by this court, nor may they be cited by counsel as precedent

185. For a list of cases using this phrase, see *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1567 n.7 (Fed. Cir. 1987); see also *supra* note 149.

spective; it notifies appellants that they must carry a heavy burden if they are to be successful on appeal.

The existing mechanisms are in a sense retrospective and thus do not assist counsel in deciding whether to appeal. The rule that appeals are based on the judgment and not on the language of the opinion below, although focused, is conclusory. Invocation of this rule indicates that the Federal Circuit believes the lower court to be correct, although its opinion occasionally misstated the law.¹⁸⁶ Court rule 18, although allowing for speedier opinion writing because unpublished opinions are brief, destroys the Federal Circuit's value as a patent law declaring body. This is because the brief, unpublished opinions are not precedent.¹⁸⁷

The mechanisms developed by the Federal Circuit may add to appellate efficiencies when utilized in conjunction with a clearly erroneous standard of review. Rule 52(a) would force appellants to defer to the presumption of validity and focus on the legal issue of whether or not the district court used the *Graham* analysis, rather than on reanalyzing the lower court record.¹⁸⁸ The addition of Rule 52(a) will also deter marginal appeals,¹⁸⁹ and require less use of court rule 18, a result the Supreme Court favors.¹⁹⁰ In this way, Rule 52(a) can combine with other appellate mechanisms to prevent diversion of policymaking resources in the Federal Circuit.

The allocational considerations, though not definitive, are illuminating. Assessment of the potential risks of clearly erroneous review, in light of all the structural and substantive safeguards, yields a low risk of inconsistency. Assessment of the benefits, in the light of the Federal Circuit's past experience, provides a significant potential for appellate efficiency. The resulting balance, although appearing "artificial,"¹⁹¹ favors clearly erroneous review of the nonobviousness determination.

186. See, e.g., *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1556 (Fed. Cir. 1985).

187. See *supra* note 184; *infra* Appendix A.

188. See *supra* note 179 and accompanying text.

189. See *supra* notes 175-76 and accompanying text.

190. *County of Los Angeles v. Kling*, 474 U.S. 936, 938 & n.1 (1985) (Stevens, J., dissenting) (citing widespread hostility toward the use of unpublished opinions); cf. *Weakland*, *supra* note 167, at 60 (quoting Judge Crabb, highest rated district judge in a survey of published appellate affirmances, who attributes her success to the large number of published opinions in her circuit that add certainty and guidance).

191. See K. DAVIS, *supra* note 103, § 30.02, at 547.

C. Analogous Determinations in the Law

The preceding analysis is not the only justification for treating the conclusion of nonobviousness as a question of fact for purposes of Rule 52(a). Analogous determinations are treated as factual issues for purposes of Rule 52(a) and subjected to the clearly erroneous standard of review.¹⁹² This implies that other appellate courts have balanced the benefits of Rule 52(a) against the costs and have concluded that the efficiency enhancing characteristics of the Rule outweigh the risks of inconsistency.

There are at least four analogous issues in similar areas of the law: 1) the minimum statutory damages issue in patent infringement cases; 2) negligence, with its reasonable man construct, in tort law; 3) likelihood of confusion in trademark law; and 4) the substantial similarity infringement test in copyright law. Each of these determinations is reviewed by the majority of courts of appeals under Rule 52(a) as a "fact."¹⁹³

1. *Willing licensor-willing licensee rule*— Upon finding patent infringement, a district court will award damages. The patent statute provides for recovery of actual damages, such as lost

192. To recognize analogous legal constructs, one must fully appreciate the nonobviousness construct. The nonobviousness conclusion relies upon a hypothetical person of ordinary skill who has infinite knowledge of the prior art. This hypothetical person is called "the person having ordinary skill in the art" by some members of the patent bar. This hypothetical person has been given the acronym "Mr. Phosita," Soans, *Some Absurd Presumptions in Patent Cases*, 10 *IDEA* 433, 438 (1966), and has been characterized as a superhuman monster, Gambrell & Dodge, *Ordinary Skill in the Art—An Enemy of the Invention or a Friend of the People?*, in *NONOBVIOUSNESS*, *supra* note 6, at 5:301, 5:319, or simply a ghost, Leonard, *The Man Skilled in the Art—Goodness Gracious, a Ghost!*, 56 *J. PAT. OFF. SOC'Y* 599, 599 (1974); *see supra* note 132.

This construct has been used by the courts for many years to test for the condition of nonobviousness. Interestingly, the invention requirement used this construct as the ultimate test of invention as well. *See, e.g.*, *B.G. Corp. v. Walter Kidde & Co.*, 79 F.2d 20, 22 (2d Cir. 1935) (L. Hand, J.); *Kirsch Mfg. Co. v. Gould Mersereau Co.*, 6 F.2d 793, 794 (2d Cir. 1925) (L. Hand, J.) (stating that when objective indicia are not helpful, the legal construct of the journeyman in the art must be referenced).

Those who argue for free review of nonobviousness on appeal cite the ambiguity of this legal fiction as one reason for de novo review. *See Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1566 (Fed. Cir.), *cert. denied*, 107 S. Ct. 2187 (1987); Brief of Amicus Curiae at 18, *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1987) (No. 85-1144) (submitted by Professor Chisum). Analysis of other legal fictions present in intellectual property law and elsewhere, however, demonstrate that this justification is insufficient.

193. *See generally* 5 D. CHISUM, *supra* note 7, § 20.03[3][a] (discussing minimum statutory patent infringement damages); 2 J. MCCARTHY, *TRADEMARKS AND UNFAIR COMPETITION* § 23:22 (1973) (discussing likelihood of confusion); 5A J. MOORE, *supra* note 86, ¶ 52.05 (discussing negligence); 3 M. NIMMER, *NIMMER ON COPYRIGHT* § 13.03[A] (1986) (discussing substantial similarity).

profits, but when actual damages cannot be proven, courts award a reasonable royalty.¹⁹⁴ A reasonable royalty is generally determined by the willing licensor-willing licensee rule.¹⁹⁵ This rule states that a reasonable royalty is a rate that a willing licensor and willing licensee would negotiate at the time of the first infringement.¹⁹⁶

This rule is really a statement of a legal fiction consisting of two hypothetical parties negotiating a royalty.¹⁹⁷ The courts have fleshed out this construct by analyzing a number of factors that may become relevant given the facts of a specific case.¹⁹⁸ These factors are chosen at the discretion of the trial judge.¹⁹⁹ The Federal Circuit approves of this analytical method for determining a reasonable royalty²⁰⁰ and reviews the individual factors and the conclusion of a royalty rate under the clearly erroneous standard.²⁰¹

The willing licensor-willing licensee rule can be analogized to the legal fiction of nonobviousness. The conclusion relies on a

194. 35 U.S.C. § 284 (1982).

195. 5 D. CHISUM, *supra* note 7, § 20.03[3][a], at 20-104; *see also* *Faulkner v. Gibbs*, 199 F.2d 635, 639 (9th Cir. 1952).

196. *Stickle v. Heublein, Inc.*, 716 F.2d 1550, 1561 (Fed. Cir. 1983).

197. The Chief Judge of the Federal Circuit described this construct in *Panduit Corp. v. Stahl Bros. Fibre Works*, 575 F.2d 1152, 1159 (6th Cir. 1978):

Determination of a "reasonable royalty" after infringement, like many devices in the law, rests on a legal fiction. Created in an effort to "compensate" when profits are not provable, the "reasonable royalty" device conjures a "willing" licensor and licensee, who like Ghosts of Christmas Past, are dimly seen as "negotiating" a "license." There is, of course, no actual willingness on either side, and no license to do anything, the infringer being normally enjoined . . . from further manufacture, use, or sale of the patented product.

198. *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (listing 15 factors available to the district court in determining a reasonable royalty), *aff'd and modified sub nom. Georgia-Pacific Corp. v. United States Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir.), *cert. denied*, 404 U.S. 870 (1971); *see also* 5 D. CHISUM, *supra* note 7, § 20.03[3][b][i]-[ix] (listing nine factors).

Several objective indicia of nonobviousness can be used as factors for reasonable royalty analysis. *See Panduit Corp.*, 575 F.2d at 1162 (indicating long felt need and commercial success proved an absence of noninfringing substitutes and justified a holding that the district court's royalty rate was clearly erroneous); *see also* *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 900 (Fed. Cir.), *cert. denied*, 107 S. Ct. 183 (1986).

199. *See, e.g., Hughes Tool Co. v. Dresser Indus., Inc.*, 816 F.2d 1549, 1558 (Fed. Cir.), *cert. denied*, 108 S. Ct. 261 (1987); *see also Georgia-Pacific Corp.*, 318 F. Supp. at 1120-21 (describing the discretionary nature of the analysis and additional economic factors beyond the 15 mentioned *supra* note 198).

200. *See TWM Mfg. Co.*, 789 F.2d at 899; *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1077 (Fed. Cir. 1983); *Stickle*, 716 F.2d at 1562.

201. *See TWM Mfg. Co.*, 789 F.2d at 899-900 (holding that the district court's findings and conclusion are reviewed under the clearly erroneous standard although the district court's choice of factors is reviewed under the abuse of discretion standard); *American Original Corp. v. Jenkins Food Corp.*, 774 F.2d 459, 464 (Fed. Cir. 1985).

court to reconstruct a time in history—the date of first infringement—and determine a royalty rate that two parties might have agreed upon.²⁰² Like nonobviousness, the courts have developed factors to assist the judge in making a conclusion.²⁰³ Unlike nonobviousness, the royalty rate conclusion is reviewed under the clearly erroneous standard.

This difference in review does not square with the virtually equivalent level of difficulty in applying these constructs. Practically, the quality and quantity of factors that a judge considers in the reasonable royalty determination can be as great as in the nonobviousness inquiry.²⁰⁴ The difficulty may even be greater because the judge must be concerned with two hypothetical parties in a very complicated commercial setting.²⁰⁵ In terms of allocation, the nonobviousness determination is better suited to the lower court than the willing licensor-willing licensee rule. In the reasonable royalty determination, a district court is free to choose the most pertinent factors,²⁰⁶ but in the nonobviousness inquiry a district court is constrained by *Graham* and must analyze any evidence of objective indicia.²⁰⁷ Moreover, the determination of a reasonable royalty has a more immediate impact on the parties than nonobviousness.²⁰⁸ This comparison demonstrates that unrestrained review on the nonobviousness determination is inconsistent with the limited review applied to another legal fiction in the patent law, the willing licensor-willing licensee rule for determining a reasonable royalty.

2. *Negligence*—Negligence, whether characterized as fact or a mixed question of law and fact, is reviewed by all courts of

202. See *supra* note 197.

203. See *supra* note 198; *infra* note 214.

204. Compare *Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (listing 15 reasonable royalty factors), *aff'd and modified sub nom. Georgia-Pacific Corp. v. United States Plywood-Champion Papers, Inc.*, 446 F.2d 295 (2d Cir.), *cert. denied*, 404 U.S. 870 (1971) with Goldstein, *supra* note 11, at 9 (listing 10 objective indicia of nonobviousness).

205. See *Georgia-Pacific Corp.* 318 F. Supp. at 1121-22.

206. See *supra* note 199 and accompanying text.

207. See *supra* notes 29-32 & 37 and accompanying text.

208. A royalty rate determination that results in a large award can destroy an adjudged infringer. See, e.g., *Smith Int'l, Inc. v. Hughes Tool Co.*, 229 U.S.P.Q. (BNA) 81, 99 (C.D. Cal. 1986) (awarding the patent owner over \$134 million before interest); see also Berkman, *Smith Settles Patent Suit with Baker Hughes*, L.A. Times, June 6, 1987, § 4, at 1, col. 5 (reporting that the total judgment amounting to \$204.6 million forced the infringer into bankruptcy, but with this bargaining leverage, the parties settled for approximately \$95 million).

appeals, with the exception of the Second Circuit,²⁰⁹ under the clearly erroneous rule.²¹⁰ The rationale for this limited review accords with the Court's position on other issues,²¹¹ and is consistent with Court decisions on Rule 52(a). The Supreme Court has treated negligence as a factual inquiry for purposes of maritime law;²¹² this treatment need not be limited to such cases.²¹³

The Supreme Court in *Graham* paralleled nonobviousness with negligence, stating that, like negligence, nonobviousness should be amenable to case by case development.²¹⁴ This statement implies that review of the determination under the clearly erroneous standard is possible. It also implies that the Court believed that the development of the nonobviousness condition would not be severely impinged by review under the clearly erroneous standard.

The negligence determination, in one sense, is more ambiguous than the nonobviousness condition, because negligence depends on the reasonable person construct—an analytical structure that can vary substantially given the wide range of socially acceptable judgments. Nonobviousness has a similar range of uncertainty, because it relies on a person of *ordinary* skill in the art. But because nonobviousness relies on a subcategory of the general population, those skilled in a particular subject matter,

209. *Edwards & Hanly v. Wells Fargo Sec. Clearance Corp.*, 602 F.2d 478, 485 (2d Cir. 1979); *Mamiye Bros. v. Barber S.S. Lines*, 360 F.2d 774, 776-78 (2d Cir.), *cert. denied*, 385 U.S. 835 (1966).

210. See J. MOORE, *supra* note 86, ¶ 52.05, at 52-117.

211. See *supra* note 152; see also *United States v. McConney*, 728 F.2d 1195 (9th Cir.), *cert. denied*, 469 U.S. 824 (1984):

Because the legal standard for judging whether conduct is negligent requires us to determine, by reference to the "data of practical human experience," whether an individual acted "reasonably" by community standards, the trial court's findings of fact effectively determine our legal conclusions. Consequently, clearly erroneous review is appropriate.

Id. at 1204 (citation omitted).

212. *McAllister v. United States*, 348 U.S. 19, 20 (1954) ("No greater scope of review is exercised by the appellate tribunals in admiralty cases than they exercise under Rule 52(a) of the Federal Rules of Civil Procedure.").

213. 9 C. WRIGHT & A. MILLER, *FEDERAL PRACTICE & PROCEDURE* § 2590, at 762 (1971) ("The natural and normal reading of [McAllister] is that the Supreme Court held that a determination of negligence is reviewed under the 'clearly erroneous' rule."). *But see Mamiye Bros.*, 360 F.2d at 777-78 ("Finding no discussion in the Supreme Court's opinion directed at what could be considered application of a legal standard to established facts, we adhere to our longheld view that a judge's determination on the issue of negligence does not fall within the 'unless clearly erroneous' rule.").

214. See *supra* note 29; see also *Reed*, *supra* note 72, at 2:306 (stating that the linking of the nonobviousness inquiry to negligence was due to their similar problem of *post hoc* determinations).

the difference of opinion may be less than negligence.²¹⁵ From the allocational perspective, if courts review negligence under the clearly erroneous standard, then nonobviousness, with its potentially smaller range of uncertainty, should also be treated under the clearly erroneous standard.

3. *Likelihood of confusion*— Unlike negligence, likelihood of confusion is statutorily based. This issue is the touchstone of trademark infringement.²¹⁶ The likelihood of confusion issue is resolved by applying a number of factors²¹⁷ to conclude “whether there is any likelihood that an appreciable number of ordinarily prudent purchasers are likely to be misled, or indeed simply confused, as to the source of the goods in question.”²¹⁸

Appellate courts are split on the scope of review applied to a determination of likelihood of confusion. A substantial majority of the courts favor review of the issue as a fact.²¹⁹ The Supreme Court has hinted that it supports the majority’s interpretation.²²⁰ The Federal Circuit is contrary to the majority and holds

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The reasonable man’s conduct is not subject to empirical verification as he is a mere personification of the jury’s or court’s social judgment. The determination of what an ordinary man in a given art could do, however, involves no issue related to social standards. The skill of the ordinary artisan at a given time can be determined only by examining the *facts existing at that time*.

Note, *supra* note 50, at 622 n.68.

216. Trademark liability can emanate from two statutory sources: 15 U.S.C. § 1114(1) (1982) and 15 U.S.C. § 1125(a) (1982). Section 1114 explicitly requires likelihood of confusion, whereas § 1125 requires false designation of origin. Judicial interpretation equates false designation of origin with likelihood of confusion. The distinction lies in whether the trademark is registered or not; section 1114(1) is only for registered marks. See 1 J. GILSON, *TRADEMARK PROTECTION & PRACTICE* § 5.01, at 5-2.4 to -3 (1987).

217. The Second Circuit, for example, follows the “Polaroid factors” outlined in *Polaroid Corp. v. Polarad Elecs. Corp.*, 287 F.2d 492, 495 (2d Cir.) (listing eight factors), *cert. denied*, 368 U.S. 820 (1961). See generally *McGregor-Doniger, Inc. v. Drizzle, Inc.*, 599 F.2d 1126 (2d Cir. 1979); *RESTATEMENT OF TORTS* § 729 (1938) (listing four additional factors).

218. *McGregor-Doniger*, 599 F.2d at 1127.

219. The First, Fourth, Fifth, Eighth, Tenth, Eleventh, and District of Columbia Circuits regard likelihood of confusion as a fact, but the Third, Sixth and Ninth Circuits consider it as law. The Second and Seventh Circuits hold that the issue is one of law if only documentary evidence is used in the trial court, but a fact otherwise. *Pravel, supra* note 159, at 332-33. The Third Circuit has recently joined the majority in reviewing the issue fully under the clearly erroneous standard. See *American Home Prods. Corp. v. Barr Laboratories, Inc.*, 834 F.2d 368 (3d Cir. 1987). The Second and Seventh Circuits may also join the majority now that a recent amendment to Rule 52(a) effectively eliminates this documentary evidence exception. See *id.* at 370; *FED. R. CIV. P.* 52(a) advisory committee’s notes to 1985 amendments.

220. See *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 855-58 (1982) (stating that an appellate court cannot make its own inferences based on the facts as found by the district court in a Lanham Act § 32 case).

that likelihood of confusion is a fully reviewable legal conclusion based on foundational facts.²²¹

Like nonobviousness, the conclusion of a likelihood of confusion rests on a hypothetical person. Similarly, the court implements a variety of factors to assist in the determination of this conclusion.²²² Unlike nonobviousness, likelihood of confusion is reviewed under the clearly erroneous standard.

4. *Substantial similarity*— Substantial similarity is one of two elements necessary to prove copyright infringement circumstantially.²²³ The test of substantial similarity is whether a hypothetical person, the average lay observer, “would recognize the alleged copy as having been appropriated from the copyrighted work.”²²⁴

The leading courts of appeals in copyright law, the Second Circuit and the Ninth Circuit, hold that conclusions of substantial similarity must be reviewed under the clearly erroneous

221. *E.g.*, *Litton Sys. v. Whirlpool Corp.*, 728 F.2d 1423, 1445 (Fed. Cir. 1984); *Giant Foods, Inc. v. Nation's Foodservice, Inc.*, 710 F.2d 1565, 1569 (Fed. Cir. 1983); *see Ultra-cashmere House Ltd. v. Spring Mills Inc.*, 4 U.S.P.Q.2d (BNA) 1252, 1253 n.2 (Fed. Cir. 1987).

The Seventh Circuit has criticized the position of the Federal Circuit on this issue:

The Federal Circuit apparently takes [the position that likelihood of confusion is an “ultimate” issue and therefore should be reviewed more carefully.] The proposition that “ultimate” findings should be reviewed with special vigor has drifted in and out of appellate cases for decades. Although we should think carefully before disagreeing with the views of the Federal Circuit, a specialist court on questions concerning intellectual property, we will not change the standard reflected in cases such as *Henri's Food*. The Supreme Court held in *Pullman-Standard v. Swint* that Rule 52(a) does not permit any distinction between ordinary and “ultimate” findings. The Federal Circuit's cases do not discuss *Swint*, and we conclude that they are inconsistent with that case.

Scandia Down Corp. v. Euroquilt, Inc., 772 F.2d 1423, 1428 (7th Cir. 1985) (citations omitted), *cert. denied*, 475 U.S. 1147 (1986); *see Morton, supra* note 71, at 183-84.

222. *See supra* note 217.

223. “To prevail on a claim of copyright infringement, a plaintiff must show both ownership of a valid copyright and copying. . . . When, as here, there is no direct evidence of copying, plaintiff may prove copying by demonstrating ‘access and substantial similarity’ of the two works.” *Knickerbocker Toy Co. v. Azrak-Hamway Int'l, Inc.*, 668 F.2d 699, 702 (2d Cir. 1982).

224. *Ideal Toy Corp. v. Fab-Lu Ltd.*, 360 F.2d 1021, 1022 (2d Cir. 1966); *accord Malden Mills, Inc. v. Regency Mills, Inc.*, 626 F.2d 1112, 1113 (2d Cir. 1980); *Universal Athletic Sales Co. v. Salkeld*, 511 F.2d 904, 907 (3d Cir. 1975), *cert. denied*, 423 U.S. 863 (1975).

standard.²²⁶ Recent decisions by the Third,²²⁶ Fifth,²²⁷ and Eleventh²²⁸ Circuits agree with this position. Only the First²²⁹ and Seventh²³⁰ Circuits review the conclusion de novo, but their rationales for free review are suspect in light of recent changes to Rule 52(a).²³¹

One would expect identical review standards of conclusions of nonobviousness and substantial similarity. Both conclusions are based on a hypothetical person.²³² Additionally, patent and copyright law have historically shared similar concepts, because of common constitutional origin and policy objectives.²³³ Yet the dissimilarity in the scope of review accorded each law's legal fiction is striking.

Analogizing from constructs applied in similar areas of the law, the conclusion of nonobviousness may be categorized as a fact for purposes of Rule 52(a), warranting review under the clearly erroneous standard. These analogous constructs demonstrate a trend toward a more limited scope of review in the intellectual property field, due in part to Supreme Court interpreta-

225. *Twentieth Century-Fox Film Co. v. MCA, Inc.*, 715 F.2d 1327, 1328 n.2 (9th Cir. 1983); *Knickerbocker Toy Co.*, 668 F.2d at 702-03; *see also* *McCulloch v. Price Inc.*, 3 U.S.P.Q.2d (BNA) 1503, 1504-05 (9th Cir. 1987); *Cooling Sys. & Flexibles v. Stuart Radiator*, 777 F.2d 485, 487 (9th Cir. 1985); 3 M. NIMMER, *supra* note 193, § 12.12, at 12-90; W. PATRY, *LATMAN'S THE COPYRIGHT LAW* 202 (6th ed. 1986).

226. *Franklin Mint Corp. v. National Wildlife Art Exch.*, 575 F.2d 62, 66-67 (3d Cir.), *cert. denied*, 439 U.S. 880 (1978).

227. *Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv., Inc.*, 807 F.2d 1256, 1259 (5th Cir.), *cert. denied*, 108 S. Ct. 80 (1987).

228. *Original Appalachian Artworks, Inc. v. Toy Loft*, 684 F.2d 821 (11th Cir. 1982). "[B]oth the Second and Ninth Circuits have held that findings concerning the similarity of two works are findings of fact. . . . In light of the Supreme Court's recent holding in *Pullman-Standard v. Swint*, . . . we conclude that the Second and Ninth Circuits have properly characterized the status of trial court findings on issues of similarity in copyright cases." *Id.* at 825 n.4.

229. *O'Neill v. Dell Publishing Co.*, 630 F.2d 685, 687 (1st Cir. 1980) (holding that substantial similarity is a mixed question of law and fact: "[A]ny factual element of that issue must be decided in the trial court and reviewed on appeal as issues of fact are decided and reviewed.").

230. *Atari, Inc. v. North Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982). "Under the circumstances of this case, the determination of copyright infringement (or lack thereof) is predicated upon an ocular comparison of the works themselves and does not involve any material credibility issues. Therefore, this court is in as good a position as the district court to decide that question." *Id.* at 614.

231. *See* FED. R. CIV. P. 52(a) advisory committee's notes to 1985 amendments (eliminating the documentary exception to clearly erroneous review of factual determinations).

232. *See supra* notes 132-33 & 224 and accompanying text.

233. *See Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984) (referring to "the historic kinship between patent law and copyright law").

tion of Rule 52(a) in other areas.²³⁴ Whether for practical or allocational reasons, there is a trend by the courts to use the policy approach. In the face of this trend, however, the Federal Circuit has staunchly held that nonobviousness is a legal conclusion.²³⁵

CONCLUSION

The position taken by the Court of Appeals for the Federal Circuit on the scope of review accorded to a conclusion of non-obviousness is difficult to justify. If the legal conclusion is entirely dependent upon underlying facts that are not to be set aside unless clearly erroneous, it makes intuitive sense that the conclusion should also be subject to the clearly erroneous standard of review. Beyond this logical inconsistency, there is a greater danger that courts may lose the appellate efficiency enhancing features of Rule 52(a) that necessitated the installation of the Rule in the federal system of civil procedure.

This Note proposes that, for bench trials, the nonobviousness determination should be fully subject to the clearly erroneous standard of review. In practical terms, the inquiry is so factually based that it resembles a factual determination, a task that the district courts have substantial expertise in performing. From an allocational standpoint, substantial benefits would be gained by increased appellate efficiency, all at an insignificant cost. The trend toward the clearly erroneous standard in intellectual property law indicates that under the policy approach, the treatment of nonobviousness as a factual issue better serves the policy of efficiently adjudicating civil matters in the federal courts. In this light, the question is not what are the inherent characteristics of nonobviousness, but rather under what standard *ought* the condition be treated under for purposes of review. It is submitted

234. *E.g.*, *American Home Prods. Corp. v. Barr Laboratories, Inc.*, 834 F.2d 368, 370 n.2 (3d Cir. 1987) (citing *Pullman-Standard* with regard to the likelihood of confusion issue); *Scandia Down Corp. v. Euroquilt, Inc.*, 772 F.2d 1423, 1428 (7th Cir. 1985) (citing *Pullman-Standard* with regard to the likelihood of confusion issue), *cert. denied*, 475 U.S. 1147 (1986); *Original Appalachian Artworks, Inc. v. Toy Loft*, 684 F.2d 821, 825 n.4 (11th Cir. 1982) (citing *Pullman-Standard* with regard to the substantial similarity issue).

235. Although a specialized appellate court, the Federal Circuit is still a member of the federal appellate system, and should heed trends in civil procedure by the other circuit courts of appeals:

It is well established that factual issues in a patent case must be tried and decided by the trial judge or a jury in precisely the same manner as such issues are tried in any other kind of a lawsuit. The technical aspects of a patent case are factual issues, and patent cases are reviewed in the circuit courts of appeals in the same manner as with other appeals.

H.R. REP. No. 312, 97th Cong., 1st Sess. 37 (1981).

that the answer to this question, as revealed by the policy approach, may be obvious.

—*Bradley G. Lane*

COURT OF APPEALS FOR THE FEDERAL CIRCUIT REVIEW OF BENCH
DETERMINATIONS OF NONOBVIOUSNESS THROUGH 1987

<u>Opinion</u>	<u>D. Ct. § 103 Decision</u>		<u>Federal Circuit Review</u>	
	<i>Patents</i> ¹	<i>Held</i> ²	<i>§ 103</i> ³	<i>Reason for Reversal</i>
FMC Corp. v. Hennessy Indus., Nos. 87-1268 & 87-1283 (Fed. Cir. Dec. 30, 1987) (LEXIS, Genfed library, CAFC file)	1	O	A	n/a
Air-Vend, Inc. v. Thorne Indus., No. 86-731 (Fed. Cir. Sept. 16, 1987) (LEXIS, Genfed library, CAFC file)*	1	O	A	n/a
Burlington Indus. v. Quigg, 822 F.2d 1581 (Fed. Cir. 1987)	1	N	A	n/a
Hartness Int'l, Inc. v. Simplimatic Eng'g Co., 819 F.2d 1100 (Fed. Cir. 1987)	1	N/O	R	Reversal on one claim that was virtually identical to a claim held valid. Otherwise affirmed.
Allen Archery, Inc. v. Browning Mfg. Co., 819 F.2d 1087 (Fed. Cir. 1987)	1	N	A	n/a
Jackson Jordan, Inc. v. Plasser Am. Corp., No. 86-1118 (Fed. Cir. Apr. 23, 1987) (LEXIS, Genfed library, CAFC file)*	1	N	A	n/a
R.E. Phelon Co. v. Wabash, Inc., Nos. 86-1424 & 86-1512, slip op. (Fed. Cir. Apr. 20, 1987) (per curiam)*	1	O	R	<i>Graham</i> analysis not applied, claims not litigated may not be held invalid.
Hughes Tool Co. v. Dresser Indus., 816 F.2d 1549 (Fed. Cir. 1987)	1	N	A	n/a

1. Number of patents analyzed by district court under § 103 that were reviewed by the Federal Circuit. Although 35 U.S.C. § 282 (1982) requires inquiry into each claim's validity, space requirements prevent full explanation of district court determinations on each claim.

2. "O" designates a district court determination that the § 103 condition was not met, "N" designates a determination that the § 103 condition was met, "N/O" designates that some claims met the condition and others did not.

3. "A" designates that the district court determination was affirmed in all respects, "R" designates that at least one claim was improperly analyzed due to an error of law or a clearly erroneous finding of fact, "M" designates an affirmance in all respects except a modification of the lower decision to maintain the validity of claims not litigated. For tabulation purposes, "M" will be counted as "A."

* Unpublished opinion per FED. CIR. R. 18.

Opinion	D. Ct. § 103 Decision		Federal Circuit Review	
	Patents	Held	§ 103	Reason for Reversal
Dow Chem. Co. v. American Cyanamid Co., 816 F.2d 617 (Fed. Cir. 1987)	4	N	A	n/a
N.V. Akzo, Aramide Maatshcappij v.o.f. v. E.I. duPont De Nemours, 810 F.2d 1148 (Fed. Cir. 1987)	1	O	A	n/a
Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561 (Fed. Cir. 1987)	3	O	R	Hindsight analysis, improper analysis of claim language, and many clearly erroneous findings.
Alco Standard Corp. v. Tennessee Valley Auth., 808 F.2d 1490 (Fed. Cir. 1986)	1	N	A	n/a
Kaufman Co. v. Lantech, Inc., 807 F.2d 970 (Fed. Cir. 1986)	1	N	A	n/a
Custom Accessories, Inc. v. Jeffrey-Allan Indus., 807 F.2d 955 (Fed. Cir. 1986)	1	O	R	<i>Graham</i> analysis not applied.
Carella v. Starlight Archery & Pro Line Co., 804 F.2d 135 (Fed. Cir. 1986)	1	N	A	n/a
Revlon, Inc. v. Carson Prods. Co., 803 F.2d 676 (Fed. Cir. 1986)	2	O	A	n/a
Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367 (Fed. Cir. 1986)	1	O	R	Hindsight analysis, clearly erroneous findings on the differences between the prior art and the claimed invention and on objective indicia.
Pacific Furniture Mfg. Co. v. Preview Furniture Corp., 800 F.2d 1111 (Fed. Cir. 1986)	1	N	A	n/a
Rolls-Royce Ltd. v. GTE Valeron Corp., 800 F.2d 1101 (Fed. Cir. 1986)	1	N	A	n/a
Lear Siegler, Inc. v. General Steel Indus., No. 86-699 (Fed. Cir. Aug. 11, 1986) (LEXIS, Genfed library, CAFC file)*	1	O	A	n/a

* Unpublished opinion per FED. CIR. R. 18.

Opinion	D. Ct. § 103 Decision		Federal Circuit Review	
	Patents	Held	§ 103	Reason for Reversal
Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443 (Fed. Cir. 1986)	1	O	R	<i>Graham</i> analysis not applied, hindsight analysis, clearly erroneous findings on the scope and content of the prior art and level of ordinary skill in the art.
Mannesman Demag Corp. v. Engineered Metal Prods. Co., 793 F.2d 1279 (Fed. Cir. 1986)	1	N	A	n/a
Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565 (Fed. Cir. 1986)	1	N	A	n/a
Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261 (Fed. Cir. 1986)	1	N	A	n/a
Eaton Corp. v. Appliance Valves Corp., 790 F.2d 874 (Fed. Cir. 1986)	1	O	A	n/a
Medtronic, Inc. v. Daig Corp., 789 F.2d 903 (Fed. Cir. 1986)	1	N	A	n/a
Polaroid Corp. v. Eastman Kodak Co., 789 F.2d 1556 (Fed. Cir. 1986)	7	N	A	n/a
Windsurfing Int'l, Inc. v. AMF Inc., 782 F.2d 995 (Fed. Cir. 1986)	1	N	A	n/a
S.C. Johnson & Son, Inc. v. Carter-Wallace, Inc., 781 F.2d 198 (Fed. Cir. 1986)	1	N	A	n/a
Loctite Corp. v. Ultraseal Ltd., 781 F.2d 861 (Fed. Cir. 1985)	1	O	R	<i>Graham</i> analysis not applied.
Concrete Unlimited Inc. v. Cementcraft, Inc., 776 F.2d 1537 (Fed. Cir. 1985)	1	O	A	n/a
Pentec, Inc. v. Graphic Controls Corp., 776 F.2d 309 (Fed. Cir. 1985)	1	O	A	n/a
Datascope Corp. v. SMEC, Inc., 776 F.2d 320 (Fed. Cir. 1985)	1 1	N O	A M	Claims not litigated may not be held invalid.

<u>Opinion</u>	<u>D. Ct. § 103 Decision</u>		<u>Federal Circuit Review</u>	
	<i>Patents</i>	<i>Held</i>	<i>§ 103</i>	<i>Reason for Reversal</i>
Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281 (Fed. Cir. 1985)	3	O	R	Hindsight analysis, improper claim interpretation, improper weight to objective indicia, and clearly erroneous findings on the differences between the prior art and the claimed invention.
Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082 (Fed. Cir. 1985)	3	O	†	n/a
Standard Oil Co. v. American Cyanamid Co., 774 F.2d 448 (Fed. Cir. 1985)	1	O	A	n/a
State Indus. v. Rheem Mfg. Co., 769 F.2d 762 (Fed. Cir. 1985)	1	O	A	n/a
Stewart-Warner Corp. v. City of Pontiac, 767 F.2d 1563 (Fed. Cir. 1985)	1	O	R	Hindsight analysis, and clearly erroneous findings on the scope and content of the prior art.
King Instrument Corp. v. Otari Corp., 767 F.2d 853 (Fed. Cir. 1985)	1	N	A	n/a
Korody-Colyer Corp. v. General Motors Corp., 760 F.2d 1293 (Fed. Cir. 1985)	1	O	A	n/a
Johns-Manville Corp. v. Guardian Indus., No. 84-1177 (Fed. Cir. Apr. 24, 1985) (LEXIS, Genfed library, CAFC file)*	1	N	A	n/a
EWP Corp. v. Reliance Universal Inc., 755 F.2d 898 (Fed. Cir. 1985)	1	N	R	Clearly erroneous findings on the scope and content of the prior art, and objective indicia are unavailing.

† Decision vacated and remanded, *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809 (1986) (per curiam). To prevent duplicative entries, *see supra*, this decision will not be tabulated.

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>D. Ct. § 103 Decision</u>		<u>Federal Circuit Review</u>	
	<i>Patents</i>	<i>Held</i>	§ 103	<i>Reason for Reversal</i>
Fromson v. Advance Offset Plate, Inc., 755 F.2d 1549 (Fed. Cir. 1985)	1	O	R	Hindsight analysis, and improper weight given to objective indicia.
State Indus. v. A.O. Smith Corp., 751 F.2d 1226 (Fed. Cir. 1985)	1	N	A	n/a
Atlas Powder Co. v. E.I. duPont De Nemours & Co., 750 F.2d 1569 (Fed. Cir. 1984)	1	N	A	n/a
Reading & Bates Constr. Co. v. Baker Energy Resources Corp., 748 F.2d 645 (Fed. Cir. 1984)	1	O	A	n/a
Patton Elec. Co. v. Lasko Metal Prods., Inc., No. 84-868 (Fed. Cir. Oct. 23, 1984) (LEXIS, Genfed library, CAFC file)*	1	O	A	n/a
Kimberly-Clark Corp. v. Johnson & Johnson, 745 F.2d 1437 (Fed. Cir. 1984)	1	O	R	Hindsight analysis, and clearly erroneous findings on the scope and content of the prior art.
Shelcore, Inc. v. Durham Indus., 745 F.2d 621 (Fed. Cir. 1984)	1	O	A	n/a
Dow Corning Corp. v. Danker Laboratories, Inc., No. 84-591 (Fed. Cir. Sept. 10, 1984) (LEXIS, Genfed library, CAFC file)*	2	N	A	n/a
Jervis B. Webb Co. v. Southern Sys., Inc., 742 F.2d 1388 (Fed. Cir. 1984)	1	O	A	n/a
Simmons Fastener Corp. v. Illinois Tool Works, Inc., 739 F.2d 1573 (Fed. Cir. 1984)	1	O	R	Improper weight given to objective indicia.
Vandenberg v. Dairy Equip. Co., 740 F.2d 1560 (Fed. Cir. 1984)	1	O	M	Claim not litigated may not be held invalid.
Chisholm-Ryder Co. v. Mecca Bros., Inc., Nos. 83-745 & 83-774 (Fed. Cir. July 25, 1984) (LEXIS, Genfed library, CAFC file)*	2	O	A	n/a

* Unpublished opinion per FED. CIR. R. 18.

Opinion	D. Ct. § 103 Decision		Federal Circuit Review	
	Patents	Held	§ 103	Reason for Reversal
Milliken Research Corp. v. Dan River, Inc., 739 F.2d 587 (Fed. Cir. 1984)	2	O	A	n/a
Air Prods. & Chems., Inc. v. Chas. S. Tanner Co., No. 83-1230 (Fed. Cir. June 29, 1984) (LEXIS, Genfed library, CAFC file)*	1	N	A	n/a
Lear Siegler, Inc. v. Aeroquip Corp., 733 F.2d 881 (Fed. Cir. 1984)	1	O	A	n/a
ACS Hospital Sys., Inc. v. Montefiore Hospital, 732 F.2d 1572 (Fed. Cir. 1984)	1	O	R	Insufficient weight to presumption of validity.
Preemption Devices, Inc. v. Minnesota Mining & Mfg. Co., 732 F.2d 903 (Fed. Cir. 1984)	1	N	A	n/a
Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818 (Fed. Cir. 1984)	1	N	A	n/a
Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452 (Fed. Cir. 1984)	1	O	R	Improper weight given to objective indicia, clearly erroneous findings on scope and content of the prior art.
Bott v. Four Star Corp., No. 83-1080 (Fed. Cir. Mar. 21, 1984) (LEXIS, Genfed library, CAFC file)*	1 1	N O	A A	n/a
RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440 (Fed. Cir. 1984)	1	N	A	n/a
Sherman Indus. v. Proto-Vest, Inc., Nos. 83-1118 & 83-1143 (Fed. Cir. Feb. 29, 1984) (LEXIS, Genfed library, CAFC file)*	1	N	A	n/a
Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540 (Fed. Cir. 1984)	1	N	A	n/a
Litton Sys., Inc. v. Whirlpool Corp., 728 F.2d 1423 (Fed. Cir. 1984)	1	N	A	n/a

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>D. Ct. § 103 Decision</u>		<u>Federal Circuit Review</u>	
	<i>Patents</i>	<i>Held</i>	<i>§ 103</i>	<i>Reason for Reversal</i>
Jones v. Hardy, 727 F.2d 1524 (Fed. Cir. 1984)	2	O	R	Graham analysis not applied.
Leinoff v. Louis Milona & Sons, Inc., 726 F.2d 734 (Fed. Cir. 1984)	1	N	A	n/a
Studiengesellschaft Kohle, m.b.H. v. Dart Indus., Inc., 726 F.2d 724 (Fed. Cir. 1984)	1	N	A	n/a
O'Nory v. Rudale, Inc., No. 83-908 (Fed. Cir. Jan. 13, 1984) (LEXIS, Genfed library, CAFC file)*	1	O	A	n/a
Gardner v. TEC Sys., Inc., 725 F.2d 1338 (Fed. Cir. 1984) (en banc)	1	O	M	Claims not litigated may not be held invalid.
Raytheon Co. v. Roper Corp., 724 F.2d 951 (Fed. Cir. 1983)	1	N	A	n/a
Carman Indus. v. Wahl, 724 F.2d 932 (Fed. Cir. 1983)	1	N	A	n/a
Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563 (Fed. Cir. 1983)	3	O	A	n/a
W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1984)	2	O	R	Improper weight given to objective indicia, clearly erroneous findings on the scope and content of the prior art and differences between the prior art and the claimed invention.
Baumstimler v. Laughlin, No. 83-718 & 83-755 (Fed. Cir. Nov. 1, 1983) (LEXIS, Genfed library, CAFC file)*	1 1	O O	A R	Clearly erroneous findings on the scope and content of the prior art and the differences between the prior art and the claimed invention.
Kansas Jack, Inc. v. Kuhn, 719 F.2d 1144 (Fed. Cir. 1983)	1	O	A	n/a
Hughes Aircraft Co. v. United States, 717 F.2d 1351 (Fed. Cir. 1983)	1	N	A	n/a

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>D. Ct. § 103 Decision</u>		<u>Federal Circuit Review</u>	
	<i>Patents</i>	<i>Held</i>	<i>§ 103</i>	<i>Reason for Reversal</i>
Richdel, Inc. v. Sunspool Corp., 714 F.2d 1573 (Fed. Cir. 1983)	1	O	A	n/a
Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693 (Fed. Cir. 1983)	1	N	A	n/a
Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530 (Fed. Cir. 1983)	1	O	A	n/a
Carl Schenck, A.G. v. Nortron Corp., 713 F.2d 782 (Fed. Cir. 1983)	1	N	A	n/a
Kalman v. Kimberly-Clark Corp., 713 F.2d 760 (Fed. Cir. 1983)	1	N	A	n/a
Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc., 707 F.2d 1376 (Fed. Cir. 1983)	1	O	A	n/a
Orthopedic Equip. Co. v. United States, 702 F.2d 1005 (Fed. Cir. 1983) (per curiam)	1	O	A	n/a

COURT OF APPEALS FOR THE FEDERAL CIRCUIT REVIEW
OF BOARD OF PATENT APPEALS AND INTERFERENCES
DETERMINATIONS OF NONOBVIOUSNESS THROUGH 1987

<u>Opinion</u>	<u>Board Decision No. claims¹</u>	<u>Federal Circuit Review²</u>
<i>In re Kugele</i> , No. 87-1184 (Fed. Cir. Dec. 17, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Lydtin</i> , No. 87-1400 (Fed. Cir. Dec. 4, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Curtin</i> , No. 87-1360 (Fed. Cir. Nov. 17, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Stark</i> , No. 87-1408 (Fed. Cir. Nov. 12, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Glen</i> , No. 87-1317 (Fed. Cir. Oct. 29, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Moik</i> , No. 87-1302 (Fed. Cir. Oct. 19, 1987) (LEXIS, Genfed library, CAFC file)*	5	A
<i>In re Abts</i> , No. 86-1677 (Fed. Cir. Sept. 25, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re Danner</i> , No. 87-1276 (Fed. Cir. Sept. 25, 1987) (LEXIS, Genfed library, CAFC file)*	10	A
<i>In re Evanega</i> , 829 F.2d 1110 (Fed. Cir. 1987)	all	R
<i>In re Stencil</i> , 828 F.2d 751 (Fed. Cir. 1987)	14	R

1. Number of claims in application held by Board to be properly rejected by PTO examiner under § 103. Two entries indicates two separate applications.

2. "A" designates affirmance by Federal Circuit on all claims, "R" designates reversal of at least one claim held by Board to be properly rejected. Two entries indicates review of two separate applications.

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>Board Decision No. claims</u>	<u>Federal Circuit Review</u>
<i>In re</i> Linhart, No. 86-1685 (Fed. Cir. Aug. 24, 1987) (LEXIS, Genfed library, CAFC file)*	2	A
<i>In re</i> Reggers, No. 86-1718 (Fed. Cir. May 11, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Hansen, No. 86-1703 (Fed. Cir. May 1, 1987) (LEXIS, Genfed library, CAFC file)*	13	A
<i>In re</i> Lew, No. 87-1045 (Fed. Cir. Apr. 23, 1987) (LEXIS, Genfed library, CAFC file) (per curiam)*	4	A
<i>In re</i> Lew, No. 87-1053 (Fed. Cir. Apr. 23, 1987) (LEXIS, Genfed library, CAFC file)*	5	A
<i>In re</i> Nielson, 816 F.2d 1567 (Fed. Cir. 1987)	14	R
<i>In re</i> Chupp, 816 F.2d 643 (Fed. Cir. 1987)	2	R
<i>In re</i> Geiger, 815 F.2d 686 (Fed. Cir. 1987)	all	R
<i>In re</i> Bogese, No. 86-1699 (Fed. Cir. Mar. 16, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Pohl, No. 86-1647 (Fed. Cir. Mar. 13, 1987) (LEXIS, Genfed library, CAFC file)*	14	A
<i>In re</i> Margolis, No. 86-1519 (Fed. Cir. Feb. 23, 1987) (LEXIS, Genfed library, CAFC file)*	all	R
<i>In re</i> Yoshida, No. 86-1566 (Fed. Cir. Feb. 17, 1987) (LEXIS, Genfed library, CAFC file)*	21	A
<i>In re</i> Sung Nam Cho, 813 F.2d 378 (Fed. Cir. 1987)	all	R
<i>In re</i> Bies, No. 86-1417 (Fed. Cir. Jan. 12, 1987) (LEXIS, Genfed library, CAFC file)*	12	A

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>Board Decision No. claims</u>	<u>Federal Circuit Review</u>
<i>In re</i> Isquith, No. 86-1241 (Fed. Cir. Jan. 12, 1987) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Edwards, No. 86-1339 (Fed. Cir. Dec. 15, 1986) (LEXIS, Genfed library, CAFC file)*	1	A
<i>In re</i> Ciba-Geigy Corp., Nos. 86-1109 & 86-1110 (Fed. Cir. Nov. 28, 1986) (LEXIS, Genfed library, CAFC file)*	2	A
<i>In re</i> Hubbard, Nos. 86-1039 & 86-1040 (Fed. Cir. Nov. 12, 1986) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Varian Assocs., No. 86-913 (Fed. Cir. Nov. 6, 1986) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Evans, No. 86-1146 (Fed. Cir. Oct. 30, 1986) (LEXIS, Genfed library, CAFC file)*	8	A
<i>In re</i> Pitts, No. 86-1148 (Fed. Cir. Oct. 23, 1986) (LEXIS, Genfed library, CAFC file)*	18	A
<i>In re</i> Joyce, No. 86-1149 (Fed. Cir. Oct. 22, 1986) (LEXIS, Genfed library, CAFC file)*	7	A
<i>In re</i> Hyoty, No. 86-972 (Fed. Cir. Oct. 17, 1986) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Merck & Co., 800 F.2d 1091 (Fed. Cir. 1986)	3	A
<i>In re</i> Scheld, No. 86-908 (Fed. Cir. Aug. 18, 1986) (LEXIS, Genfed library, CAFC file)*	all	A
<i>In re</i> Hofmann, No. 86-914 (Fed. Cir. Aug. 7, 1986) (LEXIS, Genfed library, CAFC file)*	all	A

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>Board Decision No. claims</u>	<u>Federal Circuit Review</u>
<i>In re</i> Tellman, No. 86-906 (Fed. Cir. July 28, 1986) (LEXIS, Genfed library, CAFC file)*	3	A
<i>In re</i> Queener, 796 F.2d 461 (Fed. Cir. 1986) (per curiam)	5	A
<i>In re</i> Deminski, 796 F.2d 436 (Fed. Cir. 1986)	8	R
<i>In re</i> Wren, No. 86-743 (Fed. Cir. June 25, 1986) (LEXIS, Genfed library, CAFC file)*	15	R
<i>In re</i> Jones, Nos. 85-2742 & 86-754 (Fed. Cir. June 23, 1986) (LEXIS, Genfed library, CAFC file)*	2 2	A A
<i>In re</i> Todd, No. 86-707 (Fed. Cir. June 23, 1986) (LEXIS, Genfed library, CAFC file)*	2	A
<i>In re</i> Margolis, 785 F.2d 1029 (Fed. Cir. 1986)	8	R
<i>In re</i> Hedges, 783 F.2d 1038 (Fed. Cir. 1986)	3	R
<i>In re</i> Thorpe, 777 F.2d 695 (Fed. Cir. 1985)	2	A
Titanium Metals Corp. v. Banner, 778 F.2d 775 (Fed. Cir. 1985)	1	R
<i>In re</i> Corkill, 771 F.2d 1496 (Fed. Cir. 1985)	61 21	R R
<i>In re</i> Grabiak, 769 F.2d 729 (Fed. Cir. 1985)	all	R
<i>In re</i> Sovish, 769 F.2d 738 (Fed. Cir. 1985)	4	A
<i>In re</i> Durden, 763 F.2d 1406 (Fed. Cir. 1985)	1	A
<i>In re</i> McCarthy, 763 F.2d 411 (Fed. Cir. 1985)	4	A
<i>In re</i> Longi, 759 F.2d 887 (Fed. Cir. 1985)	all	A

* Unpublished opinion per FED. CIR. R. 18.

<u>Opinion</u>	<u>Board Decision No. claims</u>	<u>Federal Circuit Review</u>
<i>In re</i> Etter, 756 F.2d 852 (Fed. Cir. 1985)	all	A
<i>In re</i> Vamco Mach. & Tool, Inc., 752 F.2d 1564 (Fed. Cir. 1985)	all	A
<i>In re</i> Johnson, 747 F.2d 1456 (Fed. Cir. 1984)	8	A
<i>In re</i> Lalu, 747 F.2d 703 (Fed. Cir. 1984)	all	R
<i>In re</i> Piasecki, 745 F.2d 1468 (Fed. Cir. 1984)	all	R
<i>In re</i> the Successor in Interest to Walter Anderson, 743 F.2d 1578 (Fed. Cir. 1984)	all	A
<i>In re</i> Yamamoto, 740 F.2d 1569 (Fed. Cir. 1984)	5	A
<i>In re</i> DeBlauwe, 736 F.2d 699 (Fed. Cir. 1984)	22	R
<i>In re</i> Gordon, 733 F.2d 900 (Fed. Cir. 1984)	6	R
<i>In re</i> Costello, 717 F.2d 1346 (Fed. Cir. 1983)	14	A
<i>In re</i> Smith, 714 F.2d 1127 (Fed. Cir. 1983)	all	A
<i>In re</i> Farrenkopf, 713 F.2d 714 (Fed. Cir. 1983)	15	A
<i>In re</i> Grasselli, 713 F.2d 731 (Fed. Cir. 1983)	32	R
<i>In re</i> Sneed, 710 F.2d 1544 (Fed. Cir. 1983)	18	A
<i>In re</i> Marosi, 710 F.2d 799 (Fed. Cir. 1983)	10	R
<i>In re</i> Kaslow, 707 F.2d 1366 (Fed. Cir. 1983)	all	A
<i>In re</i> Gulack, 703 F.2d 1381 (Fed. Cir. 1983)	5	R
<i>In re</i> Sernaker, 702 F.2d 989 (Fed. Cir. 1983)	10	R
<i>In re</i> Heck, 699 F.2d 1331 (Fed. Cir. 1983)	6	A