

HOW *KSR* BROADENS (WITHOUT LOWERING) THE EVIDENTIARY STANDARD OF NONOBVIOUSNESS

By Justin Lee

I. INTRODUCTION

In *KSR International Co. v. Teleflex Inc.*, the Supreme Court revisited the question of nonobviousness in patent law for the first time since before the creation of the Court of Appeals for the Federal Circuit in 1982.¹ In a unanimous opinion, the Supreme Court rejected the Federal Circuit's rigid application of the teaching, suggestion, or motivation test ("TSM"). It also touched on various other nonobviousness doctrines including the obvious-to-try doctrine, the line between law and fact in nonobviousness determinations, and the ability of expert testimony to foreclose summary judgment of nonobviousness.

The general thrust of the opinion can, and should, be interpreted to broaden the *type* of evidence that can be used to support a finding of obviousness, without discarding the decades of Federal Circuit precedent requiring rigorous evidence guarding against hindsight bias. Even after *KSR*, the Federal Circuit has ample power to mold the law of nonobviousness, and so far it has shown itself reluctant to let the evidentiary standards slip. The Court rejected several Federal Circuit rules without promulgating replacements, instead explaining itself with equivocal language that allows flexible interpretation. Furthermore, in *KSR* the Federal Circuit had departed from its own precedents making it unclear how far beyond merely correcting that error the Supreme Court intended to go. This and the fact that the Court reaffirmed that nonobviousness is a matter of law put the Federal Circuit in a strong position to shape post-*KSR* nonobviousness law.²

This Note examines *KSR* along with relevant post-*KSR* Federal Circuit interpretation. Part II considers the case law of nonobviousness and the TSM test, with focus on cases allowing an inference of motivation to

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1. 127 S. Ct. 1727 (2007).

2. Rebecca Eisenberg, Commentary, *The Supreme Court and the Federal Circuit: Visitation and Custody of Patent Law*, 106 MICH. L. REV. FIRST IMPRESSIONS 28, 32 (2007), <http://www.michiganlawreview.org/firstimpressions/vol106/eisenberg.pdf> ("Indeed, by affirming that the ultimate determination of obviousness is a question of law rather than a question of fact, the Supreme Court left intact the plenary review power that has allowed the Federal Circuit to reshape obviousness doctrine over the years.").

combine. These cases show that the Federal Circuit has at times taken a flexible approach to the TSM test. Part III details the facts and history of the *KSR* litigation.

Part IV addresses five substantive lessons stemming from the Supreme Court's *KSR* opinion. First, the Federal Circuit's opinion below departed from its own precedent, making it possible to limit the Court's *KSR* holding to a rejection of this error, rather than a wholesale change in the nonobviousness inquiry. Second, though the Court introduced common sense and creative inferences into the nonobviousness inquiry, this should not be interpreted as a rejection of evidentiary requirements for overcoming hindsight bias. On the contrary, *KSR* should broaden—rather than lessen—the type of evidence allowed in the nonobviousness inquiry. Third, contrary to first impressions from the opinion, the obvious-to-try doctrine remains unchanged post-*KSR*. Fourth, *KSR* may remove a barrier to summary judgment on nonobviousness questions when expert testimony conflicts in certain cases. Fifth and finally, in a subsequent case, the Federal Circuit used *KSR* to justify a rule creating a *prima facie* case of obviousness when a claim consists of the routine addition of electronics or computers to an otherwise unpatentable device.

Part V concludes that despite the overtones of common sense and creative inferences in the Supreme Court's opinion, in the hands of the Federal Circuit *KSR* will not, and should not, result in a major change in the substantive standard of nonobviousness. However, *KSR* will result in a liberalization of the nature of evidence allowed to support a finding of obviousness, and—it is hoped—higher quality outcomes.

II. BACKGROUND ON THE LAW OF NONOBVIOUSNESS

A. The Development of Predictability and the Person of Ordinary Skill

In 1850, the Supreme Court added the nonobviousness hurdle to patentability. At the time, the statutory requirements only included subject matter, novelty, and utility. In *Hotchkiss v. Greenwood*, the Court invalidated a claim for a doorknob of porcelain connected to a metal shank using a dovetail joint.³ Each of the elements—the shank, the dovetail joint, and the porcelain knob—was well known in the prior art, but the claimed combination of elements was new. The Court considered whether the substitution of a porcelain knob for the traditionally used metal or wood knob

3. *Hotchkiss v. Greenwood*, 52 U.S. 248, 264-67 (1850).

showed sufficient “ingenuity or skill.”⁴ The Court noted that any benefits from the substitution arose from the qualities of the material itself, not from any “new mechanical device or contrivance.”⁵ The Court thus held that the porcelain substitution did not warrant a patent, because it did not require more ingenuity or skill than would be possessed by an ordinary mechanic acquainted with the business.⁶

The Court later explained, in *Atlantic Works v. Brady*, that the nonobviousness requirement is needed to balance the costs of granting a patent with the incentive effect of the “monopoly” grant.⁷ Some developments in a given field are the natural products of ordinary workers as a response to the demands of their everyday needs.⁸ Indeed, many advances occur by “spontaneous trials and attempts in a hundred different places.”⁹ Granting exclusionary rights for any “trifling device” which would “naturally and spontaneously” occur to any skilled mechanic fails the essential purpose of the patent system—to advance the state of the art by rewarding inventors.¹⁰ The nonobviousness requirement ensures that patent rights are only granted to reward sufficiently substantial advancements.¹¹

The key policy guiding both *Atlantic Works* and *Hotchkiss* is the notion that a patent grant is a quid pro quo. The patentee is granted a bundle of exclusionary rights and the public receives in return a disclosure of previously unknown technological know-how. It follows that if any “mechanic”¹² would naturally choose a claimed invention when faced with a

4. *Id.* at 266. “Ingenuity or skill” was then the preferred phrase for addressing “nonobviousness.”

5. *Id.*

6. *Id.*

7. 107 U.S. 192, 199-200 (1883). Early court opinions refer to the bundle of exclusive rights associated with a patent as a “monopoly,” but courts in the Federal Circuit era have avoided the term on the grounds that patent rights are distinct from a monopoly in the economic or legal antitrust sense. See 35 U.S.C. 271(d)(5) (2000) (declining to presume market power in patent misuse cases); ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 1.4(b) at 22-23 (8th ed. 2007) (“Patent rights are not legal monopolies in the antitrust sense of the word. Not every patent is a monopoly, and not every patent confers market power.”); *In re Kaplan*, 789 F.2d 1574, 1578 (Fed. Cir. 1986) (noting that the illegality associated with the term monopoly is not conducive to dispassionate analysis).

8. *Atl. Works*, 107 U.S. at 199-200.

9. *Id.*

10. *Id.*; see U.S. CONST. art. I, § 8, cl. 8.

11. *Atl. Works*, 107 U.S. at 199-200.

12. “Mechanic” is the term used in early inventions, presumably because most patents were mechanical. See, e.g., *Hotchkiss v. Greenwood*, 52 U.S. 248, 253 (1850) (considering knowledge level of “an ordinary mechanic acquainted with the business”). Today the term is a “person having ordinary skill in the art.” 35 U.S.C. § 103 (2000).

given problem, then the grant of exclusionary rights succeeds only in preventing the public from exercising its rights to practice technology already within its grasp without giving anything back to the public return. Conversely, the grant of term-limited exclusionary rights is justified when the claimed invention requires some labor or inventiveness beyond what an ordinary mechanic can provide, because the invention's disclosure adds something to the public knowledge.

The basic elements of these early inquiries remain the guideposts of the modern nonobviousness standard. The nonobviousness standard asks whether a claim is more than a *predictable* variation *over prior art* to a person having *ordinary skill* in the art at the *time of invention*. For example, in *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*, the last Supreme Court case on nonobviousness before Congress codified the nonobviousness standard, the Court invalidated a patent on a combination of known elements because each element in the new invention behaved without change in the element's known function.¹³ The invention was a three-sided rack, mounted on rails, which helped supermarket customers and clerks move goods along an extended counter. Each element behaved as expected: the counter held goods off the ground; the rack pushed goods along a smooth surface; the rail guided the rack in a straight line.¹⁴ Even though the results of combining the elements of the claim yielded results "more striking perhaps than in any previous utilization," each element performed the function that one skilled in the art would have predicted.¹⁵ As in *Atlantic Works*, the policy motivating the nonobviousness requirement was whether or not the claim added enough to the state of the art to justify granting exclusionary rights.¹⁶ The *Great Atlantic* Court held that granting the exclusionary rights would subtract from the resources formerly available to those skilled in the art rather than adding to the sum of useful knowledge.¹⁷ The Court also considered but was unpersuaded by what are now known as secondary considerations: the clear commercial success of the device and the fact that it provided a solution for a long-felt need.¹⁸

Congress codified the nonobviousness standard in the 1952 Patent Act, 35 U.S.C. § 103. Section 103 bars a patent when:

13. 340 U.S. 147, 153 (1950).

14. *Id.* at 152.

15. *Id.* at 153.

16. See *Atl. Works v. Brady*, 107 U.S. 192, 199-200 (1883).

17. *Great Atl.*, 340 U.S. at 153.

18. *Id.* at 153. Before 1952, the Court used the phrase "lack of invention" instead of "obviousness."

. . . 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

The Court laid out the basic post-Section 103 test of nonobviousness in *Graham v. John Deere Co. of Kansas City*.²⁰ Under *Graham*, factfinders determine (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 or ordinary skill in the art.²¹ Against this factual background the court determines obviousness as a matter of law. In addition, secondary considerations such as commercial success or long-felt need “might be utilized to give light to the circumstances surrounding the origin” of the invention.²² At least one element of the invention must be nonobvious in light of these considerations for the patent to withstand Section 103.²³ *Graham* offered insights into facts that help frame the question, but how courts should resolve the legal query remained largely unanswered.²⁴ The courts have produced rich case law in response.

B. Doctrines of Nonobviousness

The law has failed to develop a single, step-by-step process to resolve the question of nonobviousness. This Section presents an overview of common approaches used by the courts. Some support a finding of obviousness, others support a finding of nonobviousness, and one of the best-known doctrines does neither.

In *Anderson's-Black Rock, Inc. v. Pavement Salvage Co. and Sakraida v. Ag Pro, Inc.*, the Supreme Court articulated a “synergy” test.²⁵ This test

19. 35 U.S.C. § 103(a) (2000).

20. 383 U.S. 1 (1966).

21. *Id.* at 17-18.

22. *Id.* Compare this language with the Federal Circuit’s formulation, which sometimes treats the secondary factors as a fourth factual predicate and refers to them not as “secondary” but as “objective” indicia. *See, e.g., Merck & Co., Inc. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1369 (2005); *see also* Rebecca S. Eisenberg, *Obvious to Whom? Evaluating Inventions from the Perspective of PHOSITA*, 19 BERKELEY TECH. L.J. 885, 893-94 (2004) (arguing that the Federal Circuit inappropriately elevates “objective” evidence over purely technological analysis focusing on the level of skill in the art).

23. *See Graham*, 383 U.S. at 24.

24. *See id.* at 17-18; *see also* Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567 (Fed. Cir. 1987) (detailing standards of review and the line between law and fact in obviousness determinations).

25. *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969); *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976).

looks at each element of a combination patent and asks if the elements do something more than they would independently, or if the combination otherwise achieves more than one skilled in the art would expect. *Anderson's-Black Rock* dealt with a claim for a patented burner attached to a patented paving machine. Each component behaved as it would separately, and the results were the same as if they were used sequentially.²⁶ Thus, the combination was unpatentable because it created no “synergistic” effects.²⁷ *Sakraida* concerned a claim for using raised tanks and sloped floors to run water over the floor of a dairy to wash away cattle waste. The court refused to find synergy, stating that “[e]xploitation of the principle of gravity adds nothing to the sum of useful knowledge where there is no change in the respective functions of the elements of the combination.”²⁸

These cases have been criticized as “unfortunate lapses” back to the infamous “flash of creative genius” standard, which was specifically overruled by Congress in 1952.²⁹ In 1972, Judge Giles Rich criticized the use of the word “synergistic” as either trivial and useless or strict and insurmountable.³⁰ Judge Rich considered examples in physics and chemistry: a new element is an arrangement of old protons and electrons, and new compounds are arrangements of old atoms. In the mechanical arts, a hammer and wedge can split wood in a way that neither could do alone, but nothing would be invalidated under such an expansive view of synergy.³¹ Today he might have considered software systems, where the defining characteristic is the unrelenting predictability of how parts of a system interact. “The laws of physics and chemistry in accordance with which all inventions perform do not permit of the judicially imagined magic according to which $2 + 2 = 5$. Wherever such a spurious test prevails all patents are invalid.”³² Judge Rich also offered a prophecy which *KSR* validates over thirty-six years later: that if inconsistencies between *Anderson's-Black Rock* and *Graham* were ever reconsidered, the Court would “stick

26. *Anderson's-Black Rock*, 396 U.S. at 61 (“A combination of elements may result in an effect greater than the sum of the several effects taken separately. No such synergistic result is argued here.”).

27. *Id.*

28. *Sakraida*, 425 U.S. at 282.

29. ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 4.2(a) at 171 (8th ed. 2007); *Cuno Eng'g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941) (applying “flash of creative genius” standard); 35 U.S.C. § 103 (2000) (“Patentability shall not be negated by the manner in which the invention was made.”).

30. Giles Rich, *Laying the Ghost of the “Invention” Requirement*, 1 APLA QUARTERLY JOURNAL 26, 44-45 (1972).

31. *Id.*

32. *Id.*

with *Graham* and say—for face-saving reasons—that *Black Rock* is really to the same effect.”³³

In *United States v. Adams*, a companion ruling to *Graham*, the Court announced what became known as the “teaching away” doctrine to find nonobviousness.³⁴ A challenged patent combined elements well known in the prior art by substituting magnesium for zinc and cuprous chloride for silver chloride in an existing wet battery design—a mere substitution of one material for another similar to the porcelain doorknobs in *Hotchkiss*.³⁵ Nevertheless, the Court upheld the patent because the prior art actually taught away from trying the substitution.³⁶ Evidence on record showed those skilled in the art did not believe this combination practical and continued to disbelieve it even after the inventor perfected it.³⁷ Further, the prior art warned of risk of fire and explosion when using magnesium in wet batteries.³⁸ Despite the factual similarity of substitution of one material for another as in *Hotchkiss*, here the important factor was the principle of predictability of the combination of elements to one of ordinary skill in the art. An invention is obvious when it combines known elements in a predictable way. But the wet battery design behaved in an *unpredictable* way, since a person skilled in the art would have predicted fire and explosion rather than a functional battery.³⁹

It is difficult to extract general rules from other nonobviousness cases. In *Dann v. Johnston* the Supreme Court found a patent claim obvious because it applied a known technique to a known device to yield predictable results.⁴⁰ The patent claimed a banking system that kept computer records in a certain way using checks, magnetic ink, and category numbers. The prior art revealed a general technique of using identifying numbers on transactions with a computer-based data processing system, and the Court accordingly found the patent claim obvious.⁴¹ The Court did little to explain its rationale besides stating that “gap between the prior art and the [patent holders]’s system is simply not so great as to render the system

33. *Id.*; see KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1739-40 (2007) (claiming that neither Section 103 nor *Graham* “disturbed this Court’s earlier instructions” and citing *Anderson’s-Black Rock* and *Sakraida* as good law consistent with *Graham*).

34. 383 U.S. 39 (1966)

35. *Id.* at 51-52.

36. *Id.* at 48, 51-52.

37. *Id.*

38. *Id.*

39. *Id.*

40. 425 U.S. 219, 220 (1976).

41. *Id.* at 227.

nonobvious.”⁴² PTO guidelines use this case to illustrate that “[a]pplying a known technique to a known device (method, or product) ready for improvement to yield predictable results” can result in a finding of obviousness.⁴³

Finally, courts use the obvious-to-try doctrine to avoid making improper determinations in the nonobviousness inquiry. This doctrine is less of a *doctrine* and more of an *admonition* to decision makers on how *not* to find obviousness in two scenarios.⁴⁴ First, in fields where there are too many possibilities to try and only some of those possibilities will succeed, the precise combination cannot be held to be obvious without some specific suggestion that a *particular* combination would be successful, even when there existed a general technique of testing all of the combinations for success and a suggestion to do so.⁴⁵ In other words, when it is obvious one *could* try many possibilities in a field, but impractical to do so, courts may not find obviousness absent further evidence. Second, when a new approach or technology seems generally promising, obviousness cannot be found without some specific suggestion leading to a “reasonable expectation of success.”⁴⁶ These two formulations are two sides of a familiar coin: the degree of predictability of success of combining certain elements to one skilled in the art.⁴⁷ This doctrine is consistent with the basic motivating principle of nonobviousness—to reward those, and only those, who engage in productive behavior. The law should encourage efforts that solve problems where the prior art only suggests success among impracti-

42. *Id.* at 230.

43. Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57,526, 57,529, 57,531 (Oct. 10, 2007).

44. See *In re O'Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988).

45. *Id.*

46. *Id.* at 903-04. This inquiry was adopted from early Court of Customs and Patent Appeals cases dating to the mid-sixties. See *id.* (citing *In re Tomlinson*, 363 F.2d 928, 931 (C.C.P.A 1966)). In *Tomlinson*, Judge Rich explained the “obvious to try” test:

Slight reflection suggests, we think, that is usually an element of “obviousness to try” in any research endeavor, that it is not undertaken with complete blindness but rather with some semblance of a chance of success, and that patentability determinations based on that as the test would not only be contrary to statute but result in a marked deterioration of the entire patent system as an incentive to invest in those efforts and attempts which go by the name of “research.”

In re Tomlinson, 363 F.2d 928, 931 (C.C.P.A 1966) (Rich, J.).

47. See Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 HIGH TECH. L.J. 1, 40-43 (1992) (arguing that these two obvious-to-try doctrines are a subset of the reasonable certainty of success standard).

cally large numbers of possibilities or general success in a field with many approaches.

The obvious-to-try doctrine has an illustrative effect in the biotechnology area, because sometimes “too many possibilities” can be numerically quantified. In *In re Bell*, the patent applicant claimed human gene sequences corresponding to a human protein.⁴⁸ The prior art suggested a mathematically enumerable, finite set of 10^{36} possible sequences, but it did not suggest which were the correct human sequences.⁴⁹ So while it was obvious that one could try every combination and be guaranteed of success, it was impractical to do so. Clearly some other cleverness was needed to isolate the useful genes.

C. The Federal Circuit Battles Hindsight Bias

In 1982, Congress created the Federal Circuit and gave it exclusive jurisdiction over all patent appeals.⁵⁰ The persistent theme in the Federal Circuit’s nonobviousness jurisprudence has been the court’s crusade to eliminate the so-called “hindsight bias” from the nonobviousness inquiry.⁵¹ Hindsight bias is the impermissible tendency to put the elements of an invention together like a “mosaic” using the patent disclosure as a blueprint.⁵² The Federal Circuit has accomplished its goal by layering an additional legal test over the existing *Graham* framework, known now as the “teaching, suggestion, or motivation” test. The early Federal Circuit formulations asked if the claim added something more than the prior art

48. 991 F.2d 781, 782 (Fed. Cir. 1993).

49. The claim at issue contained two gene sequences, the shorter of which was 35 groupings of three base pairs, known as triplets or codons. Though there are 64 base pair possibilities per codon (4 times 4 times 4), there are only 20 amino acids, so even when the amino acid sequence is in the prior art, there is uncertainty as to which three base pairs correspond to it. The parties stipulated that in this case, there were 10^{36} base pair possibilities for a given amino acid sequence. *Id.* at 784. That calculation is surely something of a simplification, since some amino acids have up to six codings, and some have only one. See BENJAMIN LEWIN, GENES IX 191 (2008).

50. Subsequently, the Supreme Court has created a narrow exception to the Federal Circuit’s jurisdiction over patent disputes, holding that the Federal Circuit’s jurisdiction does not extend to cases where patent claims appear in a counterclaim, but not in the well-pleaded complaint. See *Holmes Group, Inc. v. Vornado Air Circulation Sys.*, 535 U.S. 826 (2002).

51. For an in-depth history of the development of the TSM test starting from the Court of Customs and Patent Appeals and continuing through the Federal Circuit, see Steven P. Smith & Kurt R. Van Thomme, *Bridge Over Troubled Water: The Supreme Court’s New Patent Obviousness Standard in KSR Should Be Readily Apparent and Benefit the Public*, 17 ALB. L.J. SCI. & TECH. 127, 166-69 (2007).

52. W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1552 (Fed. Cir. 1983).

“suggested” to a person of ordinary skill in the art, but this suggestion could be either expressly stated in the prior art or reasonably inferred from the prior art.⁵³ By 1990, the court stressed that it required *evidence* of a “teaching, suggestion, or incentive” to combine the elements of the prior art before invalidating a patent claim for obviousness.⁵⁴ The source of this evidence is discussed in greater detail below, but it most often comes from printed prior art, particularly patents.⁵⁵ By 1998, the test was reformulated into the now familiar teaching, suggesting, or motivation (TSM) test.⁵⁶

Before discussing the substance of the TSM test, it is helpful to examine the terminology used in the case law. Indeed, a substantial amount of oral argument in *KSR* was spent on discussing the precise meaning of the three words, “teaching,” “suggestion,” and “motivation.”⁵⁷ However, Federal Circuit case law does not attribute any great significance to the choice of words, except for “teaching,” which is generally reserved for that which is contained explicitly in the prior art.⁵⁸ The court regularly uses the words together without distinction—particularly motivation and suggestion—and sometimes casually swaps the words for one another.⁵⁹ Furthermore, before TSM became the standard formulation, the Federal Circuit sometimes

53. See *In re Sernaker*, 702 F.2d 989, 994 (Fed. Cir. 1983).

[Obviousness depends on] (a) whether a combination of the teachings of all or any of the references would have suggested (expressly or by implication) the possibility of achieving further improvement by combining such teachings along the line of the invention in suit, and (b) whether the claimed invention achieved more than a combination which any or all of the prior art references suggested, expressly or by reasonable implication.

Id. (extracting this formulation from several Court of Customs and Patent Appeals cases).

54. N. Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934-35 (Fed. Cir. 1990).

55. *KSR* itself is a good example, detailing around a dozen prior art patents and only one on-sale product. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1735-37 (2007).

56. *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1351 (Fed. Cir. 1998).

57. Justice Breyer said, “I don’t understand, though I’ve read it about 15 or 20 times now . . . I just don’t understand what is meant by the term ‘motivation.’” Transcript of Oral Argument at 9, *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (No. 04-1350). Later Justice Scalia said, “I—like Justice Breyer, I don’t understand what the . . . motivation element is.” *Id.* at 14. When Chief Justice Roberts asked what the motivation element was, counsel responded that it was difficult to distinguish between motivation and suggestion. *Id.* at 18. When counsel suggested that the Court did not understand motivation, Justice Scalia quipped that he was “right about that.” *Id.* at 28.

58. See, e.g., *In re Deuel*, 51 F.3d 1552, 1555-56 (Fed. Cir. 1995) (referring to the “teachings of [the] Bohlen [patent] and [the] Maniatis [patent]”).

59. See, e.g., *id.* at 1558 (using “motivation or suggestion,” “reason or motivation,” and “motivation” by itself); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1274-75 (Fed. Cir. 2004) (using “reason, suggestion, or motivation,” “suggestion or motivation,” and “motivation” by itself).

used the word “incentive”⁶⁰ or even the more general word “reason.”⁶¹ As is common in Federal Circuit opinions, this Note uses the word “motivation” as shorthand to refer to whatever evidence may be required to support a conclusion that a patent claim is obvious.

Finding motivation is a “pure question of fact.”⁶² The Federal Circuit’s TSM case law places a premium on printed documentation and is skeptical of “common sense” inferences unsupported by documentary evidence. The court has expressly refused to consider whether changes in a patent are trivial, but rather ends its inquiry after failing to find evidence of a suggestion to combine the prior art.⁶³ In *In re Lee*, the Federal Circuit determined that since the PTO is subject to the Administrative Procedure Act, ex parte appeals from patent examination proceedings require reviewing courts to overturn administrative rulings that are “unsupported by substantial evidence.”⁶⁴ When rejecting a patent application as obvious, the PTO is allowed to use common sense and common knowledge to select and assemble references, but like any other administrative agency, it must support its findings with substantial evidence.⁶⁵ In an adversarial proceeding, a patent has a presumption of validity that can only be overcome by clear and convincing evidence.⁶⁶ This leaves the distinction between law and fact a critical one, because if evidence is required to support the factual question of motivation, there is little room for common sense reasoning in finding motivation. In *KSR*, an amicus brief by several law professors complained that the TSM test was a “factual inquiry” that “swallows

60. N. Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 935 (Fed. Cir. 1990).

61. Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573 (Fed. Cir. 1996) (“It is well-established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead an inventor to combine those references.”).

62. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000).

63. *N. Telecom, Inc.*, 908 F.2d at 935. (“Whether the changes from the prior art are ‘minor’, as Datapoint argues, the changes must be evaluated in terms of the whole invention, including whether the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes that would produce the patentee’s method and device.”). A finding that there was some commercial success bolstered the holding. *Id.*

64. See 5 U.S.C. § 706(2)(E) (2000); 277 F.3d 1338, 1342-44 (Fed. Cir. 2002).

65. 277 F.3d at 1342-44.

66. 35 U.S.C. § 282 (2000); SSIH Equip. S.A. v. U.S. Int’l Trade Comm’n, 718 F.2d 365, 375 (Fed. Cir. 1983).

the legal inquiry.”⁶⁷ The brief sharply criticized *In re Lee* because it “hammers the PTO’s application of its expertise.”⁶⁸

*In re Dembicza*k demonstrates just how serious the Federal Circuit is in requiring evidentiary support even for claims that seem wholly within any layperson’s grasp.⁶⁹ The Federal Circuit reversed a finding of obviousness on a seemingly trivial patent claim—decorated garbage bags. The PTO cited children’s activity books and conventional trash bags as prior art,⁷⁰ but because they failed to provide clear and particular *evidence* of teaching, suggestion, or motivation to combine the references to create the patented invention, the court reversed the PTO’s invalidation for obviousness.⁷¹ The procedural and evidentiary aspects of this ruling are important. The *Dembicza*k court did not substantively find the patent nonobvious, but rather reversed due to the PTO’s total failure to address motivation to combine or to support such a conclusion with any evidence, explicit or inferential. The Federal Circuit repeated—in great detail—a theory of obviousness that the PTO put forth on appeal, only to reject the theory as not raised below.⁷² The court did this to “highlight the shortcomings” of the PTO proceedings and, presumably, to suggest how the PTO could find the invention obvious by following the proper procedure.⁷³ The court emphasized that a finding of motivation to combine may be found in the references *or by implication*, but that the PTO had failed to do either.⁷⁴ Notwithstanding these subtleties, in *KSR* oral arguments, Justice Alito asked counsel if he would dispute that “this TSM test [as applied in *Dembicza*k] seemed to ask for something quite explicit in the prior art?”⁷⁵ Counsel at-

67. Brief of Intellectual Property Law Professors as Amici Curiae in Support of Petitioner at 1-4, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2006) (No. 04-1350), 2006 WL 2452369.

68. *Id.* Professor Cotropia argues that the TSM test has not changed the substance of the nonobviousness standard, but rather has changed the procedure by enacting a rule of evidence that requires more detailed testimony for more complex technologies. The Federal Circuit applies this rule not to change the underlying standard directly, but to reject holdings of nonobviousness on insufficient evidence. Christopher A. Cotropia, *Patent Law Viewed Through an Evidentiary Lens: The “Suggestion Test” as a Rule of Evidence*, 2006 B.Y.U. L. REV. 1517 (2006).

69. *In re Dembicza*k, 175 F.3d 994, 996 (Fed. Cir. 1999).

70. *Id.* at 997-98.

71. *Id.* at 1003.

72. *Id.* at 1001.

73. *Id.*

74. *Id.* at 1000.

75. Transcript of Oral Argument at 53, *KSR Int’l Co v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (No. 04-1350).

tempted to deflect the question by acknowledging there would always be “outliers” and “mistakes.”⁷⁶

Dembiczak and *Lee* are both part of a larger criticism of the Federal Circuit: that it has taken a formalist turn.⁷⁷ The central point of this criticism is that recent Federal Circuit opinions, in several areas of patent law including nonobviousness, have tended to value certainty over accuracy, to the detriment of innovation.⁷⁸ Professor Thomas argues this rule-oriented approach stems from “strong signals” sent by the Supreme Court’s 1998 decision in *Pfaff v. Wells Electronics, Inc.* to use contract rules instead of a totality of circumstances test in determining the on-sale bar.⁷⁹ Professor Dreyfuss, on the other hand, links this trend to the 1986 opinion *Dennison Manufacturing Co. v. Panduit Corp.*⁸⁰ *Dennison* reminded the Federal Circuit to use the clearly erroneous standard on the factual underpinnings of nonobviousness inquiries, which caused the Federal Circuit to shift its focus toward analytic methodologies or rules of evidence—like the TSM test.⁸¹

Whatever the pragmatic accuracy of these criticisms, at the time *KSR* went to the Supreme Court, some doctrinal flexibility remained in Federal Circuit TSM case law—namely the ability to find a motivation to combine by implication, rather than express evidence. The notion of finding motivation by implication has existed since the early *In re Sernaker* formulation of the rule: it allowed a showing of motivation “expressly or by reasonable implication.”⁸² The next sections discuss three instances when courts can use “reasonable implication” to find motivation to combine. First, courts can infer motivation to combine from the nature of the problem to be solved.⁸³ Second, they can infer the motivation from the knowl-

76. *Id.*

77. See John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U.L. REV. 771 (2002/2003).

78. See Rochelle Cooper Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, BERKELEY TECH. L.J. (forthcoming Fall 2008) (surveying the problems of, and proposed solutions to, Federal Circuit formalism).

79. 525 U.S. 55 (1998); Thomas, *supra* note 77, at 780-81.

80. 475 U.S. 809 (1986) (per curiam).

81. Dreyfuss, *supra* note 78.

82. *In re Sernaker*, 707 F.2d 989, 994 (Fed. Cir. 1983).

83. See, e.g., *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573 (Fed. Cir. 1996); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 n.24 (Fed. Cir. 1985); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1276 (Fed. Cir. 2004).

edge of one skilled in the art. The third, least common approach is to infer motivation from a trend in the prior art.⁸⁴

1. *Implied Motivation from the Nature of the Problem*

In *Pro-Mold & Tool Co. v. Great Lake Plastics, Inc.*, the Federal Circuit adopted a rule allowing an inference to combine from the nature of the problem to be solved.⁸⁵ The patent claimed a metal card holder which could hold a single collector sports card but was sized so that it would fit in a conventional collector storage box.⁸⁶ The claim combined known elements, but changed the size of the card holder.⁸⁷ The court inferred motivation to combine two pieces of prior art in this way because the problem to be solved—making the card holder fit in the storage box—made it obvious to resize the card holder to just the right size.⁸⁸

In *In re Rouffet*, the Federal Circuit held that to infer a motivation to combine from the nature of the problem or from knowledge of one skilled in the art, the PTO cannot merely rely on high level knowledge of one skilled in the art.⁸⁹ In that case, two references tried to effect “handover minimization” in satellites—the goal being to reduce the number of times a receiver on the ground had to change satellites as they orbited overhead. One did so by using an elliptical beam instead of a circular beam and the other reference accomplished its goal by changing the way the satellite orbited the earth.⁹⁰ The court affirmed that even if possible to infer motivation from the nature of the problem, the PTO did not articulate any reason why one skilled in the art would be motivated to combine the references, other than to invoke the high level of skill that would be ordinary in the field of satellite technology.⁹¹ *Rouffet* is also cited for the point that the PTO (or a patent challenger) must not only show motivation to combine the references as a whole, but also show motivation to select the elements from the references and to combine them in the manner claimed.⁹²

84. See, e.g., *Monarch Knitting Mach. Corp. v. Sulzer Morat GmbH*, 139 F.3d 877, 881-82 (Fed. Cir. 1998); *In re Gartside*, 203 F.3d 1305, 1321 (Fed. Cir. 2000).

85. *Pro-Mold*, 75 F.3d at 1573. This rule, adopted from a 1976 Court of Customs and Patent Appeals case, is dicta since the court invalidated the summary judgment ruling on other grounds, but the rule is often cited.

86. *Id.* at 1570-71.

87. *Id.*

88. *Id.*

89. *In re Rouffet*, 149 F.3d 1350, 1356-59 (Fed. Cir. 1998).

90. *Id.*

91. *Id.*

92. *Teleflex Inc. v. KSR Int'l Co.*, 119 F. App'x 282, 286 (Fed. Cir. 2005).

Ruiz v. A.B. Chance, Co. presents a rare case where the Federal Circuit affirmed a finding of motivation to combine inferred from the nature of the problem to be solved.⁹³ The court considered two references that dealt with simple mechanical devices to anchor a house foundation to the ground. One disclosed a screw anchor by itself and another disclosed a metal bracket attaching a different kind of anchor to a foundation.⁹⁴ The court held these two could be combined even absent an express motivation to do so, because the two references were solving the exact same problem of “underpinning existing structural foundations.”⁹⁵ (This characterization of “the” problem solved by the references would become an important issue in the *KSR* litigation.⁹⁶) In addition to the fact that the references solved the same problem, the record in *Ruiz* met the Federal Circuit’s evidence requirements because there was concrete evidence that persons skilled in the art knew that (1) screw anchors improved upon the prior art, and (2) screw anchors need some method to attach to the foundation.⁹⁷

2. *Implied Motivation from the Knowledge of Those Skilled in the Art*

The Federal Circuit has held that evidence of *actual* knowledge of an *actual* person skilled in the art can be evidence sufficient to imply motivation to combine for an *objective* person skilled in the art. In *Novo Nordisk A/S v. Becton Dickinson and Co.*, the defendant presented uncontradicted expert testimony of general knowledge among those skilled in the art that smaller needles for medical injections reduce pain.⁹⁸ This evidence of general knowledge was enough to support a jury verdict inferring motivation to modify⁹⁹ the prior art with smaller needles.¹⁰⁰ In *Cable Electric Products, Inc. v. Genmark, Inc.*, the Federal Circuit upheld summary judgment of obviousness even though the district court made no particular reference to motivation.¹⁰¹ The district court did, however, take each element of the patent claim and show that there were several instances of the

93. *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1277 (Fed. Cir. 2004). The court added that inferring motivation to combine is “particularly relevant with simpler mechanical technologies.” *Id.* at 1276.

94. *Id.*

95. *Id.*

96. See *infra* Section IV.A.

97. *Ruiz*, 357 F.3d at 1276.

98. 304 F.3d 1216, 1218-19 (Fed. Cir. 2002).

99. The word “modify” is sometimes used when the patent claims a collection of elements in the prior art, with the dimensions of one element altered.

100. *Id.*

101. 770 F.2d 1015, 1025 (Fed. Cir. 1985).

elements in the prior art.¹⁰² The Federal Circuit deemed this sufficient evidence of widespread knowledge of the elements.¹⁰³ Similarly, in *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, the Federal Circuit reversed the district court for discounting evidence that showed the existence of general knowledge of a problem which would have motivated one skilled in the art to combine certain references.¹⁰⁴ The claim was for a medical device, and the patent challenger introduced a paper from a clinical trial performed by a team of surgeons.¹⁰⁵ The paper documented that surgeons had difficulty with an older device, recognized the problem with it, and requested changes.¹⁰⁶ The Federal Circuit held this sufficient evidence to support a jury verdict finding obviousness.¹⁰⁷

3. *Implied Motivation from a Trend in the Prior Art*

At least twice the Federal Circuit allowed an inference of motivation from a “trend” in the prior art. In *Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH*, the court recognized that a trend in the art “might very well” imply a motivation to combine.¹⁰⁸ The patent claim at issue involved combining different length needles with technology to prevent breakage at high speeds in commercial weaving machinery.¹⁰⁹ The district court found a trend in four commercial knitting needles with dimensions that decreased in length over time and thus inferred motivation to combine.¹¹⁰ Although the Federal Circuit found other genuine issues of material fact and reversed the summary judgment ruling, it clearly condoned the notion of using a trend to support an inference of motivation to combine.¹¹¹ Likewise, in *In re Gartside*, the court upheld a PTO finding of obviousness by inferring motivation from a trend in the prior art. The patent concerned a chemical processes to refine oil.¹¹² Two prior art patents showed a trend toward “lower residence times” to minimize “undesired cracking reactions.”¹¹³ The court reasoned that one skilled in the art trying to reduce cracking reactions would be motivated to combine the first two

102. *Id.*

103. *Id.*

104. 424 F.3d 1293, 1320-22 (Fed. Cir. 2005).

105. *Id.*

106. *Id.*

107. *Id.*

108. 139 F.3d 877, 881-82 (Fed. Cir. 1998).

109. *Id.*

110. *Id.*

111. *Id.*

112. *In re Gartside*, 203 F.3d 1305, 1321 (Fed. Cir. 2000).

113. *Id.*

patents with a third patent that disclosed the actual residence times used in the patent claim.¹¹⁴

III. FACTS AND HISTORY OF THE KSR LITIGATION

A. Background

The technology at issue in *KSR* allows drivers of automobiles to adjust gas pedals up and down for the comfort of different sized drivers. The pedals require several design decisions, including the type of linkage to the engine (mechanical or electronic), the amount of force required to depress the pedals, the location of the pivot, and the cost and complexity of the device.¹¹⁵

Mechanical linkage pedals consist of a cable attached directly from the throttle of the car to the gas pedal.¹¹⁶ As the driver pushes the pedal, valves open to allow more fuel and air into the engine, thereby causing the car to accelerate.¹¹⁷ Conversely, the valves close as the driver lets off the pedal.¹¹⁸ During the 1990s, computer-controlled fuel injectors replaced carburetors.¹¹⁹ These injectors use an electronic sensor to determine the position of the pedal, eliminating the need for mechanical linkage, and allowing electronic sensors to be placed directly in the pedal mechanism.¹²⁰

Over a dozen pieces of prior art were presented in the *KSR* litigation, but only a few were ultimately important. Early art disclosed an adjustable pedal with an electronic sensor in the footpad,¹²¹ but the wiring suffered from chafing because the sensor was not located in a fixed location.¹²² The “Smith” patent disclosed that this chafing could be avoided by placing the sensor on a fixed part of the pedal assembly rather than in the footpad.¹²³ The prior art also disclosed modular electronic sensors that could be purchased off the shelf and which had actually been used in vehicle pedals.¹²⁴

Pedals located in deep footwells may require shorter drivers to move the seat uncomfortably forward to reach the pedal. To overcome this prob-

114. *Id.*

115. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1735-36 (2007).

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.*

120. *Id.* at 1735-36.

121. U.S. Patent No. 5,819,593 (filed Aug. 17, 1995).

122. *KSR*, 127 S. Ct. at 1735-36.

123. U.S. Patent No. 5,063,811 (filed July 9, 1990).

124. *Teleflex Inc. v. KSR Int'l Co.*, 298 F. Supp. 2d 581, 589 (E.D. Mich. 2003) (noting as prior art a Chevrolet manufactured electronic sensor pedal).

lem, adjustable pedals allow for adjustment of the resting point of the pedal in relation to the driver.¹²⁵ The “Asano” patent—perhaps the most significant piece of prior art in the dispute—disclosed an adjustable pedal that allowed the footpad to be adjusted while maintaining a fixed pivot location.¹²⁶

Teleflex owned a patent containing all of the elements of the Asano patent but with the mechanical linkage mechanism replaced with an electronic sensor attached to the fixed pivot point.¹²⁷ Teleflex’s claim placed the electronic sensor at the pedal’s pivot point, thus providing the benefits of the electronic sensors without the wire chafing problems of the Smith patent.¹²⁸

KSR owned a patent for an adjustable pedal with mechanical linkage similar to that of Asano.¹²⁹ KSR later attached a modular electronic sensor to their pedal system.¹³⁰ In response, Teleflex attempted to license its patent to KSR.¹³¹ After licensing negotiations broke down, Teleflex filed suit for infringement against KSR in the Eastern District of Michigan.¹³²

B. The District Court

On motion for summary judgment, the district court invalidated Teleflex’s asserted claim for obviousness.¹³³ The district court did not find explicit motivation in the prior art to combine the Asano patent with modular electronic sensors.¹³⁴ However, the court cited *Pro-Mold* for the proposition that motivation to combine can be reasonably *inferred* from the nature of the problem to be solved.¹³⁵ Teleflex’s asserted claim was an improvement on prior art pedals which suffered from complexity and wire chafing.¹³⁶ But the prior art expressly taught that placing the sensor on a fixed portion of the pedal assembly could solve the chafing problem.¹³⁷ Furthermore, during the mid-90s, electronic pedal position sensors became increasingly common along with the increased use of electronically man-

125. *KSR*, 127 S. Ct. at 1735-36.

126. U.S. Patent No. 5,010,782 (filed July 28, 1989).

127. U.S. Patent No. 6,237,565 (filed Aug. 22, 2000).

128. *Id.* at 1735-36.

129. U.S. Patent No. 6,151,976 (filed July 16, 1999).

130. *KSR*, 127 S. Ct. at 1736.

131. *Id.*

132. *Teleflex Inc. v. KSR Int’l Co.*, 298 F. Supp. 2d 581, 585 (E.D. Mich. 2003).

133. *Id.* at 596.

134. *Id.* at 593-94.

135. *Id.*

136. *Id.*

137. *Id.*

aged engines.¹³⁸ Thus, the district court reasoned it would be obvious to one skilled in the art to combine the Asano patent with modular electronic sensors that were well known in the field, thereby solving the wire chafing problem.¹³⁹ The court added that references relating to the same art—in this case vehicle pedal systems—*factor* into suggesting their combination.¹⁴⁰

C. The Federal Circuit

The Federal Circuit reversed the district court's grant of summary judgment, holding that the district court incompletely applied the TSM test and that genuine issues of material fact remained.¹⁴¹

The Federal Circuit found that the district court improperly inferred motivation to combine because each of the prior art references did not address precisely the same problem.¹⁴² Like the district court, the Federal Circuit carefully considered how to characterize the problem each piece of prior art tried to solve. The Federal Circuit found that the objective of the asserted claim was “to design a smaller, less complex, and less expensive electronic pedal assembly,” whereas the Asano patent intended to solve the “constant ratio problem.”¹⁴³ The Federal Circuit’s characterization contrasts sharply with that of the district court, which characterized all the prior art references as generally being in the field of “vehicle pedal systems.”¹⁴⁴ Because the Asano patent did not solve *precisely* the same problem as that of Teleflex’s patent, the Federal Circuit held that the district court erred in ruling for summary judgment without some other—presumably explicit—evidence supporting a teaching, motivation, or suggestion to combine.¹⁴⁵ Furthermore, the district court would have to make specific findings of motivation not only to combine the adjustable pedal assembly of Asano with the modular electronic sensor, but also to place the sensor at the pivot point.¹⁴⁶

138. *Id.*

139. *Id.*

140. *Id.*

141. *Teleflex Inc. v. KSR Int'l Co.*, 119 F. App'x 282, 290 (Fed. Cir. 2005).

142. *Id.* at 287-89.

143. *Id.* (citing to the Asano patent application).

144. *Teleflex*, 298 F. Supp. 2d at 594.

145. *Teleflex Inc. v. KSR Int'l Co.*, 119 F. App'x 282, 288 (Fed. Cir. 2005) (“[T]he district court was required to make specific findings as to a suggestion or motivation to attach an electronic control to the support bracket of the Asano assembly.”). Another prior art patent also suffered from wire chafing problems, and therefore did not solve the same problem as Teleflex’s patent. *Id.* Confusingly, the court here refers to a non-existent ‘595 patent which appears nowhere in the opinions of this dispute. *Id.* at 289.

146. *Id.* at 287-89.

D. The Supreme Court

The Supreme Court granted certiorari on the question of whether a patent can be held obvious without some “proven ‘teaching, suggestion, or motivation.’”¹⁴⁷ The Court reversed the Federal Circuit and reinstated the district court’s finding of invalidity.¹⁴⁸

The Supreme Court found three errors in the Federal Circuit’s opinion below. First, the Federal Circuit too narrowly limited the scope of prior art that could be used to infer motivation to combine.¹⁴⁹ Second, the Federal Circuit erred in allowing only combination of prior art elements solving the same problem.¹⁵⁰ Finally, the appellate court over-estimated the threat of hindsight bias and applied the TSM test so rigidly as to deny “factfinders recourse to common sense.”¹⁵¹ The Supreme Court held that the TSM test is useful but should not be applied rigidly and is not mandatory.¹⁵² Returning to its own jurisprudence under *Hotchkiss* and *Graham*, the Court held that Teleflex’s claimed invention was obvious.¹⁵³

IV. THE EFFECT OF KSR ON NONOBVIOUSNESS

Although some have hailed *KSR* as the most significant patent decision in the last twenty-five years,¹⁵⁴ the equivocal language of the opinion has proven pliable in the hands of later courts. The Court may have intended

147. Petition for a Writ of Certiorari, *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (No. 04-1350).

148. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

149. *Id.* at 1742.

150. *Id.*

151. *Id.* at 1742-43.

152. *Id.*

153. *Id.* at 1735.

154. Actually, Professor Duffy writes that this view “underestimates” *KSR*’s importance. John F. Duffy, Commentary, *KSR v. Teleflex: Predictable Reform of Patent Substance and Procedure in the Judiciary*, 106 MICH. L. REV. FIRST IMPRESSIONS 34 (2007), <http://www.michiganlawreview.org/firstimpressions/vol106/duffy.pdf>. Similarly, Harold Wegner sees *KSR* as the single most important obviousness opinion in the forty-one years since *Graham*. Harold C. Wegner, Commentary, *Making Sense of KSR and other Patent Cases*, 106 MICH. L. REV. FIRST IMPRESSIONS 39 (2007), <http://www.michiganlawreview.org/firstimpressions/vol106/wegner.pdf>. On the other hand, Professor Eisenberg argues that as long as the Supreme Court remains a “non-custodial” parent and the Federal Circuit does not overtly contradict Supreme Court precedent, the high court is unlikely to have much influence. Indeed, the affirmation of obviousness as a question of law puts the Federal Circuit firmly in the driver’s seat. Rebecca Eisenberg, Commentary, *The Supreme Court and the Federal Circuit: Visitation and Custody of Patent Law*, 106 MICH. L. REV. FIRST IMPRESSIONS 28 (2007), <http://www.michiganlawreview.org/firstimpressions/vol106/eisenberg.pdf>.

to create such pliability. The *KSR* Court's substantive discussion begins by "rejecting the rigid approach of the Court of Appeals," but the Court does not enact any new rule or framework.¹⁵⁵ This and several other factors suggest that *KSR* may not result in large-scale change in the TSM doctrine. After the Supreme Court sought the Solicitor General's comments on *KSR*'s request for certiorari,¹⁵⁶ the Federal Circuit started issuing opinions emphasizing the implicit prong¹⁵⁷ of the TSM test.¹⁵⁸ Chief Judge Michel of the Federal Circuit is on record stating that "not much has changed" regarding the TSM test post-*KSR* and that the test "simply got a new name."¹⁵⁹ As discussed below, early cases confirm a tendency of the Federal Circuit to maintain the pre-*KSR* doctrine with selective citations to the hedged language in the Supreme Court's opinion.

KSR impacts the doctrine of nonobviousness in several ways. First, the Supreme Court faulted the Federal Circuit's decision below for refusing to consider combining references without explicit evidence to do so unless the references were intended to solve exactly the same problem. This aspect of the Federal Circuit's opinion is arguably inconsistent with the Federal Circuit's own precedent, making it possible to cabin much of *KSR*'s effect on the TSM doctrine to a rejection of the Federal Circuit's unusual analysis.¹⁶⁰ Second, the *KSR* Court's emphasis on common sense and creativity alter evidentiary burdens of obviousness to a degree that remains to be fleshed out by the lower courts. This Note argues that lower courts should interpret *KSR* as a mandate to *allow more* evidence, not as an excuse to *require less*.¹⁶¹ Third, the Supreme Court incorrectly characterized the Federal Circuit's application of the obvious-to-try doctrine. While this language in *KSR* suggests a change in the law, the Supreme Court in fact restates conditions totally consistent with the doctrine as it has always been.¹⁶² Fourth, *KSR* may affect the ability to create a genuine issue of material fact via expert testimony.¹⁶³ Finally, a later Federal Circuit case

155. *KSR*, 127 S. Ct. at 1739.

156. *KSR Int'l Co. v. Teleflex Inc.*, 546 U.S. 808 (2005).

157. *See supra* Sections II.C.1-II.C.3.

158. *See In re Kahn*, 441 F.3d 977, 986-87 (Fed. Cir. 2006); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006).

159. Chief Judge Paul R. Michel, U.S. Court of Appeals for the Federal Circuit, Remarks at BNA-ABA Conference: Patent Obviousness: The Still-Evolving Standard, or Is It Back to the Future? (Oct 1, 2007).

160. *See infra* Section IV.A.

161. *See infra* Section IV.B.

162. *See infra* Section IV.C.

163. *See infra* Section IV.D.

used *KSR* to justify a rule that could substantially impact the validity of a certain class of claims. This rule would create a *prima facie* case of obviousness for broad claims that merely substitute electronics for mechanical parts without adding some other distinguishing technology.¹⁶⁴

A. The Federal Circuit's "Straightforward" Error

Two of the three errors the *KSR* Court attributed to the Federal Circuit were part of the "rigid approach of the [Federal Circuit]" that the Supreme Court rejected.¹⁶⁵ The two errors were: (1) too narrowly limiting the scope of prior art that could be used to infer combination; and (2) only allowing inferred combination of those elements of the prior art that solve the same problem.¹⁶⁶ Both of these errors are due to the way the Federal Circuit used the characterization of the problem solved by the references as a threshold test; if the references did not solve precisely the precise problem as the patent claim at issue, the court ceased any inquiry into implied inference of motivation to combine.¹⁶⁷ Applying this test, no inference from the "nature of the problem" was possible with the Asano patent because it was directed at the "constant ratio problem," whereas Teleflex's asserted patent addressed making a smaller, less complex pedal.

The Federal Circuit cited both *Rouffet* and *Ruiz* in support of its analysis, but a close reading of those cases does not support the rule as applied.¹⁶⁸ Although the courts in both cases considered the similarity of the problem the references addressed as compared to that of the invention at issue, the cases actually defined the "nature of the problem" not as the characterization of the specific problem *each reference* was trying to solve but rather used a more general inquiry into what background factors may have motivated a person skilled in the art to combine them.¹⁶⁹ The PTO Board in *Rouffet* did not provide *any* evidence of motivation to combine references beyond ascertaining a high level of skill in the art. The court reached the opposite holding in *Ruiz* because the record showed two critical facts: a persons skilled in the art would actually know of the claimed improved method of anchoring things to the ground (a screw anchor), and the nature of the problem would lead them to realize they needed a way to

164. See *infra* Section IV.E.

165. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741-42 (2007).

166. *Id.*

167. *Teleflex Inc. v. KSR Int'l Co.*, 119 F. App'x 282, 288-89 (Fed. Cir. 2005).

168. *Id.* (citing *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270 (Fed. Cir. 2004); *In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998)).

169. *Id.*

attach the screw anchor to the foundation (using a bracket).¹⁷⁰ The *KSR* district court's characterization of the similarity of the problem addressed by the prior art references to the asserted patent claims as a *factor* in the inquiry is a better supported interpretation of *Ruiz* and *Rouffet*. Therefore the district court's broad classification of all references into the general area of "vehicle pedal systems" supported a finding of obviousness.¹⁷¹

The Supreme Court in *KSR* found error in foreclosing the possibility of combining references to support obviousness if the references do not solve precisely the same problem.¹⁷² The Court explained that the Federal Circuit's emphasis on the problem the patentee tried to solve was erroneous—courts should look more broadly at whether a person skilled in the art would find it obvious to combine references using "any need or problem known in the field of endeavor at the time of invention and addressed by the patent [as] a reason for combining the elements in the manner claimed."¹⁷³

Moreover, it follows that courts need not require each *element* of a reference to solve the same problem the patentee tried to solve in order to combine the reference with others.¹⁷⁴ The Asano patent tried to solve the constant ratio problem, thus the Federal Circuit concluded that there was no reason to consider putting an electronic sensor on the Asano pedal.¹⁷⁵ But, as the Court explained, a "person of ordinary skill is also a person of ordinary creativity, not an automaton."¹⁷⁶ The Asano patent disclosed an adjustable pedal with a fixed pivot point, and the Federal Circuit erred in assuming that a patentee hoping to make an adjustable electronic pedal would not consider it.¹⁷⁷

Thus, the Supreme Court's admonition against rigidity and broad instruction to consider prior art addressed at "any need or problem" can be understood as a rejection of the Federal Circuit's apparent adoption of problem-characterization as a threshold test for implied motivation to combine. In *In re Translogic*, a post-*KSR* case, the Federal Circuit itself adopted this view of *KSR*, characterizing the threshold test as a "rather straightforward error" which overlooked the "fundamental proposition that

170. See *supra* Section II.C.1. Note, the standard of review is slightly different in each case.

171. Teleflex Inc. v. KSR Int'l Co., 298 F. Supp. 2d 581, 594 (E.D. Mich. 2003)

172. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741-42 (2007).

173. *Id.*

174. *Id.*

175. *Id.*

176. *Id.*

177. *Id.*

obvious variants of prior art references are themselves part of the public domain.”¹⁷⁸

B. Is the Factual Question of TSM in the Dustbin? The Impact of Common Sense and Creativity

The *KSR* Court pointedly used common sense and creativity to explain its opinion. However, allowing common sense back into the obviousness inquiry could have tremendous impact on the evidentiary burden. Prior to *KSR*, the Federal Circuit required an evidence-supported showing of motivation to combine references,¹⁷⁹ where motivation was a question of fact.¹⁸⁰ The Supreme Court’s rejection of “preventative rules that deny factfinders recourse to common sense” could be interpreted to eviscerate any meaningful requirement of evidentiary support to combine references for simpler inventions.¹⁸¹ The other, better supported interpretation is that common sense should remind judges that a person of ordinary skill is not an “automaton” and accordingly would consider diverse sources of information when attempting to solve a problem.

Some language in the Court’s opinion does in fact support the interpretation of reduced evidentiary requirements. The Supreme Court disapprovingly characterized the TSM test as a “rigid and *mandatory formula[]*”.¹⁸² The PTO has interpreted this to mean that the TSM test is not required in the nonobviousness analysis, but is simply one potential rationale for finding obviousness (or nonobviousness) alongside others like the synergy test or the teaching-away test.¹⁸³ The Court also stated that “the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”¹⁸⁴ This language can be read to offer more leeway to reject or invalidate claims as obvious using far less evidence of motivation to combine the prior art than before.

However, this interpretation is undermined by the Court’s consistent citation to supporting evidence in the form of market pressure, design

178. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1261 (Fed. Cir. 2007).

179. *In re Lee*, 277 F.3d 1338, 1342-44 (Fed. Cir. 2002); *see supra* notes 62-68 and accompanying text.

180. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000).

181. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007).

182. *Id.* at 1741 (emphasis added).

183. *See* Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, 72 Fed. Reg. 57526 (2007).

184. *KSR*, 127 S. Ct. at 1741.

pressure, or technological developments as its justification for finding the asserted claim obvious.¹⁸⁵ The Court repeatedly emphasized the fact that cars were moving towards electronic throttle control.¹⁸⁶ This use of evidence on the record does not support the notion that a judge's (or the PTO's) unsubstantiated notions of common sense should replace the evidentiary standard established in *In re Lee*, where the Federal Circuit rejected the use of common sense in place of evidence.¹⁸⁷ Rather, the Supreme Court used common sense as a justification to discard the Federal Circuit's rigid threshold test—a test which *excluded* evidence from consideration.¹⁸⁸ The Court cited external pressures that motivate combining references half a dozen times, in every substantive exposition of what the obviousness inquiry should be and how it should be applied.¹⁸⁹ The Court's consistent reliance on market pressure—a fact on the record—undermines the suggestion that evidence supporting motivation to combine can be wholly replaced with common sense.

Furthermore, full replacement of evidence of motivation to combine with common sense is likely contra-statutory. Section 103 requires that the invention not be obvious “at the time the invention was made.”¹⁹⁰ The Federal Circuit has explained that its TSM test is an evidentiary requirement that ensures that the obviousness inquiry is made at the *time of invention*, using only available prior art and then-conventional wisdom.¹⁹¹

And though nonobviousness as a whole is a legal standard, post-*KSR* the Federal Circuit continues to require evidence guarding against hindsight bias. In *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, the Federal Circuit refused to reverse a pre-*KSR* district court bench trial upholding a patent as nonobvious.¹⁹² The district court did not commit reversible error in refusing to apply what it dubbed a “presumption of motivation.”¹⁹³ At least in cases of new chemical compounds, “it remains necessary to identify some reason that would have led a chemist to modify a

185. *Id.* at 1740-44.

186. *Id.*

187. *In re Lee*, 277 F.3d 1338, 1342-45 (Fed. Cir. 2002); *see supra* notes 62-68 and accompanying text.

188. *KSR*, 127 S. Ct. at 1742.

189. *Id.* at 1742-1745 (citing “market pressure,” “design need,” and “[t]echnological developments” as possible reasons to make a modification or combination).

190. 35 U.S.C. § 103(a) (2000).

191. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999).

192. *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1360 (Fed. Cir. 2007).

193. *Id.*

known compound in a particular manner.”¹⁹⁴ Replacing the word “reason” in this quotation with “teaching, suggestion, or motivation” yields the familiar TSM test. If replacing “motivation” with “reason” is all that is required to meet the *KSR* Court’s demands, then the TSM test is alive and well.¹⁹⁵ Indeed, *Takeda* shows just how pliable the opinion is: a rigid application of TSM is forbidden on the one hand, but on the other it can be important to identify a “reason” that would have “prompted” combination, and TSM provides a “helpful insight” into the obviousness inquiry.¹⁹⁶ The *Takeda* opinion even analyzes verb tense in the *KSR* opinion to bolster the continuing reliance on § 103 as support for anti-hindsight evidence.¹⁹⁷

In another recent case, *In re Translogic*, the Federal Circuit interpreted *KSR*’s use of common sense to extend the use of “customary knowledge” in the obviousness inquiry.¹⁹⁸ The question was whether it was obvious to use a particular type of multiplexer circuit (a “TGM”) as a component of a larger device (described in the “Gorai” reference). The lower court pointed to a contemporaneous textbook that disclosed TGMs. Because an inventor could create the patent claim by selecting the “well-known” TGM and this option was within the technical grasp of one of ordinary skill, the Federal Circuit upheld the Board’s finding of obviousness.¹⁹⁹ There is, however, a notable difference in the court’s reasoning from its pre-*KSR* opinions: the court only discusses the fact that one skilled in the art “could have” or “would have been able” to combine the references.²⁰⁰ The opinion appears to turn on the fact that the replacement circuit was “well-known” and that one skilled in the art would have selected some kind of multiplexer circuit to combine with Gorai, and TGMs would have been an obvious choice (if not *the* obvious choice).

C. The Obvious-to-Try Doctrine

Next the Supreme Court attacked the obvious-to-try doctrine. This doctrine states that prior art suggesting an impractically large set of possible solutions does not support a finding of obviousness, even when the claimed invention is one of the suggested possibilities.²⁰¹ In its *KSR* opin-

194. *Id.* at 1358.

195. In oral argument on *KSR*, the Justices seemed almost infuriated by the word “motivation.” *See supra* note 57.

196. 492 F.3d 1350, 1356-57 (Fed. Cir. 2007).

197. *Id.* at 1357 n.2.

198. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1260 (Fed. Cir. 2007).

199. *Id.* at 1262.

200. *Id.*

201. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007); *see supra* Section II.B.

ion, the Federal Circuit mentioned the obvious-to-try doctrine²⁰² only briefly when discussing expert testimony suggesting that “an electronic control ‘could have been’ mounted on the support bracket of a pedal assembly.”²⁰³ It does not seem controversial that evidence of a *possibility* of combination would not *necessarily* suffice for a finding of obviousness. But the Supreme Court noted it is possible to find obviousness when a combination is merely obvious to try “[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.”²⁰⁴ When this situation leads to anticipated success, courts may find a claimed invention obvious.²⁰⁵

Regardless of the Court’s and commentators’,²⁰⁶ pronouncements, the obvious-to-try doctrine remains fully intact, cautioning courts against finding obviousness without sufficient evidence of motivation to choose a particular solution. It neither provides a positive conclusion of obviousness like an explicit teaching in the prior art, nor does it provide a positive conclusion of nonobviousness like the teaching away doctrine.²⁰⁷ The doctrine merely identifies evidentiary scenarios that fail to rise to the level of proof necessary to sustain a conclusion of obviousness. While *KSR* results in more evidentiary scenarios that could support obviousness,²⁰⁸ these scenarios were not previously foreclosed by the obvious-to-try doctrine.²⁰⁹ Although the Supreme Court found motivation to try a certain solution when presented with a “finite number of identified, predictable solutions,” nothing in the opinion suggests that the Supreme Court contemplated a case like *In re Bell*, in which there were an astronomical (though finite) number of possibilities.²¹⁰ The other typical application of the obvious-to-try doctrine is where there is a general indication of success in some field of endeavor without any specific direction—again different from the Supreme Court’s enumerated conditions. In short, the Supreme Court de-

202. See, e.g., *In re Deuel*, 51 F.3d 1552 (Fed. Cir. 1995).

203. *Teleflex*, 119 F. App’x at 289.

204. *KSR*, 127 S. Ct. at 1732.

205. *In re O’Farrell*, 853 F.2d 894, 903 (Fed. Cir. 1988).

206. See Matthew J. Down et. al., *KSR International Co. v. Teleflex Inc.: Another Small issue for Nanotechnology?*, 4 NANOTECHNOLOGY L. & BUS. 293, 299 (2007) (“KSR breathes new life into the argument that, if it was simply obvious to try to make the claimed invention, then the invention is not patentable.”).

207. See *supra* Section II.B.

208. See *supra* Section IV.B.

209. See *supra* Section IV.A.

210. *In re Bell*, 991 F.2d 781 (Fed. Cir. 1993).

scribed a scenario for which the obvious-to-try doctrine would never be applicable and then proceeded to call it an exception to the doctrine.

A possibly related concept from *KSR* is the notion of the “objective reach” of a patent claim, which apparently describes two situations.²¹¹ First, the *KSR* Court refers to the objective reach of a claim as that which is obvious in light of the wide variety of problems that would be known to the inventor.²¹² This notion stands in contrast to the narrow set of problems the Federal Circuit considered in its obviousness inquiry, comprising only those variants that are obvious with respect to the stated problem a given reference attempts to solve.²¹³ Second, the Federal Circuit used the term in a post-*KSR* case in connection with possibilities that are obvious to try.²¹⁴ There, the objective reach of a reference is that which is obvious to try *and* which, because of the limited number of possibilities, is also obvious. This sense of the word illuminates the problem with the obvious-to-try doctrine: being obvious to try sheds no light on the obviousness inquiry. Thus, only obvious modifications or combinations fall into the objective reach of a prior art reference.

D. Removing a Barrier for Summary Judgment of Obviousness

In a somewhat oblique and brief portion of *KSR*, the Supreme Court appeared to make it easier to obtain a summary judgment of obviousness over conflicting expert testimony. This holding arose because the Federal Circuit had vacated the district court’s summary judgment ruling on the alternate grounds that conflicting expert testimony had created a genuine issue of material fact.²¹⁵

KSR’s expert testified that the industry trend towards electronic throttle control would have motivated one skilled in the art to combine the references.²¹⁶ Two Teleflex experts emphasized that the *location* of the sensor at the pivot was “simple, elegant, and novel combination,”²¹⁷ in contrast to one prior patent, which had placed its electronic sensor in the pedal housing rather than at the pivot, thus causing wire-chafing problems for its

211. *KSR Int’l Co v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007).

212. *Id.*

213. *Id.*

214. *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1359 (Fed. Cir. 2007).

215. *Teleflex*, 119 F. App’x at 289-90.

216. *Id.*

217. *Id.*

claimed device.²¹⁸ The Federal Circuit held this “credibility determination” between the experts rendered summary judgment inappropriate.²¹⁹

The Federal Circuit’s holding illustrates the essence of the evidentiary nature of the TSM test. Though it would not be surprising if conflicting expert testimony on one of the *Graham* factual inquiries foreclosed summary judgment, the expert testimony in *KSR* concerned the mental processes of a person of ordinary skill. This is entirely consistent with Federal Circuit precedent: the court has stressed that there must be motivation not only to choose the references but also to combine them in the particular way of the patent claim,²²⁰ and that motivation is a question of fact.²²¹ This part of *KSR* illustrates the criticism that the Federal Circuit allowed a question of fact to “swallow” a question of law.²²²

The Supreme Court disagreed that there remained any genuine issue of fact. A “conclusory affidavit addressing the question of obviousness” should not prevent summary judgment because the ultimate judgment of obviousness is a legal determination.²²³ If the *Graham* factors are not in material dispute and obviousness is “apparent” in light of the factors, summary judgment is appropriate.²²⁴

Some commentators anticipate an increase in summary judgment on obviousness due to *KSR*.²²⁵ Professor John Duffy writes that *KSR* is the “Holy Grail” for “an efficient method for challenging questionable patents,” causing a “sea change in procedure.”²²⁶ However, one post-*KSR* Federal Circuit opinion casts doubt on this assertion. In *Omegaflex, Inc. v. Parker-Hannifin Corp.*, the court reversed a grant of summary judgment of nonobviousness because of conflicting expert testimony similar to that

218. *Id.*

219. *Id.* at 290.

220. *In re Rouffet*, 149 F.3d 1350, 1356-67 (Fed. Cir. 1998).

221. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000).

222. Brief of Intellectual Property Law Professors *supra* note 67, at 1-4.

223. *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1745 (2007) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966)).

224. *Id.* at 1745-46.

225. Compare Judge T. S. Ellis, U.S. District Court, E.D. Va., Remarks at BNA-ABA Conference: Patent Obviousness: The Still-Evolving Standard, or Is It Back to the Future? (Oct 1, 2007) (anticipating more summary judgment motions and grants) with Chief Judge Paul R. Michel, U.S. Court of Appeals for the Federal Circuit, Remarks at BNA-ABA Conference: Patent Obviousness: The Still-Evolving Standard, or Is It Back to the Future? (Oct 1, 2007) (anticipating more grants of judgments as a matter of law but not more grants of summary judgment).

226. John F. Duffy, Commentary, *KSR v. Teleflex: Predictable Reform of Patent Substance and Procedure in the Judiciary*, 106 MICH. L. REV. FIRST IMPRESSIONS 34, 37 (2007), <http://www.michiganlawreview.org/firstrimpressions/vol106/duffy.pdf>.

in *KSR*.²²⁷ The OmegaFlex patent was a device designed to make snug pipe fittings in hard-to-reach areas and used a “locating sleeve” to accomplish this task.²²⁸ The alleged infringer’s expert testified that person of ordinary skill in the art would have “recognized the importance of proper alignment” and thus would have been motivated to add the locating sleeve to the prior art. The Federal Circuit found that this testimony created a genuine issue of material fact sufficient to defeat summary judgment of validity and infringement.²²⁹

Of course, the posture in *Omegaflex* differs from that in *KSR*, where the Supreme Court found the patent claim *obvious* on summary judgment. However, the differences only highlight the evidentiary standard applied by the Federal Circuit in *Omegaflex*, because patents are presumed valid under 35 U.S.C. § 282; if anything, it should be more difficult to invalidate a patent (as in *KSR*) than to hold it valid (as the district court had done in *Omegaflex*). In fact, the Supreme Court held that there were *no* factual issues from this kind of testimony, so neither motions for validity and invalidity should be foreclosed from summary judgment.²³⁰ While it is reasonable to imagine that a dispute over historical fact in a *Graham* factual inquiry could foreclose summary judgment, it is hard to square the idea that testimony that goes directly to a conclusion of obviousness can create a genuine issue of material fact with the holding in *KSR*.²³¹

E. The Emergence of the *Dann* Rule

One final effect of *KSR* is its use as a justification in an emerging post-*KSR* doctrine. The Federal Circuit appears now to be more ready to overturn broad patents that merely replace some existing mechanical element with electronics.

This rule finds roots in the 1976 Supreme Court case of *Dann v. Johnson*.²³² In *Dann*, the Supreme Court refused to uphold a broadly worded patent claim that added the idea of using computers in a very generic way

227. *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 243 F. App’x 592, 597 (Fed. Cir. 2007) (non-precedential).

228. *Id.* at 593-94.

229. *Id.* at 596.

230. *KSR*, 127 S. Ct. at 1745.

231. As the terms are used here, historical facts are assertions of who did what, e.g., whether someone ran a red light. Ultimate facts are applications of the law to the historical facts, e.g., whether running the light constituted negligence. See Martin B. 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, 993 n.3 (1986).

232. 425 U.S. 219 (1976); *see supra* Section II.B.

to existing banking technology.²³³ At *KSR* oral argument, *KSR*'s counsel stressed an analogous idea that only claim 4 of the patent was obvious because it was an "enormous verbal abstraction" in contrast with claims 1 and 3 which contained much more detail about the structure of the invention (and of course did not read on *KSR*'s device).²³⁴ The judgment of *KSR* is thus consistent with the *Dann* Court's skepticism of adding electronic technology in a general way to existent technology.

Two post-*KSR* cases fully develop the new rule. In *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, the Federal Circuit upheld a bench trial finding of obviousness.²³⁵ The claim at issue disclosed replacing the mechanical mechanism of a children's toy with an electronic mechanism.²³⁶ As in *KSR*, the claim was broad and unspecific.²³⁷ Just as the Supreme Court saw market pressure as providing motivation to improve the Asano pedal, the *Leapfrog* court viewed market pressure as motivation to improve the old children's toy. The *Leapfrog* court further noted that "[a]pplying modern electronics to older mechanical devices has been commonplace in recent years."²³⁸ It concluded that "the adaptation of an old idea . . . using newer technology that is commonly available and understood in the art" is obvious.²³⁹ Again, like in *KSR*, the claims of the patent were quite general and the electronics added to the old toy did not suggest any new technologies, besides presumably off-the-shelf components: a "reader," a "sound production device," and "switches."²⁴⁰

Finally, the *Comiskey* court stated the rule plainly: the "routine addition of modern electronics to an otherwise unpatentable invention typically creates a *prima facie* case of obviousness."²⁴¹ Though this rule is dicta, *Comiskey* extracts the principle from *Dann*, *KSR*, and *Leapfrog* and will presumably be followed by later Federal Circuit panels.²⁴² Like the other cases, the patent claim in *Comiskey* added computers in a very general way to existing techniques: it claimed using a computer for collecting

233. *Id.*

234. Transcript of Oral Argument at 16-17, *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007) (No. 04-1350).

235. *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007).

236. *Id.* at 1158-59.

237. *Id.* at 1161.

238. *Id.* It was not mentioned in the opinion whether this statement was based on the factual record.

239. *Id.* at 1162.

240. *Id.* at 1158.

241. *In re Comiskey*, 499 F.3d 1365, 1380 (Fed. Cir. 2007) (dicta).

242. *Id.* at 1380 n.16.

and storing data in an otherwise typical dispute resolution process.²⁴³ If the Federal Circuit follows *Comiskey*, this rule could provide a convenient expedient to invalidate many low quality claims that generate criticism of the patent system.

V. CONCLUSIONS

The Federal Circuit has long offered a flexible version of the TSM test that allows evidence of motivation from various sources, including clinical trials, expert testimony, trends in the prior art or in industry, and evidence that the possible choices in a given problem are limited. Common sense should be used to expand the possible evidentiary inputs, but it should not be used as a catch-all recourse to invalidate claims when no evidence of motivation to combine references is presented.

Motivation to combine should take its place as a kind of fourth *Graham* factual inquiry supporting the *statutory* mandate that nonobviousness be determined at the time of invention. The Federal Circuit, however, had made motivation so large a component of the obviousness inquiry that it practically displaced all other considerations. In its quest to protect against hindsight bias, the Federal Circuit allowed a question of fact to “swallow” a question of law.²⁴⁴ *KSR* ensures that nonobviousness remains a question of law supported by fact, by, for example, ensuring that conclusory expert testimony does not defeat summary judgment. But the sweeping statements in the Supreme Court’s opinion should not be understood to lower the evidentiary burden protecting against hindsight bias. It is not too much to ask that parties support their positions with fact.

Nonobviousness is undoubtedly a knotty problem in patent law. Even the Supreme Court has at times been unable to articulate their judgments other than to conclude that the “gap between the prior art and the [patent holders]’s system is simply not so great as to render the system nonobvious.”²⁴⁵ The Federal Circuit’s general thrust towards evidentiary rigor was move in the right direction, and *KSR* as interpreted by the Federal Circuit should enrich the kind of evidence used in the nonobviousness inquiry.

243. *Id.* at 1368-70.

244. Brief of Intellectual Property Law Professors, *supra* note 67, at 1-4.

245. *Dann v. Johnston*, 425 U.S. 219, 230 (1976).