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AN ENHANCED STANDARD FOR REDEFINING OBVIOUSNESS: WHY KSR DOES NOT WORK AND A PROPOSED SOLUTION TO A SUBJECTIVITY PROBLEM

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I. INTRODUCTION

In the late 1940's, inventor John T. Graham sought to develop a device whereby a chisel plow used for aerating soil maintained its durability amidst the wear and tear caused by large rocks and soil.¹ Graham's chisel plow patent², which was granted in 1960, describes a clamp intended to protect the plow from breaking over time due to strong vibrations during use.

Graham's inherent right to patent such an invention is granted by the United States Constitution, which seeks "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and inventors the exclusive Right to their respective Writings and Discoveries."³ This constitutional protection still exists today, though inventors often struggle to comply with our federal court system's interpretations and enforcement of this right. While Graham's invention sparked a major change in the agricultural world, the shockwaves from the controversy surrounding his patent had a far greater impact on the intellectual property world, where a simple shock absorption device would lead to a redefining of the obviousness requirement to patentability forever.⁴

It remains unclear as to whether the policies implemented to effectuate the constitution's intent with regards to an inventor's rights are served by our judicial system. Within the limits of the constitutional grant, Congress has broad

flexibility "to implement the stated purpose of the Framers by selecting the policy which in its judgment best effectuates the constitutional aim."⁵ An inventor's right to patent an invention derives from Title 35 of United States Code, which requires that an invention be novel⁶, [useful]⁷, and nonobvious.⁸ A patent may not be obtained 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 the subject matter pertains.⁹ Of the three requirements of Federal Code (35 U.S.C. §§101-103; novel, utility, nonobvious), legal scholars often consider the nonobvious requirement as the most difficult to meet and comprehend, due to its subjective nature.¹⁰

In the landmark case, *Graham v. John Deere*, spurred by John T. Graham's shock absorption device, the Supreme Court developed a test for obviousness, which was to be determined by: 1) the scope and content of prior art, 2) the difference between the prior art and the claim at issue, and 3) the level of ordinary skill required in the field to which the subject matter of the invention pertains.¹¹ The Court also considered secondary factors, such as commercial success, long felt but unsolved needs, failure of others, etc., which may be utilized in

shedding light on the circumstances surrounding the subject matter of the patent.¹²

Graham is seen by many as the first case to truly outline the requirements of Section 103 of the Patent Act by creating an established objective standard for obviousness by using the 3-factor test.¹³ Despite a primitive objective standard in *Graham*, The United States Court of Appeals for the Federal Circuit (hereinafter , "Federal Circuit") has strayed away from the 3-factor test in favor of the "Teaching, Suggestion, Motivation" test (hereinafter "TSM test"),¹⁴ which is used to determine if two or more prior art references can legitimately be combined during the § 103 obviousness inquiry.¹⁵ The TSM test requires that a patent is not obvious over prior-art references unless there is an explicit teaching, suggestion, or motivation to combine those references.¹⁶ The Federal Circuit traditionally applies the TSM test to resolve the obviousness question in a more uniform and consistent manner.¹⁷ The TSM test also protects against the hindsight bias left open by *Graham* because it forces an inventor to indicate a motivating factor or factors from prior art.¹⁸ A hindsight analysis, on the other hand, may make the combination of prior art seem inevitable.¹⁹ However, there is confusion between the Federal Circuit's TSM test and the *Graham* 3-factor test for obviousness because the *Graham* test does not require motivation or suggestion to combine prior art.²⁰ To this

day, the test for determining obviousness remains both subjective and unclear.

II. HISTORY AND INTERPRETATION OF 35 U.S.C. § 103

The first patent statute was enacted in 1790, requiring only that a patent be "useful and important."²¹ This statute was abandoned in place of a series of legislative acts and case law that failed to directly address an obviousness requirement.²² In fact, until 1952, patentability only explicitly required novelty and utility.²³ Despite a general avoidance from addressing "obviousness" as a set requirement, in 1853, the Supreme Court held that new patents could not be upheld if their construction required no more than the "skill ... possessed by an ordinary mechanic acquainted with the business."²⁴ The fear of hindsight contributed to the obviousness void in patentability at the time, as is evident from *Diamond Rubber Co. v. Consolidated Rubber Tire Co.* (1910), where the Court offered an extensive skepticism regarding perception of an invention after the fact.²⁵

Thirteen years later, in *Eibel Process Co. v. Minnesota & Ontario Paper Co.* (1923), the Supreme Court offered a subjective standard for the patentability of an invention by suggesting that the subject invention could consist of the discovery of the source of the problem even when the solution to the problem involves only a slight change.²⁶ Over the next twenty years, a

myriad of patents were rejected or found invalid based on nonobvious grounds and "lack of invention."²⁷ This time period of patent rejection was also marked by examiners paying close attention to secondary considerations as a sort of "tiebreaker", and the nexus between the secondary considerations and existence of invention or nonobviousness.²⁸ In *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.* (1950), the Supreme Court's opinion transitions into the 1952 Patent Act when it offered: "Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained when, on the contrary, their effect is to subtract from former resources freely available to skilled artisans."²⁹

Congress finally created the Patent Act in 1952, seen as harsh on patent seekers at the time,³⁰ which prohibited obtaining patents "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."³¹

Less than two decades after the Patent Act of 1952 was drafted, The Supreme Court of the United States made a series of

landmark decisions affecting obviousness, beginning with *Graham v. John Deere* in 1966.³² In *Graham*, the Supreme Court adopted its three-part test in an effort to raise the standard for patentability, and also allowed for secondary considerations to be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.³³ However, as an ancillary fourth part to the test, the court implements secondary considerations, such as commercial success, long felt but unsolved needs, and failure of others.³⁴ During this period of time, where *United States v. Adams*³⁵ and *Calmar v. Cook Chemical*³⁶ were also litigated, courts began to strike down patents for failing to meet the nonobvious requirement. Following *Graham*, patents were still encouraged,³⁷ but a set standard of obviousness was not developed in the years following that case.

Meanwhile, while the Supreme Court had been applying *Graham*, the Federal Circuit Court of Appeals was consistently applying its own test to patents pending invalidity on the basis of obviousness in light of a *combination* of prior art references.³⁸ This test evolved from a mere requirement than one show “a suggest[ion] to the mind of an ordinary skillful mechanic.”³⁹ The Federal Circuit test, now known as the “Teaching, Suggestion, Motivation” test, or “TSM” test, never took the place of the *Graham* factors, yet the Federal Circuit

has often ignored *Graham* in obviousness analyses.⁴⁰ The TSM test requires a patent examiner (or accused infringer) to show that some suggestion or motivation exists to combine known elements to form a claimed invention.⁴¹ The TSM test is utilized by the Federal Circuit to determine whether multiple prior art references can legitimately be combined during the § 103 inquiry.⁴² The TSM test does not play a role when the contended prior art is a single reference and thus, no need for a motivation to combine references.⁴³ The premise behind the TSM test is to properly reason exactly why an invention is considered obvious, thus eliminating hindsight. However, Courts have often applied this test separately from *Graham*, creating no single standard for measuring obviousness.

There are multiple problems with the TSM test. One major problem is that it has not been uniformly adopted by all federal courts, and when the TSM test is applied there are often multiple variations. For example, in *KSR v. Teleflex*, the Supreme Court applies an “expansive and flexible” approach to the TSM test.⁴⁴ The TSM test has historically been perceived as a requirement that a patent is not obvious over prior-art references unless there is an *explicit* teaching, suggestion, or motivation to combine those references.⁴⁵ However, *KSR v. Teleflex* generates a more flexible standard, whereby a patent may be invalidated on the basis of an “obvious to try”

standard.⁴⁶ Therefore, the Court made it easier for Patent and Trademark Office (PTO) examiners to support obviousness rejections and for alleged infringers to invalidate patents based on obviousness.

Secondly, the TSM test only applies to circumstances involving a combination of prior art references.⁴⁷ This means that in cases where an accused infringer has a patent that is obvious in light of only one prior art reference, a separate standard must be applied. As a result, our court system has not identified a uniform standard of application when it comes to invalidating a patent on the basis of obviousness.

Not until 40 years after *Graham*, in *KSR v. Teleflex*, did the Supreme Court substantially readdress and alter the obvious standard in an attempt to clarify a standard with some significant authoritative value. In *KSR*, Appellant, KSR International Co. (hereinafter “KSR”) is the patent⁴⁸ holder of an adjustable pedal system for cars with cable-actuated throttles.⁴⁹ KSR also created an adjustable pedal system for trucks by using computerized throttles, making use of a modular sensor.⁵⁰ Appellee, Teleflex Inc., is an exclusive licensee of the Engelgau patent⁵¹, which discloses and claims a position-adjustable pedal assembly and an electronic pedal position sensor that is attached to a fixed pivot point.⁵²

Teleflex sued KSR for infringement of their patent after hearing of KSR's pedal system, to which KSR defended that claim 4 of Teleflex's Engelgau patent⁵³ was invalid under § 103 of the Patent Act.⁵⁴ The United States District Court for the Eastern District of Michigan granted summary judgment for KSR on obviousness grounds.⁵⁵ In granting summary judgment, the District Court applied *Graham* and found little difference between the prior art teaching and claim 4 of the Teleflex patent.⁵⁶ The District Court also reasoned that the Asano patent,⁵⁷ the prior art in question, taught everything in claim 4 other than the use of a sensor to detect the pedal's position and transmit it to a computer that controlled the throttle.⁵⁸ Nevertheless, that untaught technology was available in other technologies, such as the '068 patent and in sensors used by Chevrolet.⁵⁹ This triggered the application of the TSM test, where the District Court finally reasoned that given the state of the industry, combining electronic sensors with adjustable pedals is inevitable.⁶⁰

On appeal, the United States Court of Appeals for the Federal Circuit reversed the District Court's ruling, in finding Teleflex's claim 4 of the Engelgau patent nonobvious in light of prior art.⁶¹ The Federal Circuit Court found that the District Court failed to strictly apply the TSM test, and reasoned that the District Court "failed to make findings as to the specific

understanding or principle within a skilled artisan's knowledge that would have motivated one with no knowledge of the invention to attach an electronic control to the Asano assembly's support bracket."⁶² In reversing the District Court's summary judgment finding, the Federal Circuit court held that the prior art patents would not have led a person of ordinary skill to put a sensor on an Asano-like pedal.⁶³ The Federal Circuit Court also noted that whether or not the combination of prior art references was "obvious to try" was irrelevant.⁶⁴

In 2007, The Supreme Court of the United States granted certiorari, reversed and remanded the Federal Circuit Court's decision, and held that Teleflex's patent was invalid and obvious in light of prior art.⁶⁵ In their holding, the Supreme Court addressed a myriad of factors that would forever change the landscape the obviousness requirement to patentability. The Supreme Court, consistent with the District Court, noted that the proper inquiry was "whether a pedal designer or ordinary skill in the art, facing the wide range of needs created by developments in the field, would have seen an obvious benefit to upgrading Asano with a sensor."⁶⁶ The Supreme Court, in reversing the decision of the Federal Circuit Court and finding claim 4 obvious in light of prior art references, also noted that a patent claim may be proven obvious by merely showing that the

combination of prior art elements was obvious to try, thus confirming a more flexible approach to the TSM test.⁶⁷

Finally, less than 6 months after the Supreme Court holding in *KSR v. Teleflex*, the Federal Circuit had an opportunity to readdress the “flexible approach” to the TSM test in *Leapfrog Enterprises, Inc. v. Fisher Price Inc.*⁶⁸ In this case, the claims at issue related to children’s interactive learning devices.⁶⁹ Here, Leapfrog sued Fisher-Price, claiming that Fisher-Price’s PowerTouch product infringed claim 25 of the ‘861 patent,⁷⁰ which relates to a learning device that aids young children in reading phonetically.⁷¹ In Leapfrog, the United States District Court for the District of Delaware found the accused PowerTouch device as noninfringing because the PowerTouch could not practice the selection of a depicted letter because it only allowed the selection of words rather than letters.⁷² In addition, the District Court found that claim 25 was invalid as obvious in light of the combination of the Texas Instruments Super Speak and Read device (SSR reader)⁷³ and the knowledge of one of ordinary skill in the art, as represented by the testimony of a Fisher-Price technical expert.⁷⁴

On appeal, *Leapfrog* argued that the PowerTouch does in fact allow choosing a depicted particular letter because in some cases, each letter of a word corresponds to a different cross-point.⁷⁵ In analyzing this technology, the Federal Circuit Court

noted that an obviousness determination is not the result of a rigid formula that is disassociated from the facts of the case, as the common sense of those persons skilled in the art demonstrates why some combinations would have been obvious and others would not.⁷⁶ The Federal Circuit Court, consistent with *KSR*, found that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield a predictable result.⁷⁷ As a result, the Court found that claim 25 of the '861 patent is obvious to one skilled in the art to combine the SSR reader with a Bevan device,⁷⁸ an electro-magnetic learning toy.⁷⁹ The Court found that claim 25 of the '861 patent is merely a Bevan device that had been updated with modern electronics common at the time of the alleged infringement.⁸⁰ Finally, the Federal Circuit Court, in affirming the decision of the District Court, found that claim 25 of the '861 patent is a mere obvious combination of the Bevan device, the SSR patent, and a "reader," which is a device well-known at the time of the invention.⁸¹ Thus, while the subject inventions are distinctly different, neither *KSR* nor *Leapfrog* applied the TSM test strictly.

III. THE SUBJECTIVITY AND IMPACT OF *KSR*

The standards of patentability have been modified over the last six decades, from the enactment of the 1952 Patent act, to

Graham in 1966, and *KSR* in 2007.⁸² At the forefront of these modifications and controversies is the obviousness requirement, which has been called the “final gatekeeper of the patent system.”⁸³ However, Federal Circuit Courts and the Supreme Court of the United States have struggled to find a standard of law that appeases the rights granted by Article I, clause 8, of the United States Constitution.⁸⁴ *KSR* demonstrates this problem in three distinct ways: 1) The test for obviousness is unclear, 2) The test for obviousness is inconsistent, 3) The test for obviousness is overly subjective and does not grant patent holders proper patent protection by limiting their rights to sue potential infringers for fear of an invalidity defense based on a low threshold of obviousness.⁸⁵

The Supreme Court in *KSR* suggests that there is not necessarily an inconsistency between the TSM test and the *Graham* test, the inconsistency being the application of the “flexible approach” to the TSM test without regard to *Graham*.⁸⁶ However, The Federal Circuit’s “flexible” TSM test ignores the dictates of *Graham*, and the patent bargain itself, by setting the standard for patentability artificially low and ignoring the “person having ordinary skill in the art.”⁸⁷ Thus, inconsistent with the aim of the *Graham* test, the Supreme Court in *KSR* has probably made it easier for a patent to be invalidated as obvious, both in litigation and during the patent application

process.⁸⁸ This might make it more difficult for patent applicants, including start-up companies, to obtain patents because PTO examiners will have greater flexibility in making obviousness rejections without satisfying a rigid TSM test.⁸⁹

KSR may have also facilitated invalidating a patent during litigation because courts and juries now have the same increased latitude in invalidating a patent based on obviousness. Nevertheless, the TSM test sets out to show that just because each element of a claim was known in prior art does not render an invention obvious.⁹⁰ There must be a reason for one skilled in the art to combine those independent elements in order for obviousness to exist.⁹¹ For example, in *Leapfrog*, the Federal Circuit Court indicated that the reason that one skilled in the art might add a “reader” to the Bevan/SSR combination would be to provide an added benefit and simplify the use of the toy for the child in order to increase its marketability.⁹²

When KSR attempted to invalidate Teleflex’s claim 4 as obvious, the Supreme Court concurred with The District Court ruling that the Engलगau design was obvious to a person of ordinary skill in the art to combine the Asano patent with a pivot-mounted pedal position sensor, thus reversing the Court of Appeals’ approval of the rigid TSM application.⁹³ The question of ordinary skill refers to whether a pedal designer of ordinary skill in that particular art, facing needs created by

developments in the field, would have seen an obvious benefit to upgrading the Asano patent with a sensor.⁹⁴ The problem here is that this test appears to incorporate an excessive amount of common sense and does not set a true standard for the application of what one skilled in the art would know or “would have seen.”

One of the major problems with the TSM test before *KSR* is that it made invalidating patents as obvious more difficult, which posed a threat to those seeking new patents on their inventions.⁹⁵ The rationale for this suggests that because the current “flexible” TSM test for obviousness only requires that one skilled in the art find a combination as “obvious to try” rather than requiring an explicit teaching, suggestion, or motivation to combine references, accused infringers are now able to show that one skilled in the art would have seen an obvious benefit to combining prior art references without actually having to point to an explicit teaching, suggestion, or motivation.⁹⁶ Thus, the recent compliance with the “teaching, suggestion, motivation” test has not completely inhibited those seeking invalidation from attaining their goal.⁹⁷ This is because the motivation may stem from general knowledge known to one skilled in the art or the motivation may be implicit in the prior art itself.⁹⁸

The rationale for the TSM test is that it protects against the bias of hindsight in a patent analysis. Hindsight bias arises when a new invention enters the market and is viewed as more obvious in light of prior art, especially without a motivation to combine prior art elements.⁹⁹ In *KSR*, for the first time, the Supreme Court of the United States swayed from the TSM test that the Federal Circuit Court adopts, but did not strictly follow the *Graham* factors.¹⁰⁰ The Supreme Court in *KSR* created its own test that applied the TSM test in a more flexible fashion.¹⁰¹ The District Court and the Supreme Court of the United States both believed that the test should concern “finding[s] as to the specific understanding or principal within the knowledge of a skilled artisan that would have motivated one with no knowledge of [the] invention’ . . . to attach an electronic control to the support bracket of the Asano assembly.”¹⁰²

The Supreme Court in *KSR* also analyzed precedents, including a 1976 case which sets the stage for obviousness and the combination of prior art.¹⁰³ In *Sakraida*, the Court held that when a patent “simply arranges old elements with each performing the same function it had been known to perform” and yields no more than one would expect from such an arrangement, the combination is obvious.¹⁰⁴

In *KSR*, the Supreme Court noted the errors made by the Court of Appeals, including 1) the idea that courts and patent examiners should only look to the problem the patentee was trying to solve,¹⁰⁵ 2) assuming that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem,¹⁰⁶ 3) a patent claim cannot be proved obvious merely by showing that the combination of elements was “obvious to try,”¹⁰⁷ and 4) failing to recognize the potential for hindsight bias.¹⁰⁸ Finally, the Supreme Court in *KSR* affirms the decision by the District Court in finding that a person having ordinary skill in the art (pedal assembly) “could have combined Asano with a pedal position sensor in a fashion encompassed by claim 4, and would have seen the benefits of doing so.”¹⁰⁹

Currently, the TSM test is still good law, but courts use a more flexible approach in its application. The first sign of consistency came in *Leapfrog*, the Federal Circuit case following *KSR*, where the court applied the flexible approach to the TSM test and found that the inventor’s modification of prior art was “not uniquely challenging or difficult for one skilled in the art,” and thus invalid as obvious.¹¹⁰ The underlying problem in *KSR* is not necessarily in the court’s conclusion of patent invalidity. The problem in *KSR* is that the court’s standard of application leads other courts to apply their own test. It is no

wonder that the Court in *Leapfrog* felt no need to contradict or overrule the decision in *KSR*. The flexible approach to the TSM test is so broad that it allows subsequent Courts to reinvent the law each time and circumvent *KSR*. Thus, not only is the TSM test different in each case, depending on what would be “obvious to try” to one skilled in the art, but each time a Court applies their own standard, it creates new precedent that generates even more inconsistency. Therefore, the inconsistency problem, inherently bad by itself, continues to regenerate each time a patent case is decided on obviousness grounds where a combination of prior art elements is at issue.

Since the inception of *Graham* in 1966, federal law has struggled to find a consistent rubric for obviousness.¹¹¹ In fact, the aberration from the TSM test has drawn negative skepticism from critics who believe that decades of Federal Circuit decisions relying on this test will be tainted by a new standard for obviousness.¹¹² Before *KSR*, many believed that the Federal Circuit had been pro-patent, particularly with respect to obviousness issues, because it attempted to resolve patent issues with consistency and uniformity by utilizing the strict TSM test on obviousness issues.¹¹³

In the name of preventing hindsight bias, the courts have denied judges the ability to use common sense and rationality to determine the weight of the obviousness evidence before them.¹¹⁴

Even with the revolutionary decision in *KSR*, courts resist abandonment of the *Graham* factors and have yet to abandon the TSM test, despite altering its application. A major effect of the flexible approach to the TSM test is that it allows potential infringers to defend themselves by invalidating claims as obvious in light of prior art.¹¹⁵ The *KSR* flexible approach to the TSM test places patent holders at risk for invalidation, which would dissuade the patentee from pursuing an otherwise viable infringement claim. As a result, "patent trolls" have recognized that, with the nonobviousness standard artificially low, the probability of gaining approval for a patent on an obvious innovation is quite high, especially since it is the PTO examiner who bears the burden of finding the specific "suggestion" document, not the patent applicant.¹¹⁶

Now that federal case law has begun to show some consistency in that regard¹¹⁷, the landscape of patent law changed, all in the effort "[T]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and inventors the exclusive Right to their respective Writings and Discoveries."¹¹⁸ However as the Supreme Court has recognized,¹¹⁹ one of Congress' stated objectives in creating the Federal Circuit was "to reduce the widespread lack of uniformity and uncertainty of legal doctrine that exist[ed] in the administration of patent law."¹²⁰ *KSR* has failed to provide a solution to this predicament.

The *KSR* model is inconsistent and subjective because it offers an interpretation of 35 U.S.C. §103 that prevents patentees from truly understanding the requirement of the law. As such, inventors constantly expose themselves to patent invalidation claims from potential infringers. An additional criticism of this test is that when spurious patents issue, they quickly lend themselves to use as weapons against legitimate innovators instead of the properly applied exclusionary grants they were intended to be.¹²¹ This trend, which increased as a result of *KSR*, has led many victims of the flexible *KSR* approach to lobby for limits on damages resulting from infringement suits.¹²²

Presently, the standard for obviousness is complicated and subjective. As such, it would make little sense to incorporate a new test that is more subjective in giving courts leniency to adopt their own interpretations of what “obviousness” means. A potential solution to the problems posed by a subjective test such as the flexible approach to the TSM test, adopted by *KSR* and *Leapfrog*, is to incorporate a more comprehensive objective test. This comprehensive test should also make it possible for inventors to gain patents while protecting themselves from infringers without fear of defensive invalidity claims.

This may be accomplished by combining the *Graham* 3-part test with the standard TSM test used by the Federal Circuit

before the inception of *KSR*. Thereafter, one who makes an invalidity claim will have a certain period of time to develop the relevant claims by using prior art. By doing this, courts can avoid contradicting precedent and may apply a standard for measuring obviousness without the subjectivity of *Graham* or the unclear flexible approach to the TSM test proposed by the Supreme Court of the United States in *KSR*.

V. A HYBRID MODEL FOR OBVIOUSNESS

The hybrid model for obviousness incorporates the standard TSM test (not the flexible approach to the TSM test; “teaching, suggestion, and motivation” to combine references”) and 1) the scope and content of prior art, 2) the difference between the prior art and the claim at issue, and 3) the level of ordinary skill required in the field to which the subject matter of the invention pertains. The test also includes secondary considerations, such as those posed by *Graham*, because that increases the objective nature of the test.¹²³ By including secondary considerations to determine motivation to combine, the test would allow courts less flexibility in ignoring authoritative tests and gives less freedom to Federal Courts in creating their own models for obviousness.

When applied to a potential patent invalidity defense, the hybrid test will first apply *Graham* by evaluating the background of the art, the skill required in the field of the subject invention, and the differences between the claim and the prior art. While this is not effective on its own, it flushes out clearly invalid patents and provides a basis for further analysis. Next, the Court will determine if there is any teaching, suggestion, or motivation for one skilled in the art to combine references. There will be no implementation of what is “obvious to try” or what one of ordinary skill in the art should know having never seen the invention. There must be a clear and explicit teaching, suggestion, or motivation to combine references.

On its face, this test seems to incorporate exactly the test which was in place prior to the Supreme Court decision in *KSR*. The reason for the reversion back to the older test is to eliminate some of the subjectivity of the “obvious to try” language that the “flexible” TSM test incorporates. The difference will be in the timing and the application of the patent process. The new test will give a patentee the right to have the United States Patent and Trademark Office reveal the claim or claims of an invention without revealing the method by which the invention is produced. Thereafter, the party contending the patentee’s patent validity must recreate the

claims and reduce the invention to practice based on the combination of relevant prior art. More simply, there will be a grace period whereby others will have an opportunity to recreate the claims of the invention from prior art technology. If the claims are able to be recreated and reduced to practice, then the patent will be invalid as obvious. If not, then the patent is a novel concept that likely deserves patenting. However, before recreating the claim and reducing to practice, the party claiming invalidity must still first make an obviousness showing based on the strict TSM test and the *Graham* factors. More simply, an inventor making an invalidity defense based on the combination of prior art must first meet the requirements of the strictly applied TSM test and the *Graham* factors. If the subject patent is invalid in light of the combination of prior art, the inventor must still recreate the claim or claims of the patent.

Even if this test were to be shown effective in cases of nonobvious, it is not entirely objective, as it remains unclear whether or not a completely objective test is even possible.¹²⁴ One way to make the test more objective is to apply industry-specific patentability controls. However, this would pose a problem when subject matter involves components from different industries. The idea behind this is that it may take more time to develop certain inventions than it takes for others. For this reason, the grace period created by the courts should be

somewhat flexible, though courts should recognize a general applicability of grace periods to particular fields of science. For example, an invention based on biomedical engineering and the mixture of solutions may take far more time to develop than one based on structural engineering and the combination of parts in machinery. One method of assessing the appropriate allowable grace period is to solicit the opinions of those skilled in the relevant art. While this seems to reintroduce subjectivity back into the test for obviousness, it is far less subjective to ask one skilled in the art how long the creation of a patent might take than it to ask whether or not a combination prior art is "obvious to try."

This test could be applied to both *KSR* and *Leapfrog*, where the contended issue was invalidity based on obvious combinations of prior art patents or devices. In *KSR*, the burden would be on *KSR* to create the necessary claims in Teleflex's pedal system. Thus, *KSR* would have to do so by creating claim 4 of the Engelgau patent from the combination of the Asano patent, the '068 patent, and sensor technology used by Chevrolet. One skilled in the art of adjustable pedals would assess an appropriate grace period for the creation and reduction to practice of the claim. Finally, if *KSR* was able to create the claim and reduce to practice, then Teleflex's patent would be invalid. However, in this case, because the strict TSM test is

applied, as the Federal Circuit Court applied the strict TSM test, Teleflex would lose the case even before recreation of claims is addressed.

Similarly, in *Leapfrog*, Fisher-Price would first have to meet the strict TSM test, which it never originally applied because both the Federal Circuit Court of Appeals and the District Court both applied the “flexible approach” to the TSM test. Nevertheless, Fisher-Price would first have to show that claim 25 of the ‘861 patent is obvious in light of the combination of the SSR reader, the Bevan Device, and a commonly available “reader” device. If Fisher-Price was able to show obviousness in this regard while complying with the strict TSM test and *Graham* factors, they would then have to recreate the claim of the ‘861 patent within a specified grace period.

By using this test, Courts will eliminate overly simple patents that probably do not deserve protection in the first place. However, this test will create a premium on patent holders to keep their patents confidential and secret. In addition, this test could create problems with complicated patents that are uncomplicated to recreate once claims are revealed. Once again, this test is not completely objective, but it shows promise because it places a high standard on what deserves to be patentable and it protects patent holders from frivolous invalidity defenses. Also, by making these changes to

the law, patent trolls will more likely be deterred from engaging lawsuits and settlements that limit and impair public access to inventions.¹²⁵

V. CONCLUSION

Over the last three centuries, lawmakers have attempted to carry out the intent of the Framers of our constitution by protecting the rights of inventors seeking patents. In interpreting § 103 of the Patent Act, our judicial system has encountered great difficulty in defining obviousness. Even after *Graham v. John Deere*, federal courts created their own standards by using “teaching, suggestion, and motivation.” In 2006, the United States Supreme Court sought to put an end to the controversy by setting forth a flexible approach to the TSM test, which does not contradict *Graham*. However, *KSR* was unclear and was so subjective that subsequent courts were hesitant to overrule the decision, instead creating their own means of testing obviousness within the broad constraint of *KSR*.

Our judicial system is set forth so that precedent is followed and authority means more than a mere relaxed interpretation. At least with an objective test, courts will not waiver as to what the law states. An effective solution to the obviousness dilemma is to create a hybrid test, which eliminates

the hindsight bias and offers a fair result to both patent holders and potential patentees.

The hybrid test incorporates the *Graham* 3-part test and the strict TSM test adopted by the Federal Circuit Court in *KSR*. Subsequently, the test will require an inventor to recreate the claims of the subject patent from the relevant combination of prior art, but within a specified period of time. This test, as applied to the same landmark cases and fact sets, is likely to produce different results because patent holders will be better protected. In doing so however, the test eliminates much of the confusion in achieving those results and provides a basis for making future decisions without reinventing the law. In *KSR*, the Supreme Court analyzed the invalidity defense claim against claim 4 of Teleflex's patent by closely looking at prior art such as the Asano and Engelgau patents. In doing so, the court found claim 4 to be obvious in light of prior art. The subjectivity of the flexible approach to the Federal Circuit TSM test avoided problems posed by hindsight bias, but exposes Courts to a bevy of litigation and exposes patentees to patent trolls seeking to reap the benefits of a weak legal grounding.

The hybrid test is not an impeccable, impenetrable legal test of obviousness. However, its application would produce consistent results. More importantly, its application would

necessitate consistency in subsequent cases, where a Court might otherwise look to reinvent the law.

VI. ANNOTATED ENDNOTES

¹ Legal Protection of Digital Information, Chapter 4, Section VI.A., <http://digital-law-line.info/cases/148PQ459.htm>. Chisel plows were developed for plowing areas free from rocks and stones. In areas where rocks and stones are present, chisel plows suffer from defects in shanks tightly attached to the plow frame. When the plow moves over rocks and stones, a tremendous vibration is sent through the shank, causing it to break. As a result, inventor John T. Graham attempted to improve the plow design by attaching a spring clamp in a device that he patented in 1960.

² See U.S. Patent No. 2,935,144.

³ U.S. CONST. ART. I, §8, cl 8. Innovation, advancement, and things which add to the sum of useful knowledge are inherent requisites in the patent system which, by constitutional command, must promote progress of useful arts. The right of an inventor to patent an invention stems from Article I, which states in relevant part, that [Congress shall have Power] To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and inventors the exclusive Right to their respective Writings and Discoveries."

⁴ Stephen G. Kunin & Andrew K. Beverina, Commentary, *KSR's Effect on Patent Law*, 106 MICH. L. REV. 50 (2007).

⁵ Rod Dixon, *When Efforts to Conceal May Actually Reveal: Whether First Amendment Protection of Encryption Source Code and the Open Source Movement Supporting Re-Drawing The Constitutional Line Between the First Amendment and Copyright*, 1 COLUM. SCI. & TECH. L. REV. 3 (2000)

⁶ 35 U.S.C. § 102

⁷ 35 U.S.C. § 101

⁸ 35 U.S.C. § 103

⁹ 35 U.S.C. § 103

¹⁰ R. Polk Wager and Katherine J. Strandburg, *The Obviousness Requirement in Patent Law*,
<http://www.penumbra.com/debates/debate.php?did=2>.

¹¹ *Graham v. John Deere Co. of Kansas City*, 127 U.S. 1, 3 (1966).

¹² *Id.*

¹³ Charles Emerick, *Missouri Patent Ruling Not Obvious To All*, MO. LAW WKLY., May 14, 2007.

¹⁴ 5 CHISUM ON PATENTS, *The Conclusion as to Obviousness* § 5.04 (2007)

¹⁵ John Knight, *Motivation for the Federal Circuit Test*, University of Utah School of Computing (2006), <http://digital-law-online.info/papers/jk/tsm.htm>

¹⁶ Ronald L. Panitch, *Fundamentals of Trademarks, Copyrights, and Unfair Competition: Protection and Enforcement in the Digital Age*, SN016 ALI-ABA 1 (2007)

¹⁷ *KSR International Co. v. Teleflex Inc*, 127 U.S. 1727, 1730 (2007). The TSM test, or “teaching, suggestion, and motivation,” is a method used by the Federal Circuit to determine obviousness.

¹⁸ 11 CHISUM ON PATENTS, *Supp. to 1500 Obviousness--35 U.S.C. Section 103*. This [“teaching, suggestion, motivation”] requirement prevents a court from labeling as obvious in hindsight a solution that was not obvious to one of ordinary skill at the time of the invention

¹⁹ Holmes J. Hawkins (King and Spaulding, LLP) *Trying Obviousness: Eliciting Effective Expert Witness Testimony in the Post-KSR Era*, 910 PRACTICING LAW INSTITUTE 335 (2007).

²⁰ Frank A. Angileri, Brief Amicus Curiae of the Federal Circuit Bar Association in Support of Respondents, *KSR International Co. v. Teleflex Inc*, 127 U.S. 1727 (2007).

²¹ Act of Apr. 10, 1790, ch. 7, § 1, 1 Stat. 109

²² Dennis Crouch, *KSR V. Teleflex: Rethinking Obviousness*, http://www.patentlyo.com/patent/2006/ksr_v_teleflex_.html

²³ Fritz Machlup, “An Economic Review of the Patent System,” Study No. 15, Subcomm. Pat., Trademark., & Copyright, Jud. Comm., 85th Cong., 2d Sess. 8 (1958).

²⁴ *Hotchkiss v. Greenwood*, 52 U.S. 248, 265 (1850)

²⁵ *Diamond Rubber Co. v. Consolidated Rubber Tire Co.*, 220 U.S. 428, 435-436 (1911). In *Diamond Rubber Co.*, the court offered the following opinion regarding the potential for hindsight bias: "'Knowledge after the event is always easy, and problems once solved present no difficulties, indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention. But the law has other tests of the invention than subtle conjectures of what might have been seen and yet was not. It regards a change as evidence of novelty, the acceptance and utility of change as further evidence, even as demonstration.... Nor does it detract from its merit that it is the result of experiment and not the instant and perfect product of inventive power. A patentee may be baldly empirical, seeing nothing beyond his experiments and the result; yet if he has added a new and valuable article to the world's utilities, he is entitled to the rank and protection of an inventor It is certainly not necessary that he understand or be able to state the scientific principles underlying his invention, and it is immaterial whether he can stand a successful examination as to the speculative ideas involved.'"

²⁶ *Eibel Process Co. v. Minnesota Ontario Paper Co.*, 261 U.S. 45, 47 (1923)

²⁷ 5 CHISUM ON PATENTS, *Historical Development of Nonobviousness* § 5.02 (2007)

²⁸ John Gladstone Mills III, *Secondary considerations—Objective evidence of nonobviousness (the subtests of invention)*, 2 PAT. L. FUNDAMENTALS § 12:43 (2D ED.)

²⁹ *Great Atlantic Pacific Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 150–153 (1950)

³⁰ James R. Barney, “Uncorrectability” As An Affirmative Defense Against Patent Infringement: Managing the Burden of Proof, 8 FED. CIRCUIT B.J. 23 (1999)

³¹ 35 U.S.C. § 103

³² *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

³³ *Id.* at 17–18

³⁴ *Id.* at 19

³⁵ *United States v. Adams*, 383 U.S. 39 (1966)

³⁶ *Calmar, Inc. v. Cook Chemical Co.*, 380 U.S. 949 (1966)

³⁷ Patents are a “carefully crafted bargain for encouraging the creation and disclosure of new, useful and nonobvious advances in technology and design.” *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989)

³⁸ See generally, *Kimberly-Clark Corporation v. Johnson & Johnson*, 745 F.2d 1437 (Fed. Circ. 1984)

³⁹ *Tucker v. Spaulding*, 80 U.S. 453 (1871)

⁴⁰ Thomas G. Field Jr., *The Federal Circuit Works Well*, 29 THE NATIONAL LAW JOURNAL 15 (2006)

⁴¹ *Winner Int'l Royalty Corp. v. Wang*, 202 F.3d. 1340, 1348 (Fed. Cir. 2000)

⁴² *Orthopedic Equipment Company v. All Orthopedic Appliances*, 707 F. 2d 1376, 1382 (Fed. Cir. 1983)

⁴³ *Id.*

⁴⁴ *See generally, KSR International Co. v. Teleflex Inc*, 127 U.S. 1727, 1732 (2007)

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ James W. Dabney, *KSR: It Was Not a Ghost*, 24 SANTA CLARA COMPUTER & HIGH TECH. L.J. 131 (2007)

⁴⁸ *See* U.S. Patent No. 5,241,936. This axel-driving apparatus was patented in 2000 and assigned to Kanzaki Kokyukoki. The '976 patent was KSR's original patent, which they later altered to be compatible with trucks. The patent is generally described as follows: In an axle driving apparatus according to this invention, an input shaft is pivotally supported in a substantially horizontal fashion inside a housing, and projects outward on one side of the housing so as to receive power from a motor via a belt converter. Axles are pivotally supported in parallel to the input shaft inside the housing, and a speed-

change mechanism is interposed between the input shaft and the axles. The speed-change mechanism is rotated in synchronism with the axles with a certain speed ratio thereto, is disposed above the axles, and includes at least one rotary shaft projecting outward on a side opposite to a side where the input shaft projects in the housing. A power take-off casing is disposed on the same side as the outer end of the rotary shaft in the housing and is adapted to accommodate the outer end of the rotary shaft therein. A power take-off shaft is pivotally supported in a substantially horizontal fashion in a direction perpendicular to the axles inside the power taking-out casing and is operatively interlocked with the rotary shaft.

⁴⁹ See U.S. Patent No. 5,241,936

⁵⁰ *Id.* KSR created a new version of their original patent when they were solicited by General Motors Corporation to supply adjustable pedal systems that would be compatible with trucks, which requires adding a modular sensor.

⁵¹ See U.S. Patent No. 6,237,565. The Engelgau Patent is a vehicle control pedal assembly that contains an adjustment mechanism for moving a pedal arm forward and backward and an electronic throttle control for controlling an engine throttle. The pedal assembly includes a pivot about which the adjustment mechanism rotates when the pedal arm is actuated and which

provides input to the electronic throttle control for providing a signal that corresponds to the pedal arm position.

⁵² *Id.*

⁵³ See U.S. Patent No. 6,237,565

⁵⁴ *Id.*; 35 U.S.C.A. § 103 describes the conditions that must be met for patentability, including non-obvious subject matter.

Obviousness refers to whether or not the subject matter of a patent would be obvious to a person with ordinary skill in the art to which the subject matter pertains.

⁵⁵ *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727, 1729 (2007).

⁵⁶ *Id.* at 1730

⁵⁷ *Id.*; See U.S. Patent No. 5,241,936. The Asano patent, filed July 28, 1989, reveals a support structure whereby one of the pedal's pivots stays fixed when the pedal location is adjusted. The patented invention is designed so that the force needed to depress the pedal is the same regardless of location adjustments.

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727, 1729 (2007).

⁶⁵ *Id.* at 1745

⁶⁶ *Id.* at 1733

⁶⁷ *Id.*

⁶⁸ *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F. 3d 1157 (Fed. Circ. 2007).

⁶⁹ *Id.*

⁷⁰ Claim 25 of the '861 patent reads as follows: An interactive learning device, comprising:

a housing including a plurality of switches; a sound production device in communication with the switches and including a processor and a memory; at least one depiction of a sequence of letters, each letter being associable with a switch; and a reader configured to communicate the identity of the depiction to the processor, wherein selection of a depicted letter activates an associated switch to communicate with the processor, causing the sound production device to generate a signal corresponding to a sound associated with the selected letter, the sound being determined by a position of the letter in the sequence of letters.

⁷¹ *Id.* at 1158

⁷² *Id.*

⁷³ See U.S. Patent No. 3,748,748

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.* at 1161

⁷⁷ *Id.*

⁷⁸ The Bevan device, relied on by the District Court in its obviousness finding, describes a toy that teaches reading based on the association of letters with their phonemic sounds.

⁷⁹ *Id.* at 1161-1162

⁸⁰ *Id.* at 1160

⁸¹ *Id.* at 1163

⁸² Craig Allen Dard, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U. L. REV. 1619 (2007).

⁸³ Robert Patrick Merges & John Fitzgerald Duffy, *Patent Law and Policy: 3 Cases and Materials* 644 (2002).

⁸⁴ U.S. CONST. ART. I, §8, cl 8. The right of an inventor to patent an invention stems from Article I, which states in relevant part, that [Congress shall have Power] To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and inventors the exclusive Right to their respective Writings and Discoveries."

⁸⁵ The low threshold of obviousness refers to the flexible approach to the TSM test adopted by the Supreme Court in *KSR*, which arguably makes patents less protectable.

⁸⁶ *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727, 1732 (2007).

⁸⁷ Brief for Electronic Frontier Foundation, Inc. et al as Amici Curai Supporting Respondents, *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727 (2007)

⁸⁸ J. Matthew Buchanan, *KSR International v. Teleflex*, <http://www.fedcirc.us/case-reviews/ksr-international-v.-teleflex-inc.html>

⁸⁹ Julie Holloway, *It's Obvious: Supreme Court Rejects Rigid Application of "Teaching, Suggestion, Motivation" Test in Patent Cases*, <http://www.wsgr.com/WSGR/Display.aspx?SectionName=publications/>

⁹⁰ *KSR International Co. v. Teleflex Inc.*, 127 U.S. 1727, 1731 (2007).

⁹¹ *Id.*

⁹² *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F. 3d 1157, 1162 (Fed. Circ. 2007).

⁹³ *Id.* at 1733

⁹⁴ *Id.*

⁹⁵ Jeffrey M. Butler, *Teaching, Suggestion, Motivation: KSR v. Teleflex and the Chemical Arts*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 915 (2007). Over the last several years, the Federal Circuit TSM test has been followed closely, but has led to formidable results in favor of the patent holder because the TSM test requires a motivation to combine prior art. However, courts continue to invalidate patents due to a finding of obviousness in light of prior art. See generally, *Alza Corp. v. Mylan Laboratories, Inc.*, 464 F.3d 1286 (Fed. Circ. 2006).

⁹⁶ David L. McCombs, *Intellectual Property Law*, 60 SMU L. REV. 1141 (2007)

⁹⁷ See generally, *Alza Corp. v. Mylan Laboratories, Inc.*, 464 F.3d 1286, 1289 (Fed. Circ. 2006). In *Alza*, the court does not apply a test or standard for motivation to combine prior art. Rather, the court seems to suggest that combining references is a matter of common knowledge, but may be found implicitly in the prior art itself.

⁹⁸ *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1319 (Fed. Circ. 2005).

⁹⁹ See generally, *In re Kahn*, 441 F.3d 977 (Fed. Circ. 2006). In *In Re Kahn*, the patent under dispute was a reading machine for blind readers and the court incorporated the TSM test and found

a motivation to combine prior art references before determining that the patent was invalid as obvious in light of prior art.

¹⁰⁰ *KSR International Co. v. Teleflex Inc*, 127 U.S. 1727, 1734 (2007).

¹⁰¹ *Id.*

¹⁰² *Id.* at 1738

¹⁰³ *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976)

¹⁰⁴ *Id.* at 282

¹⁰⁵ *KSR International Co. v. Teleflex Inc*, 127 U.S. 1727, 1742 (2007).

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 1743

¹¹⁰ *Leapfrog Enterprises Inc. v. Fisher-Price Inc.*, 485 F. 3d 1157 (Fed. Circ. 2007). In *Leapfrog*, the United States Court of Appeals for the Federal Circuit confirmed the decision in *KSR* by upholding a flexible approach to the Federal Circuit's TSM test.

¹¹¹ *Graham v. John Deere Co. of Kansas City*, 127 U.S.1. *Graham* is seen by many as the first case to truly outline the requirements of Section 103 of the Patent Act by setting a standard for obviousness by using a 3-factor test.

¹¹² James Skelley, *Teaching-Suggestion-Motivation Under Review: Developments in KSR International Co. v. Teleflex Inc.*, 13 B.U. J. Sci. & Tech. L. 107 (2007).

¹¹³ M. D. Henry and J. L. Turner, *The Court of Appeals for the Federal Circuit's Impact on Patent Litigation*, 35 THE JOURNAL OF LEGAL STUDIES 85 (2006)

¹¹⁴ Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* ("FTC Report") Chap .4, at 12 (2003)

¹¹⁵ Keith Slenkovich, *Trying A Patent Validity Case in a Post-KSR World*, Mondaq Business Report (2007). The business report sheds light on the idea that as a result of *KSR*, companies being sued of infringement have more flexibility in defending their claim by asserting that a patent claim was obvious and thus invalid.

¹¹⁶ Manual of Patent Examining Procedure (MPEP) § 2142 (Legal Concept of Prima Facie Obviousness)

¹¹⁷ The consistency refers to the decisions in *KSR* and *Leapfrog*, where the federal courts apply a flexible approach to the Federal Circuit TSM test by taking into account, factors such as motivation, common knowledge, common sense, market factors, and the level of ordinary skill in the art.

¹¹⁸ U.S. Const. art. I, §8, cl 8.

¹¹⁹ *Christianson v. Colt Industries Operating Corp.*, 486 U.S. 800 (1988)

¹²⁰ Henry C. Su, *The Future of Obviousness*,
<http://www.law.com/jsp/article.jsp?id=1156340412305>

¹²¹ Kevin W. Kirsch, David A. Mancino, *Winds of Change in U.S. Patent Law*, 19 No. 10 INTELL. PROP. & TECH. L.J. 1 (2007)

¹²² Stephen B. Maebius, *Patent Reform Bill: Will it Benefit Nanotechnology?* 4 NANOTECHNOLOGY L. & BUS. 171 (2007)

¹²³ *Graham v. John Deere Co. of Kansas City*, 127 U.S. 1, 3 (1966)

¹²⁴ Kate H. Murashige, *The Hillmer Doctrine, Self-Collision, Novelty, and the Definition of Prior Art*, 26 J. MARSHALL L. REV. 549 (1993)

¹²⁵ Ashley Chuang, *Fixing the Failures of Software Patent Protection: Deterring Patent Trolling By Applying Industry-Specific Patentability Standards*, 16 S. CAL. INTERDISC. L.J. 215 (2006)