

**Keywords: obviousness; teaching, suggestion, motivation; obvious to try; Graham factors**

***KSR International Co. v. Teleflex Inc.***  
**No. 04-1350 (April 30, 2007)**  
**Much Ado About Nothing (Almost!)**

**I. Facts**

Teleflex holds the exclusive license to U.S. Patent No. 6,237,565 directed to an adjustable pedal assembly with an electronic throttle control, referred to as the Engelgau patent. Claim 4 of the Engelgau patent describes a mechanism for combining an electronic sensor with an adjustable automobile pedal so that the pedal's position can be transmitted to a computer that controls the throttle in the vehicle's engine. After KSR added an electronic sensor to one of its previously designed adjustable pedals, Teleflex sued KSR for patent infringement. KSR counterclaimed that claim 4 was invalid under 35 U.S.C. § 103.

The district court relied upon the factors set forth in *Graham v. John Deere* to determine whether the subject matter set forth in claim 4 was obvious. In *Graham*, the analysis is objective:

Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or non-obviousness of the subject matter is determined. Such secondary considerations as commercial success, long-felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the original of the subject matter sought to be patented.

In considering the scope and content of the prior art, the district court considered not only specific prior art references, but also evidence relating to general market influences at the time the invention was made. With regard to specific prior art references, the district court considered the Asano and Redding references relating to adjustable pedals and the Smith and Rixon references relating to the placement of sensors on pedal assemblies. With regard to general market influences, it was noted that in car engines without computer-controlled throttles, the accelerator pedal interacts with the throttle via a cable or other mechanical link. However, in the 1990's, it became more common to install computers in cars in order to control engine operation. For a computer-controlled throttle to respond to a driver's operation of the car, the computer must know the manner in which the driver is operating the accelerator pedal. Accordingly, it became common to combine accelerator pedals with electronic sensors to provide the engine computers with the necessary information.

In regard to ascertaining differences between the prior art and claim 4, the district court compared the teachings of the prior art of the Engelgau patent and found "little difference." The district court also considered that the PTO rejected one of the claims that was similar to, but broader than, claim 4 during prosecution. The rejected claim did not include the requirement that the sensor be placed on a fixed pivot point, and the PTO concluded that the claim was an obvious combination of the Redding and Smith references. Further, utilizing the TSM test required by Federal Circuit precedent, the district court reasoned that the state of the industry would lead inevitably to combinations of electronic sensors and adjustable pedals, that Rixon provided the basis for these developments, and that Smith taught locating the sensor on a fixed structure of the pedal to overcome the wire chaffing problems in Rixon. These teachings would lead one of ordinary skill in the art to a combination of the adjustable pedal of Asano with a pedal position sensor, thus rendering the subject matter of claim 4 obvious. In the district court's view, this conclusion was

further supported by the PTO's rejection of the broader version of claim 4, because the district court believed that the PTO would have found the subject matter of claim 4 to be obvious in view of a combination of the Asano and Smith references.

On appeal, the Federal Circuit principally relied on the TSM test and reversed the district court's decision. The Federal Circuit ruled that the district court had not been strict enough in applying the TSM test having failed to make findings as to the specific understanding or principle that would have motivated one to attach an electronic control to the support bracket of the Asano assembly. The Federal Circuit (incorrectly) held that the district court was incorrect that the nature of the problem to be solved satisfied this requirement because unless the "prior art references address the precise problem that the patentee was trying to solve," the problem would not motivate an inventor to look at those references. Since Engelgau allegedly sought to provide a simpler, smaller, and cheaper adjustable electronic pedal, the Federal Circuit looked at each of the prior art references to determine whether Engelgau would have considered the reference in solving the problem. When the references are interpreted in this way, the Federal Circuit held that they would have not lead a person of ordinary skill to put a sensor on the pedal described in Asano. The Federal Circuit also noted that while it might have been "obvious to try" the combination of Asano with a sensor, being merely obvious to try has long been held not to constitute obviousness. Finally, the Federal Circuit found that the PTO has rejected the broader version of claim 4 had no place in an obviousness analysis.

## **II. Issues**

Can a patent claim only be proven obvious if some teaching, suggestion, or motivation to combine the prior art teachings can be found in the prior art, the nature of the problem, or the knowledge of the person having ordinary skill in the art?

## **III. Discussion**

No. The Supreme Court began by rejecting the rigid approach the Federal Circuit in applying the TSM test. Instead, the Court stated that its cases have set forth an expansive and flexible approach inconsistent with a rigid application of the TSM test. In addition to reaffirming its earlier holdings in *Graham v. Deere* and *Hotchkiss v. Greenwood*, the Court further reaffirmed that a "patent for a combination which only unites old elements with no change in their respective functions ... obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skillful men." In this regard, the Court stated that the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results. Nevertheless, in reaffirming its decision in *United States v. Adams*, the court recognized the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means is more likely to be non-obvious. The fact that the elements work together in an unexpected manner may support a finding of non-obviousness.

Relying upon the underlying principles in its earlier cases, the Court stated that when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill. Of course, the Court noted that following these principles may be more difficult in cases that involve more than the simple substitution of one known element for another or the mere

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application of a known technique to a piece of prior art ready for the improvement. In this regard the Court stated:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977-988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”). As our precedents make clear, however, 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.

After stating that its precedents call for a flexible and “common sense” approach to the determination of obviousness, the Court recognized that the CCPA had captured a helpful insight in determining whether a teaching, suggestion, or motivation to combine known elements is present in order to determine whether a combination is obvious. Clearly, a patent composed of several elements is not proved obvious merely by demonstrating that each of the elements was, independently, known in the prior art. It can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does, because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. However, the Court was quick to note that such helpful insights need not become rigid in mandatory formulas. The Court noted that the diversity of inventive pursuits and of modern technology counsels against limiting the analysis in this way and that, in many fields, there may be little discussion of obvious techniques or combinations in the scientific literature. Instead, it is often the case that market demand will drive design trends. However, the Court noted that in the years since the CCPA set forth the essence of the TSM test, it has been applied in many instances in accordance with the general principles set forth in the Court’s precedents, and there is no necessary inconsistency with the idea underlying the TSM test and the *Graham* analysis. It is only when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Federal Circuit did in the present case, that an error is committed.

With regard to the decision of the Federal Circuit in this particular case, the Court noted that the Federal Circuit had committed several errors. First, the Court found that courts and patent examiners should not look only to the problem the patentee was trying to solve. Rather, the problem motivating the patentee may be only one of many problems, and the question is not whether the combination is obvious to the patentee but whether the combination is obvious to a person of ordinary skill in the art. Under the correct analysis, any need or problem known in the field of endeavor at the time of the invention can provide a reason for combining the elements in the manner claimed. Second, it is not a correct assumption that a person of ordinary skill attempting to solve a problem will be lead only to those elements of prior art designed to solve the problem. Rather, common sense dictates that familiar items may have obvious uses beyond their primary purposes, so regardless of the primary problem being solved, the prior art may still provide examples to a person of ordinary skill. Third, the Court found that the Federal Circuit erred in stating that a patent claim cannot be proved obvious merely by showing that a combination of elements was “obvious to try.” Instead, when there is a design need or market

pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this pursuit leads to the anticipated success, it is likely the product of ordinary skill and common sense, not the product of innovation. Finally, the Court found that the Federal Circuit should not deny fact finders resource to common sense under the pretext of avoiding distortion cause by hindsight bias and reliance upon *ex post* reasoning.

In light of these errors, the Court essentially adopted the district court's reasoning in reversing the Federal Circuit and remanding the case for further proceedings consistent with this opinion.

#### **IV. Conclusions**

It appears that the Court has not made any "new law." The Court only held that a rigid application of the TSM test is improper, but clearly found that the application of the TSM can provide helpful insights in assisting a court or the PTO in determining whether a claimed subject matter is obvious. Rather, the Court merely reaffirmed its longstanding precedents that caution against rewarding a patent monopoly to subject matter within the skill of the ordinary artisan, and thus within the possession of the public, as well as precedents that recognize that a proper determination of what is obvious may include evidence other than an explicit teaching, suggestion, or motivation to combine found in prior art, such as well known principles and market driven forces.

Although the Court did state that advances in one field of endeavor may lead to advances in different fields of endeavor, the Court did not seem to suggest that it was in any way impugning the Federal Circuit's test to determine whether art is analogous. Indeed in reaffirming the *Graham* factor that requires a determination of the scope and content of the prior art, the Court has essentially reaffirmed that there is some limit on what art is analogous and what art is not. In fact, since Section 103 states that subject matter is not patentable only if it would have been "obvious ... to a person having ordinary skill in the art to which said subject matter pertains," the proper inquiry for scope and content of the prior art continues to focus upon the person of ordinary skill in the relevant art and with what prior art such a person would have been familiar. If principles, common sense, or market forces are so well known, then such evidence would satisfy the second step of the accepted test to determine whether art is analogous.

Furthermore, the Court did not suggest that objective evidence need not be provided in the record. Just the opposite, the Court specifically stated that "this analysis should be made explicit." Hence, the viability of *In re Lee*, which held that any factual inquiry whether to combine references must be based on objective evidence of record, appears to be untouched.

Finally, because of the inartful manner that the Court dispensed of the "obvious to try" issue, one may think that it has somehow reversed longstanding precedent related to this issue. However, such does not appear to be the case. While the litany of cases related to "obviousness to try" do not drawn any bright line, it seems clear that where a particular configuration may be selected from a broad range of possibilities and where the prior art suggests no particular advantages of any particular configuration, yet the inventive configuration achieves significant advantages, the result achieved must be considered as well as the actual physical modification in determining whether the subject matter is obvious. In such situations, absent evidence to the contrary, a mere "obvious to try" allegation does not render the subject matter obvious under Section 103. However, where a new problem may arise and the prior art suggests that the solution may reside in limited number of possible permutations, the solution will usually be obvious even though a person of ordinary skill would have to try several of the permutations to reach the desired configuration. In this light,

it is clear that the Court's brief discussion of "obvious to try" does not stray from the longstanding precedent.

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**Suggested Stock Paragraph for Use in Responding to Official Actions**

In addressing obviousness determinations under 35 U.S.C. § 103, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), reaffirmed many of its precedents relating to obviousness including its holding in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In *Graham*, the Court set out an objective analysis for applying the statutory language of §103:

Under §103, the scope and content of the prior art are to be determined, differences between the prior art and the claims at issue are to be ascertained, and the level of ordinary skill in the pertinent art are to be resolved. Against this background the obviousness or non-obviousness of the subject matter is to be determined. Such secondary considerations as commercial success, long-felt but unresolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

*KSR, slip op.* at 2 (citing *Graham*, 383 U.S. at 17-18).

In *KSR*, the Court also reaffirmed that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 14. In this regard, the *KSR* court stated that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does ... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *Id.* at 14-15. Traditionally, to establish a *prima facie* case of obviousness, the CCPA and the Federal Circuit have required that the prior art not only include all of the claimed elements, but also some teaching, suggestion, or motivation to combine the known elements in the same manner set forth in the claim at issue. *See, e.g., ASC Hospital Systems Inc. v. Montifiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (holding that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination.); *In re Mills*, 16 U.S.P.Q.2d 1430, 1433 (Fed. Cir. 1990) (holding that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination). In *KSR*, the court noted that the demonstration of a teaching, suggestion, or motivation to combine provides a “helpful insight” in determining whether claimed subject matter is obvious. *KSR, slip op.* at 14. However, the court rejected a *rigid* application of the “TSM” test. *Id.* at 11. In this regard, the court stated:

The obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and explicit content of issued patents. The diversity of inventive pursuit and of modern technology counsels against limiting the analysis in this way. In many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends.

*Id.* at 15.

In other words, the *KSR* court rejected a rigid application of the TSM test which requires that a teaching, suggestion or motivation to combine elements in a particular manner must be explicitly found in the cited prior art. Instead, the *KSR* court favored a more expansive view of the sources

of evidence that may be considered in determining an apparent reason to combine known elements by stating:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art all in order to determine whether there was an apparent reason to combine in the known elements in the fashion claimed in the patent at issue.

*Id.* at 14.

The *KSR* court also noted that there is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis, and it further stated that the broader application of the TSM test found in certain Federal Circuit decisions appear to be consistent with *Graham*. *Id.* at 17-18 (citing *DyStar Textilfarben GmbH and Co. v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (2006) (“Our suggestion test is in actuality quite flexible and not only permits but *requires* consideration of common knowledge and common sense”); *Alza Corp. v. Mylan Labs, Inc.*, 464 F.3d 1286, 1291 (2006) (“There is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art. We do not have a rigid test that requires a teaching to combine ... “)).

Furthermore, the *KSR* court did not diminish the requirement for objective evidence of obviousness. *Id.* at 14 (“To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). As our precedents make clear, however, 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.”); see also, *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002) (holding that the factual inquiry whether to combine references must be thorough and searching, and that it must be based on *objective evidence of record*).