

REPORT

SUPREME COURT HOLDS IN *KSR* CASE THAT EXPANSIVE AND FLEXIBLE OBVIOUSNESS ANALYSIS IS REQUIRED

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On April 30, in *KSR International Co. v. Teleflex Inc.*,¹ the United States Supreme Court provided its long-awaited guidance on proper obviousness analysis. The decision includes the Court's view of the Federal Circuit's long-applied "teaching, suggestion, or motivation test" (TSM test) that has required demonstration of a teaching, suggestion or motivation to combine or modify prior art as a critical part of an obviousness analysis. The unanimous Court, in an opinion written by Justice Kennedy, reversed the Federal Circuit's decision below and held the sole asserted claim of Teleflex's patent invalid for obviousness.

In so holding, the Court stated that "[t]here is no necessary inconsistency between the idea underlying the TSM test and the *Graham*² analysis," and the Court acknowledged that the Federal Circuit "no doubt has applied the test in accord with these [Supreme Court] principles in many cases." However, the Court further stated that *Graham* and other Supreme Court cases "have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here," and that "when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Court of Appeals did here, it errs."

This Special Report: (1) presents in Part I the background of the Supreme Court's decision (including the basic facts, the issue, the decisions under review and related Federal Circuit decisions), (2) summarizes in Part II key aspects of the decision, (3) analyzes in Part III the interplay between the decision and the Federal Circuit's related body of law, and the practical effects of the decision, and (4) provides in Part IV conclusions and recommendations.

¹ 550 U.S. ___, 2007 WL 1237837 (2007).

² *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

I. Background

A. The Underlying Facts and Issue

Teleflex sued KSR in the Eastern District of Michigan for alleged infringement of, *inter alia*, claim 4 of U.S. Patent No. 6,237,565 to Engelgau ("Teleflex patent"). Claim 4 recites a vehicle control pedal apparatus comprising a support adapted to be mounted to a vehicle structure, an adjustable pedal assembly having a movable pedal arm, a fixed pivot for pivotally supporting the pedal assembly with respect to the support, and an electronic control attached to the support for controlling a vehicle system by being responsive to the pivot and thereby providing a signal corresponding to the position of the pedal arm. KSR asserted that claim 4 is invalid for obviousness in view of the prior art.

The prior art before the courts during the litigation included the Asano patent (disclosing an adjustable pedal assembly with a fixed pivot point), references disclosing the use of an electronic sensor on a pivot point of a pedal assembly to detect pedal position (*e.g.*, for computer-controlled throttles), the Rixon patent (disclosing an electronic sensor located in a pedal footpad and thus suffering from wire chafing from pedal operation), and the Smith patent (disclosing a sensor located on a fixed part of the pedal assembly to prevent wire chafing). Additional factual details of the Teleflex patent and the prior art are provided in Part I of Appendix A hereto.

The sole issue before the Supreme Court, and before the Federal Circuit below, was the obviousness of claim 4 of the Teleflex patent in view of the prior art.

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B. The Underlying District Court and Federal Circuit Decisions Applying the TSM Test

On December 12, 2003, the district court granted summary judgment in favor of KSR. The district court held that claim 4 of the Teleflex patent, the only claim at issue, was invalid for obviousness.³

In the course of its decision, the district court reviewed the pertinent history of pedal design, the Teleflex patent and asserted claim 4, and the relevant prior art. The district court applied *Graham's* framework and determined that claim 4 would have been obvious from Asano in combination with prior art teaching the use of a sensor to detect the pedal position and transmit it to the computer controlling the throttle.

In the course of finding claim 4 to have been obvious, the district court applied the Federal Circuit's TSM test and held that KSR had satisfied the test. The district court held that the state of the industry would have inevitably led to combinations of electronic sensors and adjustable pedals, that Rixon provided the basis for those developments, and that Smith taught to solve Rixon's wire chafing problem by locating the sensor on the fixed structure of the pedal.

By non-precedential decision on January 6, 2005, the Federal Circuit vacated the district court's decision based upon the Federal Circuit's more rigid application of the TSM test.⁴ Although acknowledging that a teaching, suggestion or motivation to combine prior art references may be found explicitly or implicitly in the prior art references themselves, in the knowledge of those of ordinary skill in the art, or from the nature of the problem to be solved, the Court stated that "we have consistently held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teachings in the particular manner claimed."

The Federal Circuit agreed with Teleflex that the district court had "applied an incomplete teaching-suggestion-motivation test in granting KSR summary judgment." More particularly, the Federal Circuit stated

that "the district court was required to [but did not] make specific findings as to a suggestion or motivation to attach an electronic control to the support bracket of the Asano assembly," and that Asano, Rixon and Smith -- each directed to a different problem than the Teleflex patent -- do not provide the motivation. The Federal Circuit also stated that expert declaration testimony, essentially stating that it would have been "obvious to try" mounting an electronic control on the support bracket of a pedal assembly, did not support an obviousness determination. Finally, the Federal Circuit determined that genuine issues of material fact (created by conflicting expert declarations) rendered summary judgment inappropriate.

C. The Federal Circuit's Intervening *Kahn*, *Ormco*, *Alza* and *Dystar* Decisions Regarding the TSM Test

Between March and October 2006, well after KSR petitioned the Supreme Court for a writ of *certiorari* (on April 6, 2005), including after KSR's petition was granted (on June 26, 2006), the Federal Circuit issued a number of decisions showing much more flexibility in the application of the TSM test. In each of *In re Kahn*,⁵ *Ormco Corp. v. Align Technology, Inc.*,⁶ *Alza Corp. v. Mylan Laboratories, Inc.*,⁷ and *Dystar Textilfarben GmbH & Co. v. C. H. Patrick Co.*,⁸ the Court held patent claims unpatentable or invalid for obviousness.

Kahn noted that the Federal Circuit's predecessor court (the Court of Customs and Patent Appeals (CCPA)) was the first to articulate the TSM test, but that "a related test -- the 'analogous art' test -- has long been part of the primary *Graham* analysis articulated by the Supreme Court." Under the analogous art test, prior art must be in the field of the inventor's endeavor or reasonably pertinent to the problem facing the inventor. *Kahn* stated that the analogous art test "begins the inquiry into whether a skilled artisan would have been motivated to combine references ...," and that the TSM test "picks up where the analogous art test leaves off and informs the *Graham* analysis."

Kahn held that the motivation (or suggestion or teaching) need not be found explicitly in the prior art, that

³ *Teleflex Inc. v. KSR Int'l Co.*, 298 F.Supp.2d 581 (E.D. Mich. 2003).

⁴ *Teleflex Inc. v. KSR Int'l Co.*, 119 Fed. Appx. 282 (Fed. Cir. 2005).

⁵ 441 F.3d 977 (Fed. Cir. 2006).

⁶ 463 F.3d 1299 (Fed. Cir. 2006).

⁷ 464 F.3d 1286 (Fed. Cir. 2006).

⁸ 464 F.3d 1356 (Fed. Cir. 2006).

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the problem examined in considering motivation is not the specific problem solved by the invention but the general problem that confronted the inventor before the invention was made, and that the prior art need not be combined for the reasons contemplated by the inventor. However, *Kahn* stated that "obviousness ... cannot be sustained by mere conclusory statements," but rather "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." Thus, according to *Kahn*, the TSM test "asks not merely what the references disclose, but whether a person of ordinary skill in the art, possessed with the understandings and knowledge reflected in the prior art, and motivated by the general problem facing the inventor, would have been led to make the combination recited in the claims."

Ormco added that "[a] claim can be obvious even where all of the claimed features are not found in specific prior art references," if a suggestion or motivation to modify the prior art references can be shown. Then in *Alza*, the Court cited heavily to *Kahn* in stating (seemingly for the benefit of the Supreme Court) that "[t]here is flexibility in our obviousness jurisprudence because a motivation may be found *implicitly* in the prior art," and in referring to "our non-rigid 'motivation-suggesting-teaching' test." *Alza* struck down the asserted patent claims for obviousness because one of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and would have had a reasonable expectation of success in doing so.

In *Dystar*, written by Federal Circuit Chief Judge Michel, the Court expressly noted the Supreme Court's grant of *certiorari* in the *KSR* case, and again lobbied for its TSM test stating that "[o]ur suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense" as possibly establishing motivation. *Dystar* also pointed out that "prior art" is a much broader category than just the references sought to be combined, *e.g.*, "textbooks or treatises may include basic principles unlikely to be restated in cited references."

Dystar even more strongly stated that "an implicit motivation to combine exists ... when the 'improvement' is technology-independent and the combination of references results in a product or process that is more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient." Indeed,

the Court indicated that "[i]n situations where a motivation to combine is based on these principles, the invention cannot be said to be nonobvious." The Court also stated that its precedent on this point is consistent with the Supreme Court's holdings in *Graham*, *Sakraida v. Ag Pro, Inc.*,⁹ *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*,¹⁰ and *United States v. Adams*.¹¹ *Dystar* also emphasized the importance of properly determining the level of skill because of its importance in determining whether prior art is "analogous art" and whether one of ordinary skill in the art would have been motivated to combine (or modify) prior art references.

II. The Supreme Court's Unanimous Decision

A. Proper Obviousness Analysis Based Upon §103 and Supreme Court Precedent

The Supreme Court in *KSR* began its discussion of a proper obviousness analysis as follows:

We begin by rejecting the rigid approach of the Court of Appeals. Throughout this Court's engagement with the question of obviousness, our cases have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here.

The Court noted that *Graham* reaffirmed the "functional approach" of the Supreme Court's 1851 decision in *Hotchkiss v. Greenwood*,¹² and that "[n]either the enactment of §103 nor the analysis in *Graham* disturbed this Court's earlier instructions concerning the need for caution in granting a patent based on the combination of elements found in the prior art." The Court then cited to its earlier decisions dating back to 1950, including those addressed by the Federal Circuit in *Dystar* discussed above, for the proposition that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." The cited cases included: *Great Atlantic & Pacific Tea Co. v. Supermarket Equipment Corp.*¹³ (patent for a combination uniting old elements with no change in their

⁹ 425 U.S. 273 (1976).

¹⁰ 396 U.S. 57 (1969).

¹¹ 383 U.S. 39 (1966).

¹² 11 How. 248 (1851).

¹³ 340 U.S. 147 (1950).

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respective functions obviously withdraws what is already known into the field of its monopoly); *United States v. Adams* (patent claim to a known structure that is altered by the mere substitution of one element for another known in the field must do more than yield a predictable result); *Anderson's-Black Rock* (combining two pre-existing elements to do no more than they would in separate, sequential operation is obvious); and *Sakraida* (combination of old elements each performing its known function is obvious).

After reiterating the principles of the foregoing prior cases, the Court in *KSR* enunciated the following corollary principles derived from those cases:

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 person of ordinary skill can implement a predictable variation, §103 likely bars its patentability. For the same reason, 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.... [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Often [*e.g.*, where the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement], 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 [*citing Kahn*] 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.

The Court further acknowledged that, in establishing the TSM test, the CCPA (the Federal Circuit's predecessor court) "captured a helpful insight," *i.e.*, 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." The Court stated, though, that "[h]elpful insights, however, need not become rigid and mandatory formulas; and when it is so applied, the TSM test is incompatible with our precedents."

B. The Federal Circuit's Flawed Analysis in this Case

The Court noted four flaws (errors) in the Federal Circuit's analysis in its *KSR* decision under review that "relate for the most part to the court's narrow conception of the obviousness inquiry reflected in its application of the TSM test." The Court stated, contrary to the Federal Circuit, that in determining whether a patent claim is obvious "neither the particular motivation nor the avowed purpose of the patentee controls. What matters is the objective reach of the claim."

We briefly discuss below the four errors in the Federal Circuit's *KSR* obviousness analysis detected by the Supreme Court.

1. Overly Narrow Definition of the Problem

According to the Court, the Federal Circuit erred in its *KSR* decision "by holding that courts and patent examiners should look only to the problem the patentee was trying to solve." The Court stated that, "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed."

2. Overly Narrow View of the Prior Art

The Court held that the Federal Circuit also erred in its *KSR* decision "in its assumption 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." As to this error, the Court stated that "[c]ommon sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a

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person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." The Court also stated that "[a] person of ordinary skill is also a person of ordinary creativity, not an automaton."

Pertinent to the issue before it, the Court held that, regardless of Asano's primary purpose (*i.e.*, solving a constant ratio problem in an adjustable pedal assembly), the Asano reference was an obvious example of an adjustable pedal with a fixed pivot point. The Court also noted that the prior art indicated that a fixed pivot point was an ideal mount for a sensor.

3. Disregard of "Obvious To Try"

The Court further noted that "[t]he same constricted analysis" led the Federal Circuit to erroneously conclude in its *KSR* decision "that a patent cannot be proved obvious merely by showing that the combination of elements was 'obvious to try.' " The Court stated that if a design need or market pressure to solve a problem having a finite number of identified, predictable solutions provides good reason for an ordinarily skilled person to pursue the known options within his or her technical grasp, and if such pursuit leads to the anticipated success, "it is likely the product not of innovation but of ordinary skill and common sense." According to the Court, "[i]n that instance the fact that a combination was obvious to try might show that it was obvious under §103."

4. Overly Rigid Rules To Avoid Hindsight

The Court found that the Federal Circuit further erred in its *KSR* decision when it "drew the wrong conclusion from the risk of courts and patent examiners falling prey to hindsight bias." Although recognizing the need to guard against slipping into the use of hindsight, the Court noted that "[r]igid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it."

C. The Federal Circuit's Decisions Since Its Decision in *KSR*

The Court noted that the Federal Circuit, in cases such as *Dystar* and *Alza* decided after the Federal Circuit's *KSR* decision under review, "elaborated a broader conception of the TSM test than was applied in the instant matter." However, the Court further noted that those later decisions

were not before it for review and do not correct the errors of law made by the Federal Circuit in the case under review. The Court further stated that "[t]he extent to which they [the later decisions] may describe an analysis more consistent with our earlier precedents and our decision here is a matter for the Court of Appeals to consider in its future cases."

D. Obviousness of Asserted Claim in this Case

The Court applied its above-discussed standards to the facts of the matter under review and found claim 4 obvious. In particular, the Court stated that "[a] person having ordinary skill in the art 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."

The Court initially addressed Teleflex's argument that the Asano pedal could not be combined with a sensor in the manner described by claim 4 because of the design of Asano's pivot mechanisms. However, the Court pointed out that this argument was not raised before the district court, that it was unclear whether the argument was raised before the Federal Circuit, and that Teleflex's own expert declarations did not support the argument. Accordingly, the Court assumed the correctness of the district court's conclusion that combining Asano with a pivot-mounted pedal position sensor fell within the scope of claim 4.

The Court determined that the district court had correctly concluded that, as of the time the subject matter of claim 4 was designed, "it was obvious to a person of ordinary skill to combine Asano with a pivot-mounted pedal position sensor" given the strong incentive in the marketplace to convert mechanical pedals to electronic pedals. The Court stated that the Federal Circuit considered the issue too narrowly, and that "[t]he proper question to have asked was whether a pedal designer of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to upgrading Asano with a sensor." The Court decided that a pedal designer would have seen that benefit, and that the question for a designer starting with Asano was where to attach the sensor.

The Court determined that, from the combined teachings of the prior art, "the designer would know to place the sensor on a nonmoving part of the pedal structure [*e.g.*, the support structure]," and that "[t]he most obvious

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nonmoving point on the structure from which a sensor can easily detect the pedal's position is a pivot point." Thus, the Court concluded that it would have been obvious to upgrade Asano to work with a computer-controlled throttle, thereby achieving an adjustable electronic pedal covered by claim 4. The Court stated that it alternatively would have been possible to arrive at the adjustable electronic pedal of claim 4 by starting with an adjustable electronic pedal as disclosed in Rixon, and improving it, on the basis of teachings from prior art references such as Smith and Asano, to avoid the wire-chafing problem.

The Court also held that (1) the prior art did not teach away from attaching a sensor to Asano and (2) there was no showing of secondary factors "to dislodge the determination that claim 4 is obvious." The Court also determined that summary judgment by the district court was appropriate, because "[t]he ultimate judgment of obviousness is a legal determination," there are no material facts in dispute, and the obviousness of the claim is apparent in light of the *Graham* factors.

The Court stated that it did not need to reach the question of whether the failure to disclose Asano during prosecution voided the presumption of validity given to issued patents, because claim 4 was obvious despite the presumption. However, in an important piece of dicta, the Court stated that "[w]e nevertheless think it appropriate to note that the rationale underlying the presumption -- that the PTO, in its expertise, has approved the claim -- seems much diminished here."

III. Analysis

A. The Interplay Between *KSR* and Federal Circuit Decisions

In large measure, *KSR* simply reiterates, albeit in more detail, what the Supreme Court has been saying for over 150 years. Only those inventions that are the result of more than ordinary skill and ingenuity are protectable by patents, prior advances in a field redefine a new, higher threshold from which innovation is measured, and the standard for obviousness must be expansive and flexible to ensure that patents do not stifle the progress of useful arts.

The Federal Circuit had created a somewhat confused and inconsistent body of law applying its TSM test, which resulted in the issuance and enforcement of patents

according to widely varying standards, at times appearing to be inconsistent with prior Supreme Court decisions. The Federal Circuit's *KSR* decision was a prime example of a line of cases applying the TSM test in a very rigid and narrow manner, and thus was an easy target for the Supreme Court.

1. The Federal Circuit's Reformulated TSM Test Basically Comports With *KSR*

Given some of the harsh criticism of the TSM test voiced by certain Justices at the oral argument before the Supreme Court, an extraordinary aspect of the unanimous *KSR* decision is that the Supreme Court did not condemn the TSM test outright, only its inflexible, formulaic and narrow application in the particular case at hand. Whether or not the Federal Circuit acted only because it saw the handwriting on the wall once *certiorari* was sought and granted by the Supreme Court in the *KSR* case, the fact remains that the Federal Circuit did a remarkable job in its quartet of 2006 post-*cert* cases (*Kahn*, *Ormco*, *Alza* and *Dystar*) of harmonizing its formulation of the more detailed TSM test with the Supreme Court's more generalized standard for obviousness. Fundamentally, there is no inconsistency between the Federal Circuit's already-reformulated TSM test and the Supreme Court standard. Significantly, the Supreme Court appears to have been sufficiently satisfied with the Federal Circuit's reformulated test to leave it to the Federal Circuit to consider in future cases to what extent there is any discrepancy between the reformulated test and the Supreme Court standard.

2. Both Courts View Narrowly What Circumstances "Teach Away"

A key determinant identified in both Supreme Court and Federal Circuit cases as weighing against obviousness is if the prior art "teaches away" from the claimed invention. However, both *KSR* and the Federal Circuit's precedent are consistent in narrowly viewing what circumstances constitute a teaching away. *KSR* noted in this regard, under the circumstances involved in that case, that it was not enough to show that upgrading Asano would result in an inefficient device, and that it was improper to compare the efficiency of Asano with the efficiency of a preferred embodiment of the Teleflex patent. The Court pointed out that Teleflex had not shown "that Asano was

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somehow so flawed that there was no reason to upgrade it, or pedals like it, to be compatible with modern engines."

Under the Federal Circuit's long-standing basic formulation, which was repeated in *Kahn* and *Ormco*, a reference "teaches away" from a claimed invention "when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." Other Federal Circuit cases have confirmed that disclosure of a preference for one alternative does not necessarily teach away from the claimed alternative, unless the disclosure criticizes, discredits, or otherwise discourages the claimed alternative.¹⁴

Similarly, the Federal Circuit has noted that if a reference brings up the topic of combining two references, but then states that the combination would produce a seemingly inoperative device, then the reference teaches away from the combination. However, simply because two inventions were designed to resolve different problems is not sufficient to demonstrate that one invention teaches away from another. *Nat'l Steel Car Ltd. v. Can. Pac. Rwy. Ltd.*;¹⁵ see also *Dystar* ("[w]e will not read into a reference a teaching away... where no such language exists"), *Alza* (no teaching away despite uncertainties expressed in references concerning correlation between chemical and physiological properties of a drug), and *Fulton* (obviousness despite prior art's characterization of claimed feature or combination as less desirable or "inferior").

3. The Federal Circuit Decisions Embellish Key Concepts of *KSR*

It is also important to recognize that the 2006 post-*cert* quartet of Federal Circuit decisions discussed above, and other more recent Federal Circuit decisions, have already extended the reach of the Supreme Court's principles of obviousness well beyond the simple mechanical invention fact scenario at issue in *KSR*. These Federal Circuit decisions also contain numerous significant embellishments not found explicitly in the Supreme Court decisions. Time will tell whether the Federal Circuit finds it necessary to revisit any of its recently formulated embellishments in light of the Supreme Court's *KSR* decision.

a. "Teaching Away" and "Obvious to Try"

One example is the Federal Circuit's treatment of the "teaching away" factor, which is discussed above. Another example is *KSR*'s statement about the "obvious to try" standard of obviousness, which has already elicited much comment. However, the standard is widely misunderstood. *KSR*'s statement of the standard -- "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" -- is not inconsistent with Federal Circuit pronouncements on the subject, when that precedent is correctly understood. The recent *Pfizer v. Apotex* decision¹⁶ contains an extended discussion of the Federal Circuit's relevant precedent. *Pfizer* cogently demonstrates both that the standard is far more nuanced than may appear from the Supreme Court's statement of the standard, and that there is considerable opportunity for error in invoking the principle and its many corollaries without due regard to the particular facts in each case.

More specifically, as summarized by *Pfizer*, when all claim limitations are found in a number of prior art references, a subsidiary requirement subsumed in the *Graham* factors for evaluating obviousness is that a skilled artisan not only would have been motivated to combine the prior art teachings to achieve the claimed invention, but also that the skilled artisan would have had a "reasonable expectation of success in doing so." However, obviousness is not avoided simply by showing some degree of unpredictability in the art where there is a reasonable probability of success. *Pfizer* specifically rejected the proposition that unpredictability necessarily equates to patentability. Nonetheless, as *Pfizer* further explains, under the "obvious to try" standard, one must be motivated to do more than merely vary all parameters or try each of numerous possible choices until one possibly arrives at a successful result, where the prior art gives no indication of which parameters are critical or no direction as to which of many possible choices is likely to be successful.

¹⁴ *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

¹⁵ 357 F.3d 1319, 1339 (Fed. Cir. 2004).

¹⁶ Appeal No. 2006-1261 (Fed. Cir. March 22, 2007).

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b. Level of Skill and Scope of the Relevant Art

As noted above (see Part II.A.), *KSR* touches, but does not focus on, the principle built into the statute and Supreme Court decisions that obviousness is measured from the perspective of one of ordinary skill in the relevant art. However, as also noted above, the Federal Circuit in *Kahn* elaborated at length on its long-established "analogous art" standard for determining what prior art may properly be considered. The Federal Circuit subsequently further explained in *Dystar* that determination of the level of skill is often critical both to determinations of whether prior art is "analogous art" and to determinations of whether one of ordinary skill in the art would have been motivated to combine (or modify) prior art references.

Because the Supreme Court's holding of invalidity does not turn on these factors, the Court's comments on these topics are arguably dicta. In any event, in view of *KSR*'s broad pronouncements, the question can be asked whether, and to what extent, the traditional analogous art test is still appropriate given the multi-disciplinary nature of modern research and development, and the convergence of many once-distinct technologies.

c. The Obviousness Inquiry Is Complicated and Fact Specific

As is typical of Supreme Court pronouncements, *KSR*'s statements of obviousness principles are highly distilled. The Federal Circuit's recent decisions demonstrate that this seductively succinct formulation of the obviousness standard belies the fact that obviousness is actually "a complicated subject requiring sophisticated analysis" and thus that decisions on obviousness must be narrowly tailored to the facts of each individual case. *Pfizer*, citing and quoting *Dystar*.

B. The Practical Effects of *KSR*

For some applicants and patentees who had been accustomed to relying on and exploiting the pro-patent aspects of the Federal Circuit's rigidly applied TSM test,

KSR, and the Federal Circuit's most recent decisions, have had a major impact. Assuming that the Federal Circuit has had a genuine change of heart, many of the old tactics used in the Patent Office and in the district courts likely will no longer work, and if they do, they likely will not withstand scrutiny on appeal.

The impact may be felt most strongly, and most immediately, in the so-called "predictable" mechanical and electrical arts, and particularly with respect to the ability to obtain and enforce broad, generic claims for technologically simple combinations. Arguably, in the advanced biotechnology and chemical arts and other sophisticated and highly complex technologies, patent practices may be less affected. However, the "predictable art" rubric can be misleading, particularly if applied to distinguish broad categories of technologies. (For example, many chemical and biological interactions are quite predictable.) In any event, the Federal Circuit's *Alza* and *Pfizer* decisions, which both invalidated chemical (pharmaceutical) patents applying the Federal Circuit's reformulated TSM test, demonstrate that no technology is immune from the effects of the Supreme Court's mandate that the proper test for obviousness is expansive and flexible.

For competitors and other members of the public who have been frustrated by apparently obvious patents issuing from the PTO, and the vagaries of defending against such patents in the courts, *KSR* should be heartening. But for those looking for greater certainty and predictability in evaluating obviousness, *KSR* may disappoint, for at least three reasons. First, the Supreme Court's basic characterization of the proper approach as being "expansive and flexible" and "functional" is not appreciably more concrete or precise analytically than the TSM approach. Second, the Supreme Court's principles are not controlling; rather, the various noted factors only "can" or "might" be indicative of obviousness. Third, the import of the *KSR* Court's own analysis of the facts is clouded for several reasons.

Regarding the third point, the factual record before the Court was skewed. In particular, the Court refused to substantively consider, as untimely presented, a more sophisticated technical argument by Teleflex as to why one of ordinary skill allegedly would not have been motivated

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to modify Asano.¹⁷ Additionally, the Court's characterization of the prosecution history is not accurate in at least one key respect, *i.e.*, contrary to the Court's statement (see Appendix A hereto), the PTO had before it an adjustable pedal with a fixed pivot point (Rixon 183).

Finally, despite the expansive principles that the Court said inform the obviousness analysis, the Court, without explanation, confined its obviousness analysis of claim 4 to a traditional restricted PTO-style rejection analysis. The Court narrowly framed the "proper question to have asked" as being "whether a pedal designer of ordinary skill, facing the wide range of needs created by developments in the field of endeavor, would have seen a benefit to upgrading Asano with a sensor." The Court also did the inverse analysis, explaining that it was possible to start with an adjustable electronic pedal like Rixon's and seek an improvement that would avoid Rixon's wire-chafing problem. The one possible departure from a traditional PTO-style evaluation of obviousness was the Court's extrapolation from Smith's general teaching (of placing a sensor on a pedal's fixed support structure) to observe that "the most obvious nonmoving point on the structure from which a sensor can easily detect the pedal's position is a pivot point."¹⁸

IV. Conclusions and Recommendations

Needless to say, patent applicants and patentees need to rethink patentability/validity arguments, and competitors

need to take advantage of *KSR*-style obviousness analysis when confronted with others' patents. Unfortunately, most of the advice that could be provided to applicants and patentees is "negative," that is, a list of the traditional arguments that are no longer legally sound. In any event, the most useful thing that applicants, patentees and competitors can do at this juncture is to familiarize themselves with the new body of law.

We welcome any specific questions that you may have as you develop prosecution, enforcement and defense strategies in view of *KSR*. Meanwhile, we recommend consideration of the following:

- At a minimum, applicants and patentees need to evaluate the merits of an invention from a much larger "prior art" vantage point, and with due regard for the obviousness of employing recognized design considerations and features that perform their same functions when combined with other features. Patent examiners and district courts will likely take a more liberal view of the prior art in view of *KSR* (based on asserted general principles and knowledge in the art, combined teachings of the prior art as a whole, and the like). Thus, applicants and patentees need to be even better prepared to demonstrate, if factually supportable, that, *e.g.*,
 - (1) the level of skill in the art is low,
 - (2) prior art is non-analogous,
 - (3) there is no viable reason to combine or modify the prior art references,
 - (4) the function of a claim element is not disclosed in the prior art,
 - (5) the ordinarily skilled person would not have had the requisite knowledge or skill to combine or modify the prior art references,
 - (6) the examiner's or an opponent's assertions of general principles and knowledge are erroneous,
 - (7) the prior art teaches away from the claimed invention,
 - (8) the claimed invention provides unpredictable, unexpected or surprising results, and/or

¹⁷ *KSR* asserted that it would have been obvious to sense the rotation of Asano's pivot 54 (see Asano Figure in Appendix A). Teleflex in part tried to argue that an ordinary designer would not have considered pivot 54 because it suffered from a constant ratio problem that the rest of the Asano structure was designed to solve. The legal relevance of the argument is questionable, though, since neither claim 4 nor the Teleflex patent require a pedal pivot that avoids the constant ratio problem. To the contrary, the Teleflex patent never discusses the constant ratio problem, specifically states that the adjustable pedal assembly "can be any of various ... assemblies known in the art," and identifies Rixon 183 as an example. See col. 2, lines 55-60. The disclosed embodiment in Rixon 183 is not configured to provide constant ratio adjustment. See col. 4, lines 25-29.

¹⁸ Additional perspectives on *KSR* are provided in Part II of Appendix A hereto.

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- (9) there are significant secondary consideration factors, with a nexus to the claimed invention, evidencing nonobviousness.¹⁹

Moreover, to demonstrate the above points, patent applicants may need to increase the use of inventor and expert declarations that, to date, have been more widely used in litigation practice.

- Applicants and patentees should be prepared to demand of the PTO or a district court, as required by both the Supreme Court and the Federal Circuit, an explicit analysis of obviousness with "articulated reasoning" and "rational underpinning," not "mere conclusory statements." A May 3, 2007 PTO Memorandum from the Deputy Commissioner for Patent Operations to the Technology Center Directors (copy attached as Appendix B), providing initial guidance concerning *KSR*, supports this point.²⁰ By the same token, when confronted with a legally sufficient *prima facie* case of obviousness, it is doubtful that rote invocations of obviousness principles or arguments limited to distinguishing each reference will be successful rebuttals. Applicants instead may need to present more fully articulated rebuttals than were needed under pre-*KSR* practice in order to succeed in the Patent Office and withstand subsequent judicial scrutiny. An unavoidable consequence is the increased probability that claim scope will be limited.
- As noted above, applicants and patentees need to give careful attention to evaluating both what is the scope of the relevant (analogous) art and what is the level of skill in the art. In this connection, applicants should consider whether, despite the many potential pitfalls for claim scope that exist with including a background section in the specification, it would be advantageous to include a description of the background of the invention that appropriately frames the context of the invention in order to support later nonobviousness arguments. For example, if factually supportable (and

tolerable from the applicant's business perspective), it may be advantageous to define the field of the invention narrowly, and to describe a long-standing problem that is unique to the particular field. As another example, consider whether the invention can be described, at least in part, as discovery of a problem, and/or as counter to or beyond the conventional wisdom.

- Applicants should carefully evaluate the adequacy of PTO rejections (*e.g.*, for the required "articulated reasoning") before responding on the merits. However, applicants must exercise care in challenging the adequacy of an examiner's asserted general principle or other general knowledge on the basis that the examiner has not adequately demonstrated the existence of the principle or knowledge at the relevant time. Applicants should consider whether the assertion is in fact fairly supportable notwithstanding the Examiner's failure to cite support, and whether there is information known by the applicants that should be disclosed pursuant to Rule 56. Applicants also need to evaluate whether the Supreme Court's express endorsement of design needs and market pressures as motivating factors creates a duty to disclose such information to the Patent Office in order to comply with Rule 56.
- Competitors and others faced with the need to evaluate the validity of patents are still faced with a potentially very difficult and complex challenge if obviousness is the determining question. In this connection, the Supreme Court's comments about the potential effect on the presumption of validity of prior art not considered by the Patent Office were only dicta. Even if the Federal Circuit decides to follow this dicta, as it did the *MedImmune* dicta concerning the Federal Circuit's reasonable apprehension of imminent suit test for declaratory judgment jurisdiction in patent cases (see our April 13, 2007 Special Report), it will still be necessary to establish an adequate case for obviousness based on the additional prior art. However, competitors now have an expanded, more flexible arsenal of potential obviousness arguments, including, *e.g.*, that
 - (1) the interrelated teachings of the prior art as a whole, any need or problem known in the field of endeavor at the time, design incentives or market forces in the same or a different field, background knowledge, common knowledge and/or common

¹⁹ The required nexus may be coming under closer scrutiny. *E.g.*, *Ormco* (commercial success) and *Pfizer* (unexpected results).

²⁰ The Memorandum also states that the PTO will issue guidance to examiners in view of *KSR* in the near future. We will monitor for that guidance and report on it when it is issued.

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sense provide(s) a reason to combine or modify prior art references,

- (2) it would have been obvious to try a claimed combination, which was predictably successful and thus obvious,
 - (3) the person of ordinary skill is "a person of ordinary creativity, not an automaton," who in many cases can fit the teachings of multiple patents together like the pieces of a puzzle, and can employ inferences and creative steps without precise teachings directed to specific subjects, and/or
 - (4) references merely expressing a preference for an alternative do not "teach away" from other alternatives.
- *KSR* teaches that, as in the past, competitors should consider relying upon prior art that was before the PTO during prosecution if that prior art appears to be the most relevant. *KSR* also teaches that arguments must be developed early and timely submitted to avoid waiver.
 - *KSR* upheld the district court's determination of invalidity on summary judgment, and clarified the circumstances in which summary judgment of obviousness is appropriate notwithstanding the existence of conflicting expert declarations. However, we will have to await future Federal Circuit cases to determine the real impact of this aspect of *KSR*. Only time will tell whether either this guidance, or the application of the appropriate expansive and flexible test for obviousness, will make summary judgment resolution of obviousness-based invalidity any easier or more common in practice, including with respect to those patents obtained under a rigid application of the

TSM test for obviousness. From a litigation strategy standpoint though, the Supreme Court's effective endorsement of summary judgment weighs in favor of alleged infringers routinely seeking summary judgment of obviousness-based invalidity. Summary judgment particularly should be considered when it reasonably appears that "the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors."

* * * * *

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APPENDIX A

I. Additional Factual Details of *KSR*

In support of claim 4, the Teleflex patent discloses, as shown in the attached simplified Fig. 4 from the patent, a vehicle control pedal apparatus 12 including a support 18 and an adjustable pedal assembly 22 having a movable pedal arm 14. The pedal assembly 22 is pivotally supported with respect to the support 18 by a fixed pivot 24. An electronic throttle control mechanism 28 is attached to support 18 for controlling an engine throttle and is responsive to pivot 24 for providing a signal corresponding to the position of the pedal arm 14.

The Teleflex patent cites two examples of prior art adjustable pedal assemblies, U.S. Patents Nos. 5,460,061 (Redding) and 5,632,183 (Rixon 183, simplified Fig. 1 attached hereto), and one example of a prior art adjustable pedal assembly with an electronic throttle control, U.S. Patent No. 5,819,593 (Rixon). The Teleflex patent states that "[t]he adjustable pedal assembly 22 can be any of various adjustable pedal assemblies known in the art," such as "the adjustable pedal assembly in U.S. Pat. No. 5,632,183 ...," and that "[t]he electronic throttle control mechanism 28 can be any of various electronic throttle control mechanisms known in the art, as the one described in U.S. Pat. No. 5,819,593...."

There were essentially four categories of prior art considered during the litigation between *KSR* and Teleflex and referenced in the Supreme Court's decision: (1) adjustable pedals, (2) electronic pedal sensors for computer-controlled throttles, (3) self-contained modular sensors, and (4) sensors on adjustable pedals. Category (1) included U.S. Patent No. 5,010,782 (Asano, simplified Fig. 7 attached hereto) disclosing a support structure in which, when the pedal location is adjusted, one of the pedal's pivot points remains fixed, and the Redding patent disclosing a structure in which the pedal's pivot point moves when the pedal's fore and aft position is adjusted. Category (2) included U.S. Patent No. 5,241,936 (936 patent) disclosing a pedal with an electronic sensor on a pivot point in the pedal assembly, and U.S. Patent No. 5,063,811 (Smith) disclosing a sensor on a fixed part of the pedal assembly, rather than on the pedal's footpad, to prevent wire chafing. Category (3) included U.S. Patent No. 5,385,068 (068 patent) and Chevrolet's 1994 use of modular sensors attached to the pedal support bracket and engaged with the pivot shaft about which the pedal rotated in operation. Category (4) included the Rixon patent disclosing an adjustable pedal assembly with an electronic sensor located in the pedal footpad and thus suffering from wire chafing from operation of the pedal.

Although Rixon 183 was cited in the Teleflex patent, and discloses an adjustable pedal with a fixed pivot point, it is not mentioned in the Supreme Court's decision. Rather, contrary to Teleflex's explanation of Rixon 183 in its brief, the Court erroneously states that "the PTO did not have before it an adjustable pedal with a fixed pivot point."

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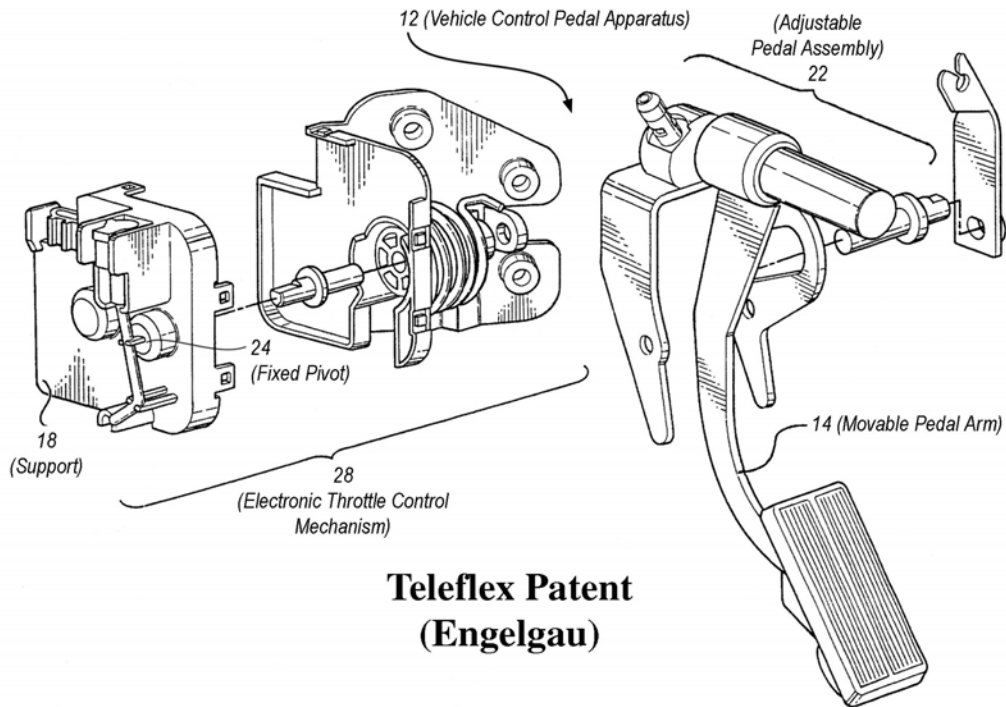
II. Additional Perspectives on *KSR*

The Supreme Court's failure to address the teachings of the prior art more generally (as a whole), and Rixon 183 in particular, is curious. The Rixon 183 fixed pivot adjustable pedal assembly is more relevant structurally than Redding's moving pivot adjustable pedal assembly distinguished by Teleflex during prosecution. Moreover, the Rixon 183 adjustable pedal assembly is structurally more relevant than Asano's disclosed assembly, since Rixon 183 has all the claimed pedal features, plus has a compact, simple and inexpensive design, all features that Teleflex argued were missing from Asano.

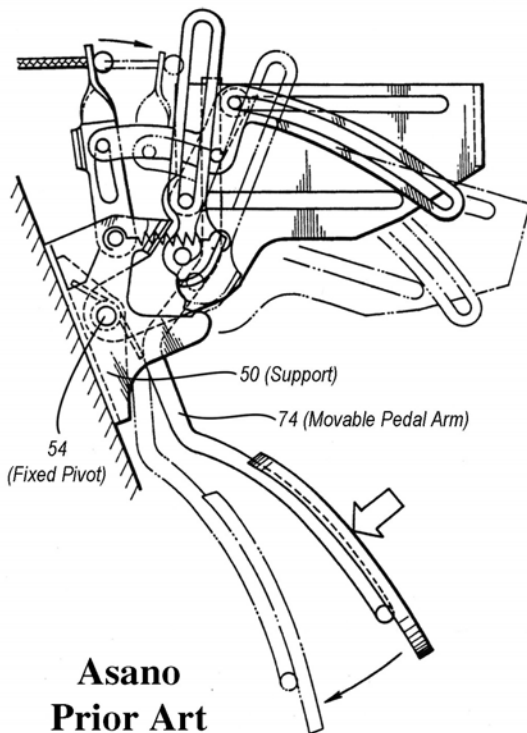
Various reasons can be surmised why *KSR* chose not to rely on Rixon 183, particularly in light of the way the standard for obviousness had been framed in the district court. From a litigation perspective, it is preferable to rely on prior art that was not before the Patent Office (so as to take advantage of the Federal Circuit's long-stated view that the burden of proving invalidity may be more easily met by relying on more relevant non-cited prior art). Further, although Rixon 183 is plainly directed to all types of vehicle pedals, including both accelerator and brake pedals (see, *e.g.*, col. 1, lines 4-9 and 55-56), the only illustrated embodiment is described as controlling, "for example, the brake mechanism of the motor vehicle" (col. 3, lines 6-7). By contrast, Asano explicitly discloses both a brake pedal and an accelerator pedal. Accordingly, *KSR* may have believed that Asano was in this regard easier to combine with a reference teaching a throttle control sensor. In any event, neither factor should have negated obviousness in view of Rixon 183 under the Supreme Court standard for obviousness, or under the Federal Circuit's reformulated TSM test implementing the Supreme Court standard.

Given the teachings of the prior art to place controller sensors on the fixed pedal support and to sense pedal movement at the pedal pivot point, the obviousness of modifying the Rixon 183 general purpose pedal in accordance with those teachings to meet the prior art need for pedals compatible with electronic vehicle control systems does not require profound analysis, or the nominally more specific analysis presented by the Supreme Court. Moreover, under the restricted "teaching away" exception, the fact that an otherwise useful conventional adjustable pedal may be inferior in one or more respects to other adjustable pedals should not affect the obviousness of making the pedal compatible with an electronic control system by providing the pedal with a pivot sensor as taught by the prior art.

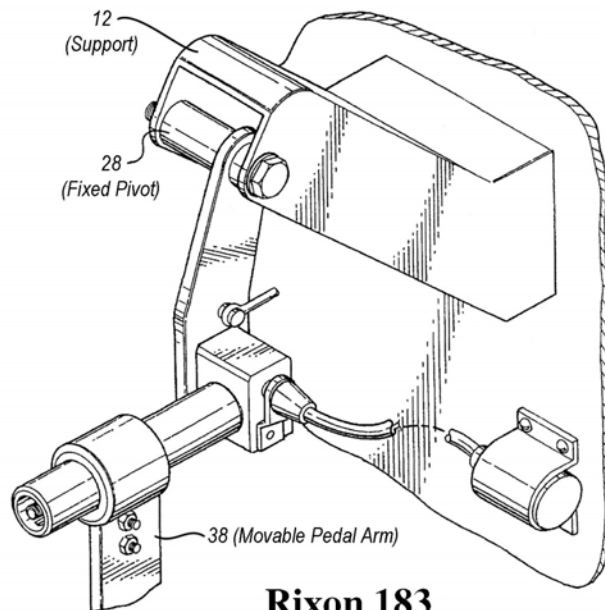
May 7, 2007



**Teleflex Patent
(Engelgau)**



**Asano
Prior Art**



**Rixon 183
Prior Art**

APPENDIX B



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

MEMORANDUM

DATE: May 3, 2007

TO: Technology Center Directors

FROM: *Margaret A. Focarino*
Margaret A. Focarino
Deputy Commissioner
for Patent Operations

SUBJECT: Supreme Court decision on *KSR Int'l. Co., v. Teleflex, Inc.*

The Supreme Court has issued its opinion in *KSR*, regarding the issue of obviousness under 35 U.S.C. § 103(a) when the claim recites a combination of elements of the prior art. *KSR Int'l Co. v. Teleflex, Inc.*, No 04-1350 (U.S. Apr. 30, 2007). A copy of the decision is available at <http://www.supremecourtus.gov/opinions/06pdf/04-1350.pdf>. The Office is studying the opinion and will issue guidance to the patent examining corps in view of the *KSR* decision in the near future. Until the guidance is issued, the following points should be noted:

- (1) The Court reaffirmed the *Graham* factors in the determination of obviousness under 35 U.S.C. § 103(a). The four factual inquiries under *Graham* are:
- (a) determining the scope and contents of the prior art;
 - (b) ascertaining the differences between the prior art and the claims in issue;
 - (c) resolving the level of ordinary skill in the pertinent art; and
 - (d) evaluating evidence of secondary consideration.

Graham v. John Deere, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966).

- (2) The Court did not totally reject the use of "teaching, suggestion, or motivation" as a factor in the obviousness analysis. Rather, the Court recognized that a showing of "teaching, suggestion, or motivation" to combine the prior art to meet the claimed subject matter could provide a helpful insight in determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a).

- (3) The Court rejected a rigid application of the "teaching, suggestion, or motivation" (TSM) test, which required a showing of some teaching, suggestion, or motivation in the prior art that would lead one of ordinary skill in the art to combine the prior art elements in the manner claimed in the application or patent before holding the claimed subject matter to be obvious.

(4) The Court noted that the analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it was "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. The Court specifically stated:

Often, it will be necessary . . . 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**.

KSR, slip op. at 14 (emphasis added).

Therefore, in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.