No. 04-1350

In the
# Supreme Court of the United States

KSR INTERNATIONAL CO.,
*Petitioner*,

v.

TELEFLEX INC. and
TECHNOLOGY HOLDING CO.,
*Respondents*.

**On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit**

## BRIEF *AMICI CURIAE* OF MICHELIN NORTH AMERICA, INC., ARVINMERITOR, INC., AND NARTRON CORPORATION IN SUPPORT OF RESPONDENT


RICHARD W. HOFFMANN*
WARN HOFFMANN
MILLER & LALONE PC
691 N. SQUIRREL ROAD
SUITE 140
AUBURN HILLS, MI 48326
(248) 364-4300
* *Counsel of Record*

CARY W. BROOKS
REISING ETHINGTON
BARNES KISSELLE PC
201 W. BIG BEAVER ROAD
SUITE 400
TROY, MI 48084
(248) 689-3500

*Counsel for Amici Curiae*



Becker Gallagher · Cincinnati, OH · Washington, D.C. · 800.890.5001

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## STATEMENT OF INTEREST OF *AMICI CURIAE*

Michelin North America, Inc., ArvinMeritor, Inc. and Nartron Corporation are automotive suppliers.[1] The innovations of the *amici* have resulted in the issuance of hundreds, if not thousands, of patents which, consistent with the constitutional purpose of the Patent Statute, have resulted in further technological advances and as such have promoted "the progress of Science and the Useful Arts." U.S Const. Art. I, §8 cl. 8. The technological advances protected by the patent system have allowed *amici* to compete effectively in the highly competitive automobile industry by securing for them rights to their respective inventions. *Amici*'s patents have allowed them to maintain a market position which provides an avenue to recoup the significant investment it has made in research and development. Continued protection of their respective developments is necessary for *amici* to continue to provide innovative solutions for the automotive industry.

Because many of the patents received by *amici* relate to incremental advances in the art, they can fairly be characterized as "combination" patents. These incremental developments typically result in new and nonobvious inventions. *Amici* believe that nonobvious advances in the art should continue to be protected as they have. *Amici* also have an interest in ensuring that patents for obvious inventions are not allowed to remain as an impediment to their respective businesses.

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[1] Pursuant to this Court's Rule 37.6, we note that no part of this brief was authored by counsel for any party, and no person or entity other than *amici curiae* made a monetary contribution to the preparation or submission of the brief. The brief is filed with the consent of the parties, both of which have consented to the filing of any briefs of *amicus curiae* in this case.

## SUMMARY OF ARGUMENT

This Court's decision in *Graham v. John Deere Co.*, 383 U.S. 1 (1966) provides the factual framework that must be studied in making the obviousness determination. However, the *Graham* Court did not specifically articulate an approach for evaluating the factual findings when making the legal judgment of whether the invention would have been obvious to a person of ordinary skill in the art at the time of the invention.

The Federal Circuit has adopted the teaching-suggestion-motivation approach for evaluating the *Graham* factors. Nothing in *Graham* or 35 U.S.C. §103 is inconsistent with the Federal Circuit's approach. The approach provides a consistent manner of assessing each of the *Graham* inquiries in reaching the obviousness conclusion. The teaching-suggestion-motivation approach to the nonobviousness inquiry was performed in *United States v. Adams*, 383 U.S. 39 (1966). Further, the approach rightly focuses on the requirements of 35 U.S.C. §103, namely that the obviousness determination is made as by one of ordinary skill in the art at the time of the invention. It also forces the decision maker to articulate the basis for any conclusion.

Petitioner has urged a synergism standard for combination patents. Nothing in 35 U.S.C. §103 calls for special treatment of combination patents. Synergism, by itself, is but one factor that should be considered in the overall legal analysis of obviousness. It cannot drive the inquiry.

Casting aside the Federal Circuit's teaching-suggestion-motivation approach will have draconian results. Tens of thousands of patents have issued in reliance on the approach.

Discarding the approach in its entirety will cast doubt on each of these patents.

## ARGUMENT

### I. WHY IS AN APPROACH FOR DETERMINING OBVIOUSNESS NECESSARY

#### A. The Origin Of 35 U.S.C. §103

Before the enactment of the present statute in 1952, patentability of an invention required novelty and utility by statute. But novelty and utility were not enough. *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248 (1851) and its progeny added a third requirement --"invention." Over time, it became clear that the term "invention" was ambiguous and subject to the diverse interpretations of judges. *McLain v. Oltmayer*, 141 U.S. 419, 426-427 (1891):

> The truth is, the word cannot be defined in such manner as to afford any substantial aid in determining whether a particular device involves an exercise of the inventive faculty or not.

Because courts had difficulty in consistently applying the third requirement of "invention," a number of "negative rules" and exceptions to the negative rules for testing the presence of a patentable invention were developed. See, e.g., Donald S. Chisum, *2 Chisum on Patents*, §§5.02[1], 5.04[a] (2005). But these negative rules did not always do justice and were not always easy to apply. In an effort to remedy the problem, to provide uniformity, definiteness, stabilizing effect, and to

minimize the great departure which appeared in some cases,[2] Congress enacted 35 U.S.C. §103.[3]

By statute, nonobviousness became the focus of the third requirement of patentability and supplanted the vague concept of "invention." The statute answered many important questions regarding the patentability analysis, such as: obvious of what,[4] to whom,[5] at what time,[6] and in view of

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[2] H.R. Rep. No. 1923, 82nd Cong. 2d Sess., on H.R. 7794, May 12, 1952, 5, 7, and 18.

[3] 35 U.S.C. §103 provides:

> §103. Conditions for patentability; non-obvious subject matter
>
> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

[4] Of the claimed invention as a whole.

[5] To a person of ordinary skill in the art.

[6] At the time the invention was made. The most difficult aspect of the decision making process is the requirement that the decision maker must cast his mind back to the time the invention was made in order to arrive at an ultimate conclusion regarding nonobviousness. Hindsight evaluation of the invention is a trap that is easy for the decision maker to fall into.

what?[7] Although 35 U.S.C. §103 brought relatively more clarity to the decision making process, clarification as to the meaning of the statute in the decision making process (like the meaning of court decisions) became a work in process of the courts.

Since *Hotchkiss v. Greenwood* and the enactment of 35 U.S.C. §103, this Court has not specifically articulated an approach for evaluating the factual factors relevant to the obviousness inquiry that would preclude patentability. From an ideological standpoint, Congress was charged with implementing the objective of the Constitution to promote the progress of science and useful arts. In so doing, Congress enacted 35 U.S.C. §103 as the sole basis for determining inventions worthy of patent protection from those that are obvious. The goal aspired was only to allow patents for nonobvious inventions thereby serving to advance the state of the useful arts. Practical implementation of an approach to achieve the ideological result has been elusive and results in inconsistent applications of the nonobviousness test.

**B. Direction Provided By *Graham***

In *Graham v. John Deere Co.*, 383 U.S. at 17-18, the Court laid out the factual predicate for an obviousness determination:

> Under 35 U.S.C. §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims it issue are to be ascertained; and the level of ordinary skill in the art resolved. Against this backdrop, the obviousness or

[7] The prior art.

> nonobviousness 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 weight to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy.

Thus, the *Graham* court provided some direction to the nonobviousness analysis by specifying several factual inquiries to be considered in determining whether to the invention is obvious. This Court directed the decision maker to make the ultimate decision of nonobviousness against the background of the facts developed under these three areas of evidentiary inquiry. Even though intending to lay a factual framework that must be strictly followed, the *Graham* court recognized that obviousness is not a question on which there is likely to be uniformity of thought in every given factual context. *Id*. at 18-19. *Graham* also recognized the danger of hindsight and accordingly directed the evidentiary inquiry to include a fourth area: other indicia of nonobviousness.[8] *Id*. at 18.

Beyond laying out the factual predicates for finding obvious or nonobviousness of an invention, the *Graham* court provides no guidance on how the nonobviousness determination is made. There is no stated approach for evaluating these factual findings.

The *Graham* factors in and of themselves are separate factual predicates that can be found independently from one another. Considered in isolation, the *Graham* factual

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[8] This is sometimes referred to as the fourth *Graham* factor.

inquiries are not helpful to reach the ultimate decision on obviousness. For example, in *Dennison Manufacturing Company v. Panduit Corp.*, 475 U.S. 809, 810 (1986), the Court noted the district court properly reasoned that one may not simply choose isolated elements from the prior art and combine them so as to yield the invention in question if such a determination would not have been obvious at the time of the invention. Accordingly, mere identification of the scope and content of the prior art, by itself, cannot result in a finding of obviousness.

A necessary reason for a proper approach to determine obviousness is to provide uniform application of the nonobviousness standard. Simply allowing judges to determine obviousness without an approach for making that determination will reduce an obviousness analysis to an "I know it when I see it" analysis. Having a uniform approach will require courts to articulate the basis for its obviousness conclusion. Such an approach will provide patent applicants and litigants with a factual predicate that it can rebut by bringing forth evidence contrary to the stated basis for the obviousness assertion.

Some uniform approach to evaluating the *Graham* factors and interrelating them is necessary to consistently carry out the obviousness analysis. Nothing in *Graham* precludes the adoption of an approach that can be used to guide the obviousness conclusion, so long as that approach takes into account the requirements of 35 U.S.C. §103 and the *Graham* factual findings. In *Graham*, this Court concluded that the "inquiry which the Patent Office and the courts must make as to patentability must be beamed with greater intensity on the requirements of §103…" *Graham*, 383 U.S. at 19. A teaching-suggestion-motivation approach to the ultimate conclusion on nonobviousness accomplishes this mandate.

## II. THE TEACHING-SUGGESTION-MOTIVATION APPROACH IS CONSISTENT WITH THE STATUTE AND THE PRECEDENT OF THIS COURT

### A. Nonobviousness Jurisprudence At The Federal Circuit

In essence, the central issue in this case is whether the Federal Circuit's nonobviousness jurisprudence is consistent with the statute and the precedent of this Court. Several cases are illustrative. See, e.g., *Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co. et al*, No. 06-1088, 2006 WL 2806466 (Fed.Cir.Oct.3,2006); *Alza Corp. v. Mylan Labs.*, No. 06-1019, 2006 WL 2556356 (Fed.Cir.Sept.6,2006); *In re Kahn*, 441 F.3d 977 (Fed.Cir.2006); and *Cross Med. Prods., Inc., v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293 (Fed.Cir.2005). These decisions focus on §103 and require a party asserting obviousness to articulate the basis on which it concludes that it would have been obvious to make the claimed invention. *In re Kahn*, 441 F.3d at 986. Articulation of only the facts uncovered by the first *Graham* factual inquiry, in a way that merely identifies where in the prior art each element of the claimed invention may be found, without more, is not sufficient to establish obviousness. *Id*. The Federal Circuit jurisprudence leaves open how the ultimate conclusion on nonobviousness might be articulated under any given set of facts. *Id*.[9] *In re Kahn*, 441 F.3d at 986 reiterates one

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[9] This obviousness jurisprudence presumably leaves open the door for a patentability challenger to articulate a rational basis for a conclusion of obviousness by a means other than the teaching-suggestion-motivation approach that is founded in fact, focused on

practical approach on how to reach and articulate the obviousness or nonobviousness conclusion.

Requiring the patentability challenger to state a rational basis for the conclusion of obviousness is important. First, without a requirement for such an articulation, courts of review are left with no basis for determining whether the conclusion was correct. Second, the articulation requirement is necessary for the patentability challenger to carry his burden under the statute.[10] Third, the articulation requirement is necessary in order for the applicant or patentee to refute or rebut the underlying facts or rationale of the challenger with his own argument or evidence. Decisions that fail to articulate a basis are merely conclusory and cannot be adequately rebutted.

### B. The Federal Circuit Precedent Is Consistent With *Graham* And The Statute

Making a determination based on what *would have been* obvious *at the time the invention was made* is the most difficult requirement of the decision making process under §103. This requires the decision maker to cast his mind back

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the requirements of §103 and not based on hindsight. To date, *amici* have not seen such an alternative means for articulating a rational basis that meets such requirements nor is such a means immediately apparent.

[10] Under 35 USC §103, the burden of proof is on the Patent and Trademark Office to establish a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed.Cir.1984). Under 35 USC §282 a patent is presumed valid and thus a burden of proving invalidity by clear and convincing evidence is placed of a patent challenger.

to the time the invention was made -- a task easier said that done. *Graham* tells what features to look at, but not how to assess them. The teaching-suggestion-motivation approach does just that.

The Federal Circuit and its predecessors recognized the danger of a hindsight approach to assessing obviousness. In practice, Federal Circuit jurisprudence requires the patentability challenger to "explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious." *In re Kahn*, 441 F.3d at 986. Absent some other rational articulation founded in fact, when the challenger of patentability fails to explain the motivation, the suggestion or the teaching that would have led the skilled artisan at the time of the invention to the claimed combination at a whole, the presumption is that the conclusion was reached through the improper benefit of hindsight. *Id.* at 986-87. This is not a separate approach from the *Graham* inquiries. Rather, it simply is a practical approach to assessing them to assure that the nonobviousness analysis is evaluated from the correct perspective.

*Amici* believe that the teaching-suggestion-motivation approach to the ultimate conclusion on nonobviousness is subsumed in the inquiry laid out in *Graham*. *Graham* presumes the factors interrelate. Ultimately, the factors must serve the statutory end--to determine whether the subject matter as a whole would have been obvious to one skilled in the art at the time of the invention. The analysis necessarily requires inquiry into what the scope and context of the prior art taught or suggested to those skilled in the art. Without such assessment, the *Graham* factual inquiries do not accomplish the purpose of 35 U.S.C. §103. The mere identification of the level of skill in the art means nothing

unless the prior art is to be evaluated from the standpoint of that level of skill (i.e., what the prior art teaches the person of ordinary skill in the art).

Further, the teaching-suggestion-motivation approach focuses the inquiry on the requirements of §103 by ensuring that any obviousness conclusion is reached from the perspective of the time frame of when the time the invention was made, and not through hindsight. The teaching-suggestion-motivation approach takes into account each of the *Graham* factual findings. The approach ensures that the challenger of patentability identifies some evidence that supports a finding that the conclusion of obviousness was based on what a person of ordinary skill *would have been* led to do, and thus found obvious, *at the time the invention was made*. Then like any question of law, the decision maker must properly weigh all of the underlying facts in reaching the ultimate conclusion on nonobviousness. Any approach to reaching the obviousness conclusion that requires a patentability challenge to articulate a rational basis founded in fact for their conclusion of obviousness does not change a question of law into a question of fact.

### C. The Teaching-Suggestion-Motivation Approach Is Flexible

The teaching-suggestion-motivation approach is not rigid in its application. The teaching-suggestion-motivation approach ensures that the decision is based on evidence and not on conclusory statements, speculation, conjecture, negative rules, rhetorical embellishments or talismanic slogans. Supporting evidence for the articulated rationale may be explicitly or implicitly found in the facts developed by the *Graham* inquiry. The supporting evidence, thus, need not contain an express teaching, suggestion or motivation.

Typically, evidence of motivation may be found in the first of the *Graham* factors - the scope and content of the prior art. In the absence of an express suggestion to combine, evidence of motivation may also be found in facts developed under the third *Graham* factor - the level of skill in the pertinent art. *Dystar Textilfarben GmbH*, No. 06-1088, slip op. at 26. The motivation can be implicit in the knowledge of one of skill in the art or in some cases, the nature of the problem to be solved. *Cross Med. Prods., Inc. v. Medtonic Sofamor Danek, Inc.*, 424 F.3d at 1321. Evidence supporting motivation may come from testimony of persons skilled in the art, *Alza Corp. v. Mylan Labs.*, No. 06-1019, slip op. at 13, or from the application or patent itself. *Cross Med. Prods., Inc.*, 424 F.3d at 1323. Motivation can even be founded in common sense. *In re Bozek*, 416 F.2d 1385 (C.C.P.A.1969). Thus, the Federal Circuit approach to evaluating obviousness is flexible both in the rationale required and the means of providing evidence necessary to support the ultimate conclusion of obviousness.

The Federal Circuit has been criticized by some commentators in rigidly adhering its teaching-suggestion-motivation approach to determining obviousness. *Dystar Textilfarben GmbH*, No. 06-1088, slip op. at 16-23. The criticisms are based largely on the misreading of selective quotations from certain cases. Contrary to the criticisms, the Federal Circuit has consistently and flexibly applied its approach. The criticism should properly lie not with the approach, but with the failure of patentability challengers to provide supporting evidence or adequately explain their rationale supporting the obviousness conclusion. *Id.* Petitioner and some *amici* argue the approach lowers the standard of patentability. But, the approach itself does not lower the standard for patentability.

## III. THIS COURT HAS USED A TEACHING-SUGGESTION-MOTIVATION APPROACH

Contrary to the contention of Petitioner and several *amici* on behalf of Petitioner, the teaching-suggestion-motivation approach to the ultimate conclusion on nonobviousness is not a creation solely of the Federal Circuit and its predecessors. Although cloaked in different terms, the Court has, at least once, used a teaching-suggestion-motivation approach in making the ultimate conclusion on nonobviousness.[11] In *United States v. Adams*, 383 U.S. 39 (1966), the patent at issue involved a battery comprised of two electrodes – one made of magnesium and the other of cuprous chloride. The electrodes were placed in a container with an electrolyte that could be water or salt water. In reviewing the scope and content of the one of the prior art references, the Court took note that a Wood reference recognized that the difficulty with magnesium electrodes is their susceptibility to chemical corrosion and that there "is no *indication* of its use with cuprous chloride, nor was there any *indication* that magnesium battery could be water activated." (emphasis added). *Id.* at 46 It is important to note that the term "indication" is synonymous with the term "suggestion." *The J.I. Rodale Synonym Finder*, (1979). With respect to a Codd reference, the Court found, *Id.* at 46-47:

> In short, Codd *indicates,* by inference only that magnesium is a theoretically desirable electrode by virtue of its highly electropositive character. He *does*

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[11] Evaluating the teachings and suggestions of prior art is not a new concept. In *Topliff v. Topliff*, 145 U.S. 156, 161 (1892), the Court evaluated what the prior art "would have suggested to a mechanic of ordinary intelligence."

> *not teach* that magnesium could be combined in a water-activated battery or that a battery using magnesium would have the properties of the Adams device. Nor does he *suggest,* as the Government indicates, that cuprous chloride could be substituted for silver chloride. He merely refers to the cuprous ion – a generic term which includes an infinite number of copper compounds – and in *no way suggests* that cuprous chloride could be employed in a battery. [emphasis added]

With respect to a Wensky patent, the court noted that "there is no *indication* that he *taught* a water-activated system or that magnesium could be incorporated in a battery." *Id.* at 67 (emphasis added).

The Court reviewed the scope and content of the prior art references to determine what the prior art taught or suggested. The Court noted that that the references and the accept wisdom and knowledge of persons skilled in the art "taken together, would … *deter* any investigation into such a combination as is used in Adams." *Id*. at 52. (emphasis added). But, examining deterrence of investigation is the same as examining the motivation under the current approach. Being deterred from investigating a combination or making a combination is the antithesis of being motivated. The Court plainly applied the teaching-suggestion-motivation approach to reaching the ultimate conclusion of nonobviousness in

*Adams* without specifically articulating it in those terms.[12] The Solicitor so much as agrees.[13]

## IV. THE APPROACHES URGED BY PETITIONER DIVERGES FROM THIS COURT'S DECISIONS AND ARE UNWORKABLE

### A. Synergism Is A Defective Approach

In essence, Petitioner argues that synergism is the appropriate approach to be used when the obviousness of combination patents are implicated. See, e.g., Petitioner's Brief at 27-31. Petitioner, thus, argues a different requirement for finding obviousness in combination patents. However, 35 U.S.C. §103 does not provide that such a difference is to be applied when the invention is a combination. The statutory section mentions neither synergism nor combination patents. *Stratoflex, Inc. v. AeroQuip Corp.*, 713 F.2d 1530, 1540 (Fed.Cir.1983).

On its face, the statute mandates that all inventions are to be treated evenhandedly. Nothing in the statute focuses the inquiry on the age of the elements. The statute states that nonobviousness is to be determined with respect to the claimed subject matter as a whole, thus making the age of elements completely irrelevant. The statute is also completely devoid of any suggestion of a requirement of synergism for a combination of old elements.[14]

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[12] *Adams* epitomizes the teaching-suggestion-motivation approach to the ultimate conclusion on nonobviousness.

[13] See Brief for the United States as *Amicus Curiae*, at p. 13.

[14] And *Graham* makes no mention of synergism.

*Stratoflex,* 713 F.2d at 1540 recognizes that virtually all patents are combination patents. That is, if one intends to describe patents having claimed inventions formed of a combination of elements. Virtually all mechanical structural arts are combination patents. All inventions are combinations because every invention is formed of old elements. The reality of this truism was insightfully articulated by former Federal Circuit Chief Judge, Howard T. Markey:

> Only God works from nothing. Man must work from old elements.[15]

The synergism test suffers from at least two defects.[16] First, the test looks exclusively at the function of individual elements of the combination after they are combined and thus is necessarily premised on the assumption that it was obvious to take the known elements and combine them. But the very choice of elements to be combined may not be obvious. As Judge Hand has noted in *B.G. Corp. v. Walter Kidde & Co.*, 79 F.2d 20, 22 (2d Cir.1935):

> All machines are made up of the same elements; rods, pawls, pitmans, journals, toggles, gears, cams, and the like, all acting their parts as they always do and always must. All compositions are made of the same substances, retaining their fixed chemical properties. But the elements are capable of an infinity of permutations and the selection of that group which proves serviceable to a given need may require a high

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[15] *Why Not the Statute?,* Howard T. Markey, 65 JPOS, No.6, 333-340 (1983).

[16] *Republic Indus., Inc. v. Schlage Lock Co.*, 592 F.2d 963 (7th.Cir.1979).

> degree of originality. *It is that act of selection which is the invention*. [emphasis added]

True synergism would rarely be obtainable in a mechanical case. Thus, most often a synergistic result will not be obtained although an invention would not have been obvious to one of ordinary skill in the art at the time of the invention.

The second and more critical defect with synergism is that it is not consistent with §103 which mandates that the courts and the Patent Office are to view the invention from the vantage point of a person skilled in the art *at the time the invention was made*. From that perspective, the question is whether the level of skill in the art was such that the combining of the elements in the manner claimed *would have been* obvious, not in retrospect, but at the time it was done by the inventor. As this Court stated in *Adams*, 383 U.S. at 50:

> It begs the question *** to state merely that magnesium and cuprous chloride were individually known battery components. If such a combination is novel, the issue is whether *bringing them together* as taught by [the inventor] was obvious in the light of the prior art. [emphasis added]

But synergism focuses exclusively on the performance of the elements *after* the combination has been made and without regard to the obviousness or nonobviousness of making the combination at the time of the invention.

### B. Synergism Alone As A Test For Obviousness Has Never Been Adopted By This Court

As aptly noted by Giles Rich in *Escaping the Tyranny of Words - Is Evolution in Legal Thinking Possible?*, 60 JPOS

71, May-June/APLA Bull.237, 3:316-3:318 (1978), sometimes zealous attorneys bent on winning or best representing the business interest of their client scour the decisions of courts looking for any words or phrases that could possibly support their position. Often words and phrases in decisions are taken out of context and blown out of proportion. Consequently, attorneys paste copied words into their briefs, these words and phases then make their way into the decisions, and are passed on from one decision to the next, sometimes leading to questionable decisions. Instead of focusing the inquiry on the requirements of §103, Petitioner wishes to supplant the decision making process by relying on long defunct negative rules of patentability. By arguing passing comments to synergism in two of the Court's cases, Petitioner seeks to resurrect a negative rule of patentability (i.e., that there is no patentability for a combination absent synergism) in direct contravention of *Graham* which states the focus is on the statute. *Amici* pray that this Court will pen a once and for all death blow to the argument that synergism is a condition for patentability.

Contrary to Petitioner's assertion, the Courts' decisions in *Anderson's-Black Rock v. Pavement Salvage Co.*, 396 U.S. 57 (1969) and *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976), did not adopt a synergism requirement for patentability for combination patents. In each of the cases, the Court undertook the appropriate *Graham* factual inquiry. After having reached the obviousness conclusion using the factual predicates, the *Sakraida* court merely concluded that the finding of the Court of Appeals regarding synergism was not correct. 425 U.S. at 282. In *Anderson's-Black Rock*, the Court having concluded that the invention was obvious, looked to see if any synergism may have been present which would have otherwise been considered as a factor in their decision. 396 U.S. at 61. As evaluated by the Court,

synergism was applied as a secondary consideration of the type that may be looked into in evaluating the overall conclusion of obviousness.[17] This view is consistent with earlier decisions of the Court of Custom Appeals.

Synergism can have a place in the obviousness analysis. Synergism can be one factor to be considered in the ultimate determination of obviousness. The Court of Custom Appeals in *In re Huellmantel*, 324 F.2d 998, 1003 (C.C.P.A.1963) recognized that synergism is merely a factor to be considered in the ultimate determination of obviousness. This is important because synergism per se does not confer patentability. Synergism can be expected or unexpected. *Id*. That is, a reasonably skilled artisan can anticipate that the combination of two references having a suggestion to combine will give a synergistic result. However, in such a case, the synergism obtained may not render the invention nonobvious.

Accordingly, synergism, by itself, does not necessarily confer patentability on an otherwise non-patentable invention. Rather, synergism is better looked at as another secondary consideration or indicia of nonobviousness. By evaluating synergism in this manner, it assumes its proper role in the obviousness analysis – it is one factor to be considered; but its presence or absence, by itself does not control the analysis. If Petitioner's proposal was to be adopted and synergism must be shown for a combination to be patentable, then this approach will effectively supplant the entire *Graham* analysis. That is, under Petitioner's approach, the presence or absence of synergism will be determinative of obviousness, regardless of the remainder of the *Graham* analysis.

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[17] Synergism is discussed in connection with the other secondary considerations--long felt need and commercial success.

Synergism is also an inappropriate standard because it introduces a qualitative element into the analysis not present either in 35 U.S.C. §103 or *Graham*. Synergism implies that an improved result must be obtained to be patentable. However, "better" is not a requirement for patentability:

> [T]he statutory requirements for patentability are novelty, utility and unobviousness. We repeat here what we said there: "While it is true that proof that an invention is better or does possess advantages may be persuasive of the existence of any one or all of the foregoing three requirements, and hence may be indicative of patentability, Congress has not seen fit to make such proof a prerequisite to patentability."

*In re Fay*, 347 F.2d 597, 599 (C.C.P.A.1965)

Inventions comprising combinations of old elements, should be evaluated pursuant to 35 U.S.C. §103. No special rule of patentability should apply. Although the existence of a new function produced by the combination of elements might be entitled to considerable weight in determining obviousness, the absence of a new function does not necessarily render the invention unpatentable under the statute. Experts such as Professor Robinson acknowledge that not only can combinations of old elements be patentable,[18] but also that improvements in such combinations

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[18] See also Giles Rich, *Escaping the Tyranny of Words – Is Evolution in Legal Thinking Possible?*, 60 JPOS 71, May-June/APLA Bull. 237, 3:316-3:318 (1978). Judge Rich characterizes Kodak's roller film camera as just a combination of old elements: a strip of paper, a film of cellulose nitrate, a photographic emulsion which had been used before on a glass support, a simple box, a shutter, winding spools, and a lens. Each

that involve changes in shape, size, capacity, proportions, arrangement and materials of the elements in the combination can be patentable in certain circumstances.[19] Synergism works to supplant the decision making process under 35 U.S.C. §103 and should be extinguished.

### C. The Capability Approach Is Contrary To Authority

Petitioner relies on *Hotchkiss v. Greenwood* and its progeny (Petitioner's Brief at 25) for the position that patentability should be determined by what a person skilled in the art was capable of. But *Hotchkiss* does not stand for the proposition that patentability is to be determined by what someone was capable of. The Court characterized the invention at issue in *Hotchkiss*, 52 U.S. (11 How.) at 267 as involving the "work of the skilled mechanic," not that of an inventor. Justice Bradley shed light on that concept when he commented that the patent laws were not intended to grant

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element performed the same function it had always performed in the prior art except that the photosensitive element, the film, was capable of being rolled up – an obviously desirable thing to do. That simple combination of old elements was not only patentable, but gave raise to a great US industry. Judge Rich also noted that the simple idea of putting photographic emulsion on a transparent support enabled Thomas Alva Edison to make the moving picture camera out of other old elements. All of the individual parts were lying around separately, the paper, celluloid, sensitive emulsion, plate cameras, and Geneva movement, spring motor, sprocket wheels and other mechanisms in the movie camera. According to the approaches to determining patentability advanced by Petitioner and several *amici*, Kodak and Edison should have been denied their patents.

[19] See Robinson, *The Law of Patents and Useful Inventions*, (1890), §§237-244.

patents for inventions that "naturally or spontaneously occur to any skilled mechanic or operator in the ordinary process of manufacture." *Atlantic Works v. Brady*, 107 U.S. 192, 200 (1883). These concepts are now embodied in §103. The concept of the "skilled mechanic" is embodied in "the person of ordinary skill in the art." See, *Kimberly-Clark v. Johnson and Johnson*, 745 F.2d 1437, 1454 (Fed.Cir.1984). The concept of what would "naturally or spontaneously occur" to that imaginary person is embodied in the term "obvious." The term "obvious" as used in the statute should be given its ordinary meaning. That is, the term "obvious" means readily apparent. Such an interpretation is consistent with the threshold perception level of what would "spontaneously occur" to a skilled mechanic, as expressed by Justice Bradley.[20]

There is absolutely no mention in §103 that the focus of the inquiry should be on what someone could have done or was capable of doing. Looking at what could have been done or what someone was capable of, divorces the decision process from the time frame requirement of §103. Such an approach is inherently an unbounded hindsight analysis. Rather, the requirements of §103 mandate that the focus should be what *would have been* obvious (i.e., readily apparent) to a person skilled in the art *at the time the invention was made*.

Petitioner's proposed "capable of" standard is contrary to authority. In *Webster Loom Co. v. Higgins,* 105 U.S. 580, 591 (1881), the Court recognized the impracticality of a "capable of" approach:

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[20] It is recognized that often courts use the terms "obvious" or "obviousness" with reference to a legal conclusion.

> Now that it has succeeded, it may seem very plain to any one that he could have done it as well. This is often the case when inventions of the greatest merit. It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and beneficial result, never attained before, it is evidence of invention.

This unworkable standard was reiterated in *Diamond Rubber Company of New York v. Consolidated Rubber Tire Company*, 220 U.S. 428, 434-35 (1911):

> Its simplicity should not blind us as to its character. Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and, "in the light of the accomplished result," it is often a matter of wonder how they so long "eluded the search of the discoverer and set at definance [sic] the speculations of inventive genius." [citation omitted] 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 [sic] subtle conjectures of what might have been seen and yet was not.

Starting with the completed invention will always lead to the result that it could have been done – after all, it has. The question is not whether someone was capable of developing the invention. The proper statutory inquiry is whether the

invention was obvious to one of ordinary skill in the art, at the time of the invention. Once disclosed to them, persons skilled in the art surely could have produced Kodak's camera, Edison's movie camera or electric lamp, or Glidden's barbed wire fence. But having to rummage through bits and pieces of prior art, selecting some and discarding others and to assemble the combination of old elements to produce each invention without the use of the inventor's disclosure as a blueprint is an entirely different matter.

## V. THE IMPACT ON PATENT PROSECUTION IF THE CURRENT APPROACH IS MODIFIED

Currently, patent prosecution procedure requires that the Patent Office show a basis for denying a patent to an inventor. Thus, in the first instance, the burden of showing non-patentability rests with the Patent Office. *In re Piasecki*, 745 F.2d at 1472. Elimination of the teaching-suggestion-motivation standard in favor of the synergism standard would stand that burden on its head. Rather than having the Patent Office be required to show non-patentability in the first instance, the burden will be on the applicant to show that his invention has achieved some synergistic result to be patentable.

The teaching-suggestion-motivation approach is the applicant's safeguard against the Patent Office's potential application of hindsight. If this approach is eliminated, all the Patent Office will need to do is pick through the prior art to find each claim element. Once the prior art references have been obtained, whether or not the invention would have been obvious to one of ordinary skill in the art would become an irrelevant inquiry. The Patent Office will presume that such standard has been met if it can find all of the pieces of the claimed invention in the prior art. This has never been the

law. Indeed, this was an approach specifically rejected by this Court in *Dennison*. 475 U.S. at 810. The teaching-suggestion-motivation standard protects the applicant and gives the Patent Office an objective standard by which it can measure whether an invention is obvious. It also forces the Patent Office to articulate the basis for its conclusion, thus giving the applicant an opportunity to rebut that conclusion.

## VI. REASONS FOR MAINTAINING THE CURRENT TEACHING-SUGGESTION-MOTIVATION APPROACH

The Federal Circuit adopted the teaching-suggestion-motivation approach to the ultimate conclusion on nonobviousness to ensure that the decision-making process was focused with greater intensity on the requirements of §103. The Federal Circuit accomplishes that result and does not lower the bar or lessen the standard of patentability. Rather, it provides a uniform approach to making the obviousness decision.

Eliminating the teaching-suggestion-motivation approach and adopting either of the approaches sought by Petitioner would undoubtedly result in the issuance of fewer patents. This would have a devastating impact on the United States economy and industries. Rarely does a commercial product surface that relies on technology that was developed without reference to or improve upon earlier works. To the contrary, the development of most technologies that are embodied in the commercial products that sustain the United States' economy proceed along a step-like fashion. This often results in the issuance of patents, with each patent marking a step in the progress of the art.

The patent system plays an important role in providing an incentive and protection for the individuals and companies that invest considerable amounts of time, resources and capital to develop such technologies. Most importantly, the patent system provides a vehicle for inventors to benefit from the knowledge gained by other inventors as they solve various problems associated with bringing a technology to commercialization and disclose the same in their patent applications, thus further promoting the progress of the useful arts. The current approach assures that the same consistent application of the obviousness standard will be maintained. Companies will continue to invest in improving technology provided they can secure rights to their respective innovations.

Changing the standard would likely curtail further innovation. Companies will be less willing to invest in product development if it is unable to secure patent rights. It simply will not be economically feasible to spend resources on innovation that cannot be protected. Without protection manufacturers can outsource components developed by others to the cheapest bidder, wherever in the world they might be found in an effort to sell their products at the lowest price and maintain their significant market positions. Thus, although changing the current standard of patentability by eliminating the teaching-suggestion-motivation approach to arriving at the ultimate conclusion of nonobviousness would be beneficial to some *amici* on behalf of Petitioner, such a change would not be good for American industry as a whole.

Changing the current level of patentability will impact the American economy in the future. Take, for example, American dependence on foreign oil. Reliance on foreign oil will be reduced in the future, at least in part, by advances in technology in the areas of alternative fuels, hybrid vehicles

and fuel cells, to name a few. The automotive industry, including suppliers such as *amici*, will be directly impacted by the continuous, incremental advances in these areas. For example, billions of dollars are being invested each year in the development of fuel cells and the technologies associated with integrating fuel cell stacks into vehicles.

The fuel cell was first invented in 1839, but there was no significant practical application for fuel cells until they were used by NASA in the space program. At first, the cost of building a fuel cell was astronomical. When NASA first started using fuel cells, a PEM fuel cell cost approximately $500,000 per kW. (See, www.sae.org/automag/features/fuel cells/fuelcell3. htm). Work continues at a feverish pace to reach a commercial automotive fuel cell cost target of approximately $25 per kW for a 50 kW system. (See, www.fuelcells.org, Questions and Answers About Hydrogen And Fuel Cell.) The cost of making a fuel cell stack and then integrating the same into a vehicle is more than a hundredfold higher than is acceptable for commercialization. However, fuel cell vehicles will be commercialized as the result of stepwise improvement in the technology.

The current approach to patent issuance fosters the development of this technology. It is virtually impossible for any one company to, on its own, fund the development of a commercially acceptable fuel cell vehicle. In such a situation, the patent portfolios of the companies funding development become critical. As is common, alliances are being formed to share knowledge, resources and cost in an effort to speed the development of this important technology. The patent portfolios and licensing are being offered as consideration. Furthermore, when fuel cell vehicles are eventually commercialized, such patent portfolios will be important for enforcement and defensive measures. Most of these

important patent portfolios today include files histories urging patentability based upon the teaching-suggestion-motivation approach that has been the approach used by the Federal Circuit and the Court of Custom Appeals for more than forty years. Eliminating the teaching-suggestion-motivation approach will adversely impact thousands of the patents in these portfolios, and the ability of inventors to protect their contributions to the development of the useful arts going forward.

More importantly, eliminating the teaching-suggestion-motivation approach will likely result in the nonobviousness decision making process under 35 U.S.C. §103 being supplanted by reliance on negative rules, rhetorical embellishments or talismanic slogans.

## CONCLUSION

For the foregoing reasons, *amici* respectfully submit that the decision of the lower court should be affirmed insofar as it applied to the appropriate obviousness analysis, and *amici* urge the Court to adopt the teaching-suggestion-motivation approach as a viable approach to determining non-obviousness using the *Graham* factors.

Respectfully submitted,

RICHARD W. HOFFMANN
*Counsel of Record*
Warn Hoffmann Miller & LaLone PC
691 N. Squirrel Road, Suite 140
Auburn Hills, Michigan 48326
(248) 364-4300

CARY W. BROOKS
Reising Ethington Barnes Kisselle PC
201 W. Big Beaver, Suite 400
Troy, Michigan 48084
(248) 689-3500

*Counsel for Amici Curiae*