Concept of Obviousness: Scenario post *KSR International v Teleflex Inc*

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‘Non-obviousness’ is a fundamental requirement of patentability under all patent jurisdictions across the globe. The paper maps the evolution of ‘obviousness’ as a concept under the US patent law. It then ventures into implications of the much awaited ruling of the US Supreme Court in *KSR International Co v Teleflex Inc* which has dynamized the known principles and the validity of pre-existing tests for the determination of ‘non-obviousness’ of patent claims. In US, the law was thought to have settled after *Graham v John Deere* but the Federal Circuit Court in the 1980s relied upon the TSM test which, although flayed by critics, made the entire process more certain, accurate and practically advantageous. The impetus of the paper is to make a case in favour of the TSM test, which the Court, however did not expressly reject, yet sidelined by showing its reluctance towards its application. The latest ruling of the Court reverts back to the Graham factors and further adds a number of abstract ‘secondary considerations’ like common sense, effects of the market demand, objective reach of the claim etc. which ask for overwide discretion and subjectivity in the process.

**Keywords:** Non-obviousness, TSM test, hindsight bias, common sense, Graham factors, Synergism test

The Supreme Court of United States, in its landmark ruling in *KSR International Co v Teleflex Inc et al*, on 30 April 2007, delivered its opinion on an issue that goes on to redefine the fundamentals of US patent law. The case was definitely one of the most highly anticipated patent law opinions in decades wherein some 36 amicus briefs were filed from concerned third parties, including Microsoft, General Electric, and Ford Co. The Court, while dealing with the issue of ‘conditions for patentability’ as provided under Section 103 of the US Patent Act, overturned the judgment of the Court of Appeals for Federal Circuit. Actually, the issue in question was pertaining to the standards for the determination of ‘non-obviousness’, which is an essential condition to establish the validity of a patent claim and prove that it constitutes an invention.

The patent law rewards the discovery and disclosure of inventions that are new, useful and non-obvious. The requirement of ‘non obviousness’, thus, ensures that a particular claim is not merely a progress occurring in the ordinary course but, is instead, an act resulting out of the intellect of the person claiming the patent and thus deserves due recognition. The determination of this ‘non-obviousness’, however, differs widely across the globe in terms of the standards, forms a universal phenomenon. Like Section 3 of the US Patent Act, 1977, the patent law in India and the UK also involve the requirements of non-obviousness relying upon the standard of an ordinary person skilled in the art. This ‘ordinary person skilled in the art’ is although an imaginary construct, yet, very crucial.

The paper, in its first part, holistically studies the US patent law on the subject and traces its evolution over the years to the final development of the ‘teaching, motivation and suggestion’ (TSM) test. In the second limb, it goes on to briefly look into the ‘non-obviousness’ jurisprudence in other legal systems across the world and attempts a passing comparative examination of the same. In the final part, it embarks upon its central argumentative analysis wherein the judgment in *KSR v Teleflex* is discussed.

The researchers make a case in favour of the TSM test whose validity has been consistently questioned and, as the Court also joins the same wagon. This is specifically answered in the light of jurisprudential changes and their serious practical implications like perpetuation of hindsight bias, upsurge in patent litigation, etc that have followed after the Court’s pronouncement in KSR.

**Non-obviousness**

Section 103

Patents are constantly sought for inventions. An invention is considered to be present if, having regard
to the state of the art the invention is not obvious to a person skilled in the art.4 The US Supreme Court, in Hotchkiss v Greenwood5 laid down a simple guiding principle that an invention is patentable only when it evidences more ingenuity and skill than that possessed by an ordinary mechanic acquainted with the business. It was only in the year 1952 that the US Patent Act was enacted and three separate provisions to set out the basic conditions of patentability were allocated. The first two explicit conditions were novelty and utility as provided under Sections 101 and 102. The third was a condition of non-obviousness and was provided in Section 103. The Section reads as follows:

A patent may not be obtained…if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The Section in its plain terms suggests that patentability is to depend, in addition to novelty and utility, upon the ‘non-obvious’ nature of the ‘subject matter sought to be patented’ to a person having ordinary skill in the pertinent art. One noticeable feature of Section 103 was that it departed from the language used in Hotchkiss and emphasized on ‘non-obviousness’ rather than the less definite ‘invention’.6

Four Pronged Test in Graham

In the year 1966 the Supreme Court gave an authoritative ruling in the case of Graham v John Deere Co7 and formulated a four pronged analysis for checking obviousness of a claim:

(a) the scope and content of the prior art are to be determined;
(b) differences between the prior art and the claims at issue are to be ascertained;
(c) the level of ordinary skill in the pertinent art resolved;
(d) and objective evidence of non-obviousness.

The Court also suggested certain secondary considerations to determine the obviousness of the subject matter like commercial success, long felt but unsolved needs, failure of others, etc. Although it was felt that several difficulties might come in the way of application of the non-obviousness test, yet it was believed that the case shall go a long way in strengthening the interpretation as provided under Section 103 of the Act.

The Concept of ‘Prior Art’

Prior art, basically, includes published or written material on the invention or an existing patent or any other description pertaining to the invention which exists in the public domain, before priority date of the claim.8 In US, an invention is barred by the construct of prior art if the invention was ‘known or used in US or was patented or described in a printed publication in US or a foreign country’ before the date of claim.9

In case of Calmar Inc v Cook Chemical Co10 and Colgate-Palmolive Co v Cook Chemical Co11, the Court considered the question of patentability of shipper-sprayer to spray insecticides. The patent sought by Cook Chemical Co was rejected by the court as the patent failed to satisfy the test of Section 103, since the differences between it and the prior art were believed to be nothing but obvious to a person reasonably skilled in the art. Finally, in United States v Adams12, the Court interestingly observed and opined that the Adams patent was valid as the patentee persisted with his invention despite the fact that the long accepted factors, when taken together, would have deterred any such combination as was used by Adams.

Post Graham Situation—Rise of Synergism

The Court hoped that development of the Graham test would put an end to all doubts pertaining to the application of Section 103 of the Act.13 However, subsequently, the patent regime saw ‘synergism’ as an evolving criterion, which was predominantly relied on by the Federal Circuit decisions. The Synergism test was different in the sense that it looked at an invention in terms of the result that it produced, i.e. a claim would be believed to have ‘synergistic effect’ and thus patentable if a combination, with all its elements taken together, results in an effect greater than the sum of the several parts taken separately, eg. in Burland v Trippe Manufacturing Co.14 One of the commonly held misconceptions in this regard is that the test received recognition from the Supreme Court in cases like Sakraida v Ag Pro Inc15 and Anderson’s Black Rock v Pavement Co16 but as a matter of fact the Court never accepted the test as the sole criteria for determination of non-obviousness and it was always the Graham test which superseded it. This, in a way, created a situation of multiple tests wherein the
CAFC placed much of its reliance upon the ‘synergism test’ while the Supreme Court did not concur with it and continued to apply the Graham Test.\(^{17}\)

**Why the Synergism Test failed?**

In the year 1979, the Seventh Circuit Court in *Republic Industries Inc v Schlage Lock Co*\(^{18}\) arrived to an opinion that there were certain anomalies in the use of synergism as a standard of patentability. Judge Hand observed that the test makes a presumption that the choice of the elements combined is always obvious however that may not always be the case. He opined as follows:

It may be that in certain circumstances the very choice of the elements to be selected is not obvious. All machines are made up of the same elements…. But the elements are capable of infinity of permutations and the selection of that group which proves serviceable to a given need may require a high degree of originality. It is that act of selection which is the invention.

**Evolution of ‘Teaching, Suggestion and Motivation’ (TSM)**

It was after the realization by the Federal Circuit that the ‘Synergism test’ was not an ideal standard for determination of patentability, the emphasis finally shifted to a new simpler and more uniform rule that required the presence in ‘prior art’ of a teaching, suggestion or other motivation to combine references to reach the resulting invention prior to finding an invention as ‘obvious’. Because of its relative clarity and ease of application, what became known as the TSM test subsequently found widespread application in practice.

Also, the rule was supported by both the USPTO and the Federal courts as one which could mitigate ever-present problem of hindsight construction.\(^{19}\) Actually, the test originated out of *Hollister v Benedict Manufacturing Co*\(^{20}\) where it was articulated that the test requires that the teachings, suggestions, or motivations must be found explicitly or impliedly in the prior art. The implicit criteria for the same are read in terms of the knowledge of ‘person having ordinary skill in the art’ and the ‘nature of the problem to be solved’. However, the critics of the test dispute inclusion of these bases, but the researchers beg to disagree and have tried establishing the same in subsequent sections of the paper.

The TSM test has coevolved with refinements of ‘invention/obviousness’ for over one hundred year and proved itself as a sound, pragmatic and administrable test. The fate of the test, now hangs in balance after the momentous ruling of the Supreme Court. Though the Court has not rejected the test, per se, yet it has denounced the rigid application of the test by the Federal Circuit Courts and has called for a more flexible approach which, some believe has even virtually put its validity in a maze.\(^{21}\)

**Jurisprudence in Other Countries**

‘Non-obviousness’, as a condition for patentability, finds its place in almost all patent laws around the world. However, there are some noticeable differences in regard to the meaning of the term ‘inventive step’ and other determining criteria.

**India**

The patent law in India is governed by the Indian Patent (Amendment) Act, 2005 in which Section 2(1)j lays down a tripartite test for an invention to be patentable, namely: (a) novelty, (b) existence of an inventive step (c) capability of industrial application. According to Section 2(1)j, for an invention to constitute an ‘inventive step’ it needs to be either a technical advance when compared to the existing knowledge or it needs to have some economic significance or it can be a combination of the two. Provided that the invention must, always, necessarily satisfy the requirement of ‘not being obvious to a person skilled in the art’. Although, this amendment made in the Patent Act was in the wake of the TRIPS Agreement, the provision suffers from fierce criticism due to the apparent ambiguity on its literal interpretation. The words ‘technical advance’ and ‘economic significance’ appear in Article 31(l)(i) of TRIPS, which relates to compulsory licensing. Interestingly, the agreement puts the phrase as ‘technical advance of considerable economic significance’. In other words, an invention shall be treated as an ‘inventive step’ if it reflects an advancement of technology and is also economically significant.

Such an interpretation seems outrightly absurd because economic significance or commercial success of an invention or other market factors have never individually served as the basis for establishing ‘non-obviousness’ of claims. They have at best been used as secondary considerations. Now, in the absence of any definition by the Act, what seems safer is to place reliance upon the guiding provision in TRIPS and
ascertain the meaning and import of the terms.\(^{22}\) This shall further help the courts to ward off the fears of loose interpretation. Nonetheless, the provision, as it stands today, taken at its natural grammatical construction, the standard of patentability has definitely been lowered down.\(^{23}\)

The judicial opinion on the law of obviousness is not that developed. The Supreme Court, in its sole pronouncement on the subject, in *Biswanath Prasad Radhey Shyam v Hindustan Metal Industries*\(^{24}\) ruled that the question of whether an invention consist of an ‘inventive step’ is a mixed question of law and fact, which shall be substantially affected by the facts and circumstances if the case.\(^{25}\) The Court emphasized that ‘obviousness’ has to be strictly and objectively judged and no absolute test uniformly applicable in all circumstances can be devised. In *Press Metal Corporation v Noshir Sorabji*\(^{26}\), the Bombay High Court relied upon the ‘problem and solution’ approach that if the patentee has been able to see and overcome by his ingenuity, some practical difficulties, such new use would be patentable.

**United Kingdom**

The English law on the issue is unambiguous and clear. A patent may be granted only for an invention which is ‘not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art’.\(^{3}\) The ‘state of the art’ is to comprise of all matter whether a product, process or information which has been made public at any time before the priority date of the invention either in UK or elsewhere.\(^{27}\) The judgment in *Windsurfing International v Tabur Marine*\(^{28}\) is the established law on the subject. The House of Lords held that:

the question of obviousness was not to be answered by looking with the benefit of hindsight at what was now known and what had been known at the priority date and asking whether the former flowed naturally and obviously from the latter, but by hypothesizing what would have been obvious at the priority date to a person skilled in the art who had access to what was known in the art at that time.\(^{29}\)

**Australia**

The Australian High Court ruling\(^{30}\) in the case of *Lockwood Security Products v Doric Products*\(^{31}\) is a landmark for the Australian patent law. The decision provides a clear guidance on ‘inventive step’, particularly, in relation to patents where the relevant invention is in combination of a set of known integers. Since the claimants had mentioned in the specifications as regards the existing problem which they had overcome, a question arose as to whether such mentioning of the problem was an implicit admission that the invention was ‘obvious’. The Court held that even a ‘scintilla of invention’\(^{33}\) makes a product an improvement and thus patentable. The inquiry is objective and it has to be a question of fact and not a question of what the Court thinks is obvious.

**New Zealand**

The Supreme Court of New Zealand, while deciding the case of *Peterson Portable Sawing Systems Limited (In Liquidation) v Lucas*\(^{32}\) on 30 March 2006, laid down the law of obviousness in the country. It reaffirmed that the law for the determination of non-obviousness was analogous to that in England, in particular, the UK Patents Act, 1977. In this case, the reliance was put upon the approach of the House of Lords in *Sabaf SpA v MFI Furniture Centres Limited*\(^{33}\), to hold that the impugned patent was obvious as the two concepts i.e two distinct parts, had no effect on each other and each had performed its known function. Therefore, combining them did not amount to an improvement and so there existed no inventive step.

**Comparative Analysis**

On a comparative scrutiny of the law of obviousness under different legal systems one thing is for sure that the test of a ‘person having an ordinary skill in the art’ has a universal acceptance with small variations. However, other than this, there have been both similarities as well as differences. Whereas in UK the ‘problem and solution’ approach has become the starting point for determining obviousness, being the first step of the four step process in *Windsurfing v Taburmarine*, the US Supreme Court viewed this factor only as a secondary means of determination. This also forms one of the implicit basis under the TSM test and is articulated as ‘nature of problem to be solved’. Basically, the difference lies because in US, the primary requirement is to assess whether the prior art contains any teaching, suggestion or motivation to combine, which gives rise to the invention. If the answer is in affirmative, the inquiry stops, however, if the answer is in negative, then the inquiry goes further and the secondary considerations come into play. While, as per the EU ‘problem and
solution test’, in the case of Biogen Inc v Medeva Plc [24], a patentee is required to prove ‘some express or implied reference to the problem which it required invention to overcome.’ The US Supreme Court has criticized this approach on the ground that it sets the obviousness standard ‘too high’ and truly beneficial inventions, especially simple inventions, may fail to receive patent application. In Australia, again, the Court has refused confining the obviousness to a ‘problem and solution’ approach, particularly, with a combination patent. Despite, it being useful in addressing the issue of hindsight bias, it was reiterated that such an approach could be particularly unfair to an inventor of a combination, or to an inventor of a simple solution, especially as a small amount of ingenuity can sustain a patent in Australia.

The next and the final section of the paper marks argumentative aspect, on one hand it advocates the TSM test and establishes a case for the same by means of ample judicial opinion, on the other, the argument proceeds by attempting to prove as to how the newly expanded test, by the Supreme Court, shall result in confusion, subjectivity and leave not only the inventors but also the patent examiners and the lower courts as gobbledygook.

KSR International Co v Teleflex Inc: Facts of the Case

The Teleflex Inc complained of its patent infringement by KSR. This application was countered by KSR which then challenged Teleflex’s patent as obvious and invalid. The Claim 4 of the ‘565 patent related to Teleflex’s patented adjustable vehicle pedal whose position could be moved to adjust for the height of the driver and which established an electronic control to a computer controlled throttle. The adjustable pedal included an electric sensor on its fixed pivot position to control the engine, as opposed to the mechanical linkages.

Prior art references relied on by the defendants during the case, taught every aspect of the patent claim at issue except the use of an electric sensor. However, the use of electric sensors to control the engine was already well known in the automotive industry. Also a patent in the name of Asano existed, which was not included in the prior art references put before the USPTO. Had that been included in the prior art references Teleflex’s invention would have simply been a combination of the already existing elements, without any enhancement.

On 12 December 2003, the District Court for the Eastern District of Michigan dismissed the case on summary judgment, after the judge determined on applying the test of Graham v John Deere Co and the TSM test that the invention was obvious as it had all the elements of the ‘565 patent and thus there was a suggestion to combine.

Hearing the appeal made by Teleflex, the Federal Circuit considered the Teleflex’s argument of incomplete application of TSM test by the District Court to be tenable and reversed the District Court’s judgment that the patent was invalid, holding that its application of the TSM test was incorrect as it had not been strict enough in applying the test. The Court explained that, in order to show obviousness, a prior art reference must specifically address the precise problem that the patentee was trying to solve, not merely suffer from that same problem. It observed that:

The District Court was required to make specific findings as to whether there was a suggestion or motivation to combine the teachings of Asano with an electric control in the particular manner claimed by claim 4 of the ‘565 Patent.

KSR applied to the US Supreme Court for certiorari and it was granted on 26 June 2006. The main question posed by KSR to the Court was whether the Federal Circuit’s TSM test should exist as the sole determinant of obviousness.

Teaching, Suggestion and Motivation: A Valid Test

Before the Court delivered its judgment in KSR, analysts expressed speculations that either the Court shall reject the TSM test or sideline its applicability for obviousness determination, or accept the test as a complete test and if neither of the two, it shall authorize the same with modifications. Interestingly, the Court did not hold any of the three. The Court, definitely, did not ratify the test as it was. It did not even give a go-ahead to the test after modifications; however, it criticized the ‘rigid application’ of test and reduced a significant wholesome test to a mere ‘helpful insight’ to remove hindsight bias.

It is noteworthy, in this regard, that however, the test has constituted a cornerstone of the law of obviousness at the Federal Circuit level, the Supreme Court has, itself, never applied it before. This was, therefore, an opportunity for it to rubber stamp the test, if at all it wanted to, be it with or without modifications, but the Court thought otherwise and refrained from relying upon the test as a means of ‘obviousness’ determination.

The TSM test looks for prior art references, which suggest or motivate the applicant, it is often argued by
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the critics that the test lowers down the non-obviousness standard by causing inventions for which there is no suggestion to combine, in the prior art to be held non-obvious, even though certain of these inventions actually are obvious. The same was contended by the petitioners. The amicus briefs which were submitted for the United States even opined the same and said that the test unduly restricts ability of patent and trademark office to reject obvious patent applications, by requiring an unnecessary search for evidence showing an explicit suggestion, teaching, or motivation to be present in the prior art. It is viewed as leading to erroneous conclusions. They viewed that the USPTO should instead be allowed to bring to bear its full expertise including its reckoning of the basic knowledge and common sense when making the predictive judgment whether an invention would have been obvious to a person of ordinary skill in the art.

It is submitted that such a criticism is unsustainable. Instead of venturing into the theoretical debates about the validity of the test, it is better to observe actual application by the Federal Circuit Courts. As opposed to commonly held misbelief, the test lays down certain implicit bases which the courts have from time to time relied upon to invalidate a claim even in the absence of enough documented or recorded reference. These implicit factors are ‘nature of the problem to be solved’ and the ‘knowledge of persons of ordinary skill in the art’.

‘Implicit Factors’ Form a Part of the TSM Test

The case law concerning the use of these two bases to buttress the assertion was analysed.

Person Having Ordinary Skill in the Art

This also represents the third Graham factor i.e. if no prior art reference contains an express suggestion to combine references, then the level of ordinary skill will often predetermine whether an implicit suggestion exists. When the level of skill is high, one can assume comfortably that such an artisan will draw ideas from the relevant art without being specifically told to do so, yet the examiner has to prove. The first in line is the case of:

Alza Corporation v Mylan Laboratories Inc

In the present suit, what was in contention was a pharmaceutical patent in the name of plaintiffs who had sued the defendants for an infringement of their ‘580 patent’. The ‘580 patent’, actually, is drawn to a system for the transdermal administration of fentanyl, a powerful narcotic. The defendant had submitted that the patent acquired by the plaintiffs was obvious in the light of prior art which provided for using huge drug excesses with high solubility. The plaintiff, however, did not make use of the same design as it was not suitable for the administration of narcotics. Also, it was contended that an earlier invention, namely, Keith patent taught the transdermal administration of fentanyl citrate, but the same was expressly rejected in ‘580 patent’.

Now, when the question came up before the Court as to whether the patent was ‘obvious’, the Court came to a conclusion that the same was not obvious because firstly, defendant had not specifically, provided any reference in the prior teaching which taught the use of fenatyl as a base in the design. Also, applying the implicit basis, the Court held that, even in the presence of the Kieth Patent, it could not be concluded that a ‘person having ordinary skill in the art’ would receive motivation to combine from such prior art.

Nature of Problem to be Solved

In Re Kahn

The case at hand involved a ‘reading machine’ that may be used by the blind. Prior to this, the machines employed memory and display components by which one could ‘read’ using hand-held optical pens and speech synthesizers. The plaintiff, claimed, that the earlier devices were cumbersome to use and made it difficult for a user to read complex publications, but his invention addressed this problem which is operated by eye control and sound localization. He appealed against the order of the patent board contending that his invention was non-obvious.

The Court took note of this argument and believed that ‘problem to be solved’ could be considered as one indicator suggesting non-obviousness of a claim, however, the same could not be done in the present case as plaintiff failed to establish any objective evidence in support of his argument. The objective evidence includes any satisfactory evidence not an explicit prior art reference. The Court said in clear terms that a suggestion, teaching, or motivation to combine the relevant prior art teaching does not have to be found explicitly in the prior art, as: the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references. . . . The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in
the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art.46

*DyStar v C H Patrick*47

The case related to the preparation of dyes, the Court applied its ‘suggestion’ test. It noted that the plaintiff’s arguments misdescribe the suggestion test that it requires ‘specific and definitive prior art references with clear motivation of how to combine those references’ and requires the USPTO to find ‘the glue expressly leading you all the way to obviousness’ and ‘connect the dots very, very clearly’.48 The Court then described that a motivation to combine may be found:

1. in the prior art references themselves;
2. in the knowledge of those of ordinary skill in the art that certain references, or disclosures in those references, are of special interest or importance in the field; or
3. from the nature of the problem to be solved, leading inventors to look to references relating to possible solutions to that problem.

*Princeton Biochemicals v Beckman Coulter*49

In this case, the claim was for an invention, capillary electrophoresis device, which serves as an investigator of biological materials. The plaintiff sued defendant for infringement of their patent who, in turn, contended that the patent was obvious. The Court was presented with relevant prior art reference. It came to a conclusion that however, the motivation to combine the elements did not arise directly from the existing state of art, yet with so much of knowledge in the background any person who is having ordinary skill in the art would combine the components and therefore it was not an inventive step and was obvious. The Court specifically made use of both the criteria. The objective evidence for the ‘knowledge of the skilled person’ was proved by means of an expert testimony.50 In addition, as regards the ‘nature of the problem to combine’ the Court relied upon the findings of the district court that the problem was lengthening and securing the capillaries which was exactly provided in the prior art and that only called for the combination.

After analyses of the above cases, it can thus, safely be concluded that the test offers a uniform and objective benchmark for determining all-vexing question of obviousness of an invention and the criticisms that are often levelled against the same, it being a rigid test, rest on a false caricature of the test and are demonstrably incorrect under settled precedent.

**An Insight into the Judgment and its Implications**

The Supreme Court in its judgment in *KSR*, although, does justice by deciding in the favour of petitioners holding that the patent claimed by Teleflex was nothing but obvious in the light of prior art. In fact, at the very first instance, the granting of Engelgau patent was itself disputable, as there was no inclusion of Asano among the prior art references.39 However, the Court disagreed with the application of TSM test by the Federal Circuit, which effectively resulted into a shift of reliance away from the test. The Court articulated certain standards which added a whole lot of subjectivity and uncertainty to the process, further contributing to the problems of multiplicity of tests and hindsight bias.

After discussing its post-Graham decisions, the Court concluded that its precedents make it clear that a proper analysis ‘need not seek out precise teachings directed to the subject matter of the challenged claim’.51

The TSM test insists that a factfinder must consider teaching, suggestion or motivation to combine elements of a prior art, which shall include the implicit criteria also; Kennedy J, however, stated certain determining factors that the USPTO or the courts should henceforth take into account while deciding upon the question of ‘obviousness’.52 He stated that:

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.39

The Court not only reiterated certain earlier stated secondary consideration like the commercial success of an invention, or market demand but also added some new factors like objective reach of the claim, effects of demands known to the design community. Most importantly, it emphasized upon the use of ‘common sense’ also in the inquiry by USPTO. It
specifically manifested its intention pertaining to the exercise of ‘common sense’ at numerous occasions, one of which is as follows:

Although common sense directs caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does.31

Also troubling was the Court’s suggestion that the patent law only permits protection to the ‘real innovation’ or ‘extra-ordinary innovation’ and not ordinary innovation. To quote:

Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive inventions of their value or utility.59

Inculcation of all these factors is inappropriate and detrimental to the fundamental postulates of uniformity and objectivity, safeguarding the patent law.

Common Sense
The term has been consistently used,53 which the Court, at no instance, elucidates. It nowhere addresses as to whose ‘common sense’ actually stands at a test, is it a layman in the industry or the examiners at USPTO. If it intends the ‘common sense’ of the former, that effectively means that of a person having an ordinary skill in the art.54 If it is the ‘common sense’ of the examiner, a natural consequence will be that it shall be exercised subjectively, even without any objective evidence supporting it. But, such an understanding seems contradictory when looked at the other dicta of the Court. As the Court reiterates at one point that, ‘rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’.58 This surely imports overwide discretion, which might lead to the vice of arbitrariness.

On the other hand, there is an equal possibility of this ‘common sense’ as being construed that of a skilled person of the art. That is, if the skilled person applying his common sense would have believed at the time when the invention was made that, it was obvious, the USPTO may declare it to be obvious. To the Courts’ dismay, the same has been followed in Leapfrog Enterprises Inc v Fisher-Price Inc55 wherein the Court opined that the ‘common sense’ talked of in KSR is that of ‘person skilled in the art’ instead of the common sense of the examiners at USPTO.

If Leapfrog is taken to be right then the whole concept gets blurred because then how would one distinguish between ‘common sense’ of a skilled person in the art and the third Graham requirement of the knowledge possessed by the ‘person having ordinary skill in the art’ (PHOSITA). This would render the entire concept as a misnomer.

Real/Extraordinary v Ordinary Innovation
The Court said that an invention to be patentable has to be a ‘real innovation’ and not the one occurring in the ‘ordinary course’ i.e. ‘ordinary innovation’. But, this instead of settling the position of law raised numerous questions which again remained unanswered. The Court said that if ordinary innovation is considered as the subject of exclusive rights, ‘the patents might stifle rather than promote the progress of useful arts.’39

Even the lower court judges56 opined that the Court in KSR left a very mushy standard, as no one knows when there is real innovation and when not? For ultimate reliance, what is awaited is its comprehension by the patent examining manuals. Again, one possible interpretation could be that the Court intended patents for incremental improvement to become harder to get and harder to enforce.57 This would have debilitating impacts for the companies which have engaged in a practice of ‘commodity patents’. It involves filing of a number of small and narrowly drawn patent applications which only aim at capitalizing over the incremental improvements. Companies that engage in such patent filings may need to reconsider their patent strategies.

Market Factors65
The Court also made specific references to market context. For instance, it said:

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.

In each of these references, the Court points out market factors which might lead to a conclusion of obviousness, for instance, where the work is available in one field, and someone applies the work to another field, or where the innovation was inevitable as the movement of science was in that direction, or where there were finite number of predictable solutions, and the inventor selected one of them.56

It is questionable whether these statements concerning the market are actually helpful. Rather, if this is applied broadly, it might act as a disaster. After all, how many inventions are such which are not driven by market forces? If there be no connection with the market, why would organizations spend money on research and development? This shall sour with the market, why would organizations spend driven by market forces? If there be no connection all, how many inventions are such which are not.

This is applied broadly, it might act as a disaster. After all, how many inventions are such which are not driven by market forces? If there be no connection with the market, why would organizations spend money on research and development? This shall sour the problems, especially for technical inventions which are improvements over the existing state of technology in the market. For instance, computer microprocessors or speeding engines which acquire importance primarily because they are improvements over their market counterparts in terms of speed, attributes or functions etc.65

Commercial Success

This is another factor that the Court reiterated as a ‘secondary consideration’. Although it has been accepted as a secondary consideration earlier also, the argument, is difficult to make. Firstly, because often the patent may face prosecution before the product is even introduced for sale. Additionally, the commercial use to be alleged must be of a product embodying the invention, not the patent itself (which may have separate and substantial commercial value). Finally, if there are commercial sales, the inventor has to establish evidence that it is due to the innovation of the patent and not because of any other reason, say due to advertisement or market success or any other business factor.59

So, eventually the contours of how to apply KSR will have to be worked out by the USPTO. Practically speaking, it shall be difficult for the examiners to decipher each of these guidelines and mark their ambit. Also, disputes regarding the nature of the relevant evidence (particularly regarding whether and when secondary considerations are relevant), will pose a tough challenge to the Patent Office and the Courts.60 Thus, there is another important issue of ‘hindsight bias’ which has been further entrenched after the ruling of the Court attempting to widen the ambit of the obviousness inquiry.

The Hindsight Bias: A Dilemma for the Patent Law; Situation Worsens

Hindsight bias stands as a ticklish issue. Actually, when an examiner knows that an invention was achieved and more prejudicially the method it was achieved, the invention appears to be much more simple and obvious than it actually is.51 The analysis has to be whether the invention was obvious at the time ‘when it was made’. Knowledge of the invention, however, inevitably alters the evaluation to the improper ‘appears to have been obvious in hindsight’. The Supreme Court has also recognized this requirement of freedom from hindsight bias for determination of obviousness.9 In, In Re Kahn86, the CAFC reaffirmed its opinion that the TSM requirement protects against the entry of hindsight into the inquiry. This is because the test requires the USPTO to back its decision by a reasoning and rationale based on objective evidence and it cannot merely pronounce conclusory statements. The plaintiff, who has to establish a prima facie case of obviousness, furnishes this evidence.

But, the Court has by condemning the test, aggravated the probability of this factor creeping in again. This becomes all the more crucial, considering the fact that the Graham test which the Court falls back upon, suffers from the hindsight problem, as the Court has itself accepted.

Fewer Patents and More Litigation

The Court’s ruling surely raises the bar of non-obviousness by providing for more expansive and fluid criteria that can be relied upon to establish that a claim is obvious. As a direct impact, it shall now be much more difficult for an inventor to establish his claim. It is well set to affect companies in software and other IT areas, where some of the most controversial patents have been issued and litigated in recent years.81 There can be significant short-term litigation (and an increase in patent validity opinion work) as the validity of issued patents shall be called dramatically into question, at least until a more predictable rules are devised, by either the Congress or the USPTO. Litigants, who lost on claims of obviousness because they could not meet the TSM requirement can now move back to the Court to invalidate the claim on certain other ‘secondary considerations’16.

Also, patents that only present minor advances over the prior art, the ‘incremental patents’ are likely to bear the brunt. Specific examples of this are noticeable in the pharmaceutical industry. One feature that served as precedence in the industry for the last
ten years was that, for all practical purposes obviousness was not treated a meaningful basis for invalidating drug patents. However, the Court by its construal of standards has eliminated the same, which shall adversely affect cases, which are combination of already known drugs or relatively uncreative modifications of pre-existing compounds. Under, the old regime, however, such combinations were patentable under the aegis of the pharma industry. 62

Conclusion

The standard of non-obviousness set forth in the US Patent Act and further enunciated and elaborated by the judiciary represents the legislature’s decision as regards the criteria to promote technological progress. 63 Accurate implementation of these principles, therefore, becomes imperative for the attainment of this goal. The decision in KSR, in this regard, is all set to have significant impact on the patent law in US. However, since the opinion presents a long discourse on principles without actually elucidating upon the practical techniques to apply the same, the extent of the impact shall depend upon the understanding of these principles and as to how these are brought to practice.

The implementation part, therefore, remains the most crucial. Whatever is asserted about the implications of the judgment is not a mere figment of imagination. It shall soon, or rather has already started plaguing the process. The case of In Re Translogic Technology 64, exemplifies practically the argument. The USPTO granted a patent ‘666 which became subject of an infringement suit. The plaintiff, securing his patent contended that the District Court had erred in understanding the prior art reference. It was submitted that certain elements of its claim were never taught in the prior art. 65 It was also argued on the basis of cogent evidence that, the prior art had taught against such use as was made by them. The plaintiff, further submitted that even if it was argued that the elements were a part of the prior art, nothing, be it explicit or implicit, provided a ‘motivation to combine’ those elements.

But, the Federal Circuit Court, in an attempt to give effect to the ‘landmark ruling’ answered all the questions relying upon their ‘common sense’ and the ‘person having ordinary skill in the art’ standard. In so far as the KSR opinion was concerned, the Court was cautious enough to quote that the ‘analysis cannot be confined by the formalistic conception of ‘teaching, suggestion, motivation’, on the other hand, became completely oblivious and unmindful of the principle that it cannot simply pass judgments based on mere conclusory statements. The Court did not rely on any objective evidence to justify the application of its ‘common sense’. Generally, it is observed, that in such cases the Court brings expert testimonies of skilled person in the art or any other secondary indicia. But, here, the Court dispensed with all these and made use of a new all pervasive tool of ‘common sense’. 67

It is thus, finally submitted that replacing a well-recognized standard acknowledged as ‘one means of establishing obviousness’ with ‘basic reckoning and common sense’ and other uncertain considerations would undercut many important innovations and the businesses that exploit them. With these uncertainties, investors would be less likely to make investments in innovative technologies. 67 Doubtless it will remain an enigma going forward. It is thus aptly put:

It is far better, therefore, to implement the partial and potential fixes available and described to us than to simply acknowledge the existence of inconsistency and bias but pretend that decision-makers can somehow avoid it in some undefined, unsubstantiated way. 53

References

11. Colgate-Palmolive Co v Cook Chemical Co, 86 S Ct 684.
17. Verkey Elizabeth, Law of Patents, 1st edn [EBC Publishing
(P) Ltd, Lucknow, 2005, 104-105.


20 Hollister v Benedict Manufacturing Co, 113 US 59 (1885).


23 Thorpe Phil, Deputy Director, United Kingdom Patent Office, observes: In Europe by comparison, commercial success or economic significance alone has not been regarded as indicative of inventive step although it may contribute assessment of inventive step, Thorpe Phil, A positive agenda for patent reform and harmonization for development, www.iprsonline.org/unctadictsd/bellagio/Bellagio2005/Thorpe_Piece.pdf, 2005.

24 Biswanath Prasad Radhey Shyam v Hindustan Metal Industries, (1979) 2 SCC 511.

25 Bilcare Ltd v Amartara Pvt Ltd, [2007] (34) PTC 419 (Del).

26 Press Metal Corporation v Noshir Sorabji, AIR 1983 Bom 144.


30 The High Court of Australia has the authority to conduct constitutional review of state and federal legislation and is the supreme authority on constitutional interpretation in Australia.


32 [2006] NZSC 20; New Zealand Patent No. 282742 was challenged on the grounds of lack of novelty and obviousness under Section 41(1)(e) of the Patents Act, 1953.


35 Steven Smith P & Von Kurt Thomme R, Bridge over troubled water: The Supreme Court’s new patent obviousness standard in KSR should be readily apparent and benefit the public, Albany Journal of Science and Technology, 17 (127) (2007) 152.


40 Brief for the United States as Amicus Curiae, No. 04-1350.


43 Prior to the ‘580 patent, two basic principles were applied for the transdermal designs: 1) using a drug with high solubility, so that it could be easily pushed through the skin, and 2) huge drug excesses should be used to super-saturate the system so delivery could be continued for a prolonged period of time.

44 The Court held in explicit term that: the form of fentanyl produced under the procedures of the [Keith] patent would be in the citrate salt form...As such, the Keith et al reference fails to teach one having an ordinary skill in the art to make and use a device which would transdermally administer a skin-permeable form of fentanyl.


46 SIBIA Neurosciences Inc v Cadus Pharm Corp, 225 F 3d 1349, 1356 (Fed Cir 2000), In re Dembiczak, 175 F 3d 994, 999 (Fed Cir 1999).


50 The testimony was given by Dr Jorgenson’s who said: ‘the motivation to combine these references was found in the knowledge of those skilled in the art at the time of Guzman’s invention’.


53 KSR Int’l Co v Teleflex Inc et al, 127 S Ct 1727 (2007) at 1741. The Court went on to hold that although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established Opinion of the Court functions, 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.

54 Ghosh Shubha, KSR and the F-Words, http://www.patentlyno.com/patent/2007/05/ksr_v_teleflex_html (23 June 2007). (We are reminded that a person of ordinary skill would not work in the context of PHOSITA or ordinary skill in the marketplace as a whole).


56 Mathew Kenelly and Holderman, Judges, District Court of Illinois.

57 Manzo Edward D, A panel discussion on obviousness in

58 *KSR Int'l Co v Teleflex Inc*, 127 S Ct 1727, 1742 (2007). The Court stated: ‘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 a good reason to pursue the known options within his or her technical grasp’.


63 Article I, Section 8 Clause 1 of the US Constitution enshrines that the purpose of granting patent power to the Congress ‘to promote progress’.


66 *In Re Translogic Technology Inc*, p. 11, 17.