Inventiveness reinvented by US Supreme Court

The US Supreme court has been known to come up with radical decisions in matters related to patents and such decisions have, in fact, brought out new interpretation to patent laws in the USA. These decisions and interpretations have influenced the patent laws in many countries. For example, the famous decisions in respect of patentability of microorganisms and software are the landmark decisions which not only changed the perception about patentability but also brought out major changes in the concerned industries through new innovations and technologies. We had yet another decision, which upheld the patentability of plants, whether sexually or asexually produced, is likely to bring some changes in laws related to protection of plants. The most recent decision of the US Supreme Court in the case KSR International vs Teleflex Inc. has clarified confusions prevailing in regard to non-obviousness of an invention and also put forward some new ways to look at this issue.

The US Supreme Court gave this landmark decision on April 30, 2007. The infringement suit was filed by Teleflex against KSR International for infringing a patent of which Teleflex was the sole licensee (assignee). The said patent relates to computerized adjustable pedal system for controlling fuel supply (throttle) to the engine of an automobile.

The case is about a very commonly used device. In a conventional automobile a driver depresses or releases the gas pedal, to control the quantity of fuel to be delivered to the engine. The throttle control is via a cable or other mechanical link. Because the pedal position in the footwell cannot be adjusted, a driver wishing to be closer or farther from it must either reposition himself in the seat or move the seat, both of which could be imperfect solutions for smaller drivers in cars with deep footwells. A regular adjustable pedal installed in the car would eliminate repositioning of the seat and such systems have been known to exist. In newer cars computer controlled throttles do not operate through force transferred from the pedal by a mechanical link, but open and close valves in response to electronic signals. For the computer to know what is happening with the pedal, an electronic sensor must translate the mechanical operation into digital data. Computer controlled throttles were known before the patent held by Teleflex was granted. One of the key issues during the debate was the location of the sensor to sense the movement of the pedal.

KSR International, a Canadian company, manufacturing and supplying auto-parts developed an adjustable pedal system for cars with cable actuated throttles and obtained a US design patent 6151976 in 1998. General Motors Corporation chose KSR to supply adjustable pedal systems for its trucks using computer controlled throttles. KSR utilized the ‘976 patent and added a modular sensor to its design for computer controlled throttle.

Teleflex is a competitor of KSR in this business of manufacturing and supplying adjustable pedal systems. Teleflex is the exclusive licensee of a patent granted to Engelgau entitled “ Adjustable pedal assembly with electronic throttle control”. (US

Patent No 6237565). Claim 4 of the patent was the main point under consideration of the court. Claim 4 reads as follows:-

> "A vehicle control pedal apparatus comprising
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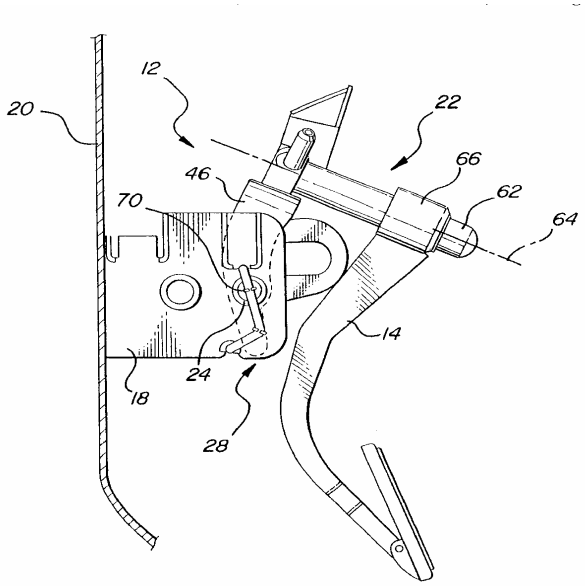
> a support adapted to be mounted to a vehicle structure;
>
> an adjustable pedal assembly having a pedal arm moveable in for e and aft directions with respect to said support;
>
> a pivot for pivotally supporting said adjustable pedal assembly with respect to said support and defining a pivot axis; and
>
> an electronic control attached to said support for controlling a vehicle system;
>
> said apparatus characterized by said electronic control being responsive to said pivot for providing a signal that corresponds to pedal arm position as said pedal arm pivots about said pivot axis between rest and applied positions wherein the position of said pivot remains constant while said pedal arm moves in fore and aft directions with respect to said pivot.



12 - Control pedal apparatus
14 - Pedal arm
18 - Support
20 - Vehicle structure
22 - Adjustable pedal assembly
24 - A pivot
28 - Electronic throttle control
46 - Bracket

62 - Guide rod
64 - Longitudinal axis
66 - Bearing member
70 - Spring center

Teleflex Incorporated and its subsidiary Technology Holding Company- both referred to as Teleflex in the present case, sued KSR International for infringing the patent 6,237,565, especially the claim 4 of the patent.

KSR countered that claim 4 of Engelgau patent was invalid as it did not satisfy the criterion of non-obviousness as stipulated in Section 103 in the US Patent Act which forbids issuance of a patent when "the difference between the subject matter sought to be patented and the prior art are such that the subject matter as a whole have been obvious at the time of the invention was made to a person having ordinary skill in the art." It is one of the rarest occasions that the highest Court in USA discussed the issue of obviousness in a patent infringement case and decided the case predominantly around this basic issue of obviousness which in its opinion has to be decided on broad principles of public good as well.

Teleflex had first approached the District Court which granted a judgment in favour of KSR. The Court heavily depended on the Graham v. John Deere Co. of Kansas City which set out an objective analysis for applying Section 103: The scope and content of the prior art should be determined, difference between the prior art and the claims at issue should be ascertained, and the level of ordinary skill in the pertinent art be resolved. Secondary considerations as commercial success, long felt but unresolved needs, failure of others etc. might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. The Court employed a "teaching, suggestion, or motivation" (TSM) test under which a patent claim is only proved obvious if the prior art, the problem's nature or the knowledge of a person having ordinary skill in the art reveals some motivation or suggestion to combine prior art teachings. Deciding an acceptable TSM test is generally not going to be easy for courts. District Court in the present situation applied the TSM test and found little difference between prior art and Engelgau's patent.

The Court of Appeals reversed the decision of the District Court on the grounds that it did not apply the TSM test properly.

The Supreme Court examined the judgments of two courts and also carried out a detailed analysis on how inventiveness or non- obviousness of a patent should be determined. The courts in USA have held for many years that a patent for a combination which only unites old elements with no change in their respective functions does not satisfy the requirement of inventiveness. (For example, if you put torch bulbs around an umbrella and operate them with the help of a battery so that people could see you walking in the rain in the night when it is dark, then this will not be treated as a patentable invention because old elements so combined that they do not show any change in their respective functions.) Similarly, the combination of familiar elements according to

known methods is likely to be obvious when it does no more than yield ***predictable*** results. The Supreme Court opined "When there is *a design need or market pressure to solve a problem* and there are *a finite number of identified, predictable solutions*, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. *If this leads to the anticipated success*, it is likely the product not of innovation but of ordinary skill and common sense. *In that instance the fact that a combination was obvious to try might show that it was obvious under §103.*" The courts must ask whether the improvement is more than the predictable use of prior art elements according to their established functions. *Granting patent protection to advances that would occur in ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements deprive prior inventions of their value or utility.* The Supreme Court unanimously rejected the verdict of the Court of Appeals on following grounds:

1. The first error of the Court of Appeals was that it held that courts should look only to the problem the patentee was trying to solve rather than taking a larger view. It failed to recognize that the problem motivating the patentee may be only one of many addressed by subject matter of earlier patents. The Court of Appeals also applied the TSM criterion in a rigid manner and failed to take a broad view. The Supreme Court took a much larger view and opined that the obviousness inquiry could not be confined by a formalistic conception of the words teaching, suggestion, and motivation, or by overemphasis on the importance of published articles and the explicit content of issued patents and there was *no necessary inconsistency* between the idea underlying the TSM test and the *Graham* analysis. But when a court transforms the general principle into *a rigid rule that limits the obviousness inquiry*, as the Court of Appeals did in this case.
2. The Court of Appeals assumed that a person of ordinary skill attempting to solve a problem will be led only to those elements of prior art designed to solve the same problem. Common sense teaches however, that familiar items may have obvious uses beyond their primary purposes.
3. The Court of Appeals concluded wrongly that a patent claim cannot be proved obvious merely by showing that the combination of elements was obvious to try. When there is a design need or market pressure to solve a problem and there are finite number of identified predictable solutions, a person of ordinary skill has good reason to pursue the known options with in his technical grasp. If this leads to the anticipated success, it is likely that the product is not of innovation but of ordinary skill and common sense.
4. The Court heavily relied on hindsight thinking and bias.

The Court took into consideration many patents as prior art documents while arriving at he above decisions. The prominent patents were US Patent Nos. 5,010,782; 5,460,061; 5,241,936 and 5,063,811. The Supreme Court was of the view that the Court of Appeals did not understand the fundamentals. It also declared that the District Court was correct to conclude that claim 4 was obvious to a person of ordinary skill to combine earlier patents on adjustable pedals. There existed a market, which created a strong incentive to convert mechanical pedals to electronic pedals. It has been stated that we build and

create, by bringing to the tangible and palpable reality around us, new works based on instinct, simple logic, ordinary inferences, extraordinary ideas and sometimes even genius. These advances once part of our shared knowledge, define a new threshold from which innovations start once more.

TSM criterion has been followed by the Court of Appeals for the last 20 years in deciding issues related to obviousness (inventiveness). This is perhaps the first time, after the requirement of inventiveness was enacted in USA in 1952, that the Supreme Court looked into this matter in depth. Although it may appear that this case happened in USA and perhaps, the applicability of the decision would be limited to USA but, it may be reckoned that inventiveness generally has the same connotation, if not explicitly but certainly implicitly, in the scientific logic and manner of thinking. The following writing of President Jefferson would help one to understand the spirit behind the US patent law:-

"[I]f a new application of an old machine be a ground for monopoly, the patent law will take from us much more good than it will give. Perhaps, it may mean another thing, that while every one has a right to the distinct and separate use of the buckets, screw, the hopper boy, in their old forms, the patent gives you exclusive right to combine their uses on the same object. But if we have right to use three things separately, I see nothing in reason or in the law, which forbids our using them all together. A man has a right to use a saw, an axe, a plane separately; may he not combine their uses on the same piece of wood? He has right to use his knife to cut his meat, a fork to hold it; may a patentee take from him the right to combine their use on the same subject? Such a law, in stead of enlarging our conveniences, as was intended, would most fearfully abridge them, and crowd us by monopolies out of the use of the things we have." (Thomas Jefferson letter to Oliver Evans (January 16, 1814) in 14 Writings of Thomas Jefferson). (Ref. http://patent law.typepad.com).

The fall out of the above decision will be far reaching and may even bring about a paradigm shift in the patenting concepts in USA, if not in other countries of the world in the coming days. Among many possible effects would be a reduction in number of patents granted especially poor quality patents. An effect may also be felt in the jurisprudence of other countries and practices of many other patent offices. The width of interpretation of obviousness in different jurisdictions of other countries will depend on the new jurisprudence which those countries are likely to witness and the new jurisprudence would be a function of the social, cultural, economic, scientific, technological and political dimensions of the countries. The present case deals with physical object which can be seen and felt; therefore relatively easy to handle. In cases of chemicals, drugs, nano-particles etc. it would be difficult arrive at such decisions quickly. A great degree of abstraction may be involved. The message is clear that routine variations in the prior art are not the subject matter of patent. If the test of patentability becomes lenient and allows routine variations on prior art to be patented anew, the public's free use of information in public domain is clouded by a new monopoly. Moreover, the public receives no value in the disclosure of minor variations of inventions already known and described.