
TECHNICAL NOTES

Inventive Step or Non-Obviousness of an Invention

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Received 18 January 2005

This note briefly discusses the inventive step or non-obviousness of an invention. The concepts of skilled person, non-obviousness, judgement and some indicators of non-obviousness are also discussed briefly.

Keywords: Non-obviousness, skilled person

One of the most complex aspects of patent law is the determination of inventive step or non-obviousness of an invention. Inventive step is judged through the line of thought of a man skilled in the art but lacking inventive genius. Article 56 of the European Patent Convention (EPC) provides that "an invention shall be considered as involving an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art". This definition is accepted as a standard throughout the world.

Who is a Skilled Person?

A skilled person is one having all the 'standard' knowledge available in the field and having the 'standard' capabilities for 'routine work and experimentation' allowing straightforward progress from what is already known. He has merely a sense of what possibilities may hold better potential for yielding results. The hypothetical skilled person should — be ordinary, but reasonably intelligent; lack imagination, inventiveness or intuition; have no benefit of foresight and no assurance of success. The said notional skilled worker is deemed to have the following information available:

- (i) Common general knowledge—the normal skill and knowledge that workers in the field or

fields, of the patent ought to know based on their general training and experience, and

- (ii) Public knowledge—publicly available information that may not be generally known but which could be found by the public in documents

Mr Justice Hugessen portrayed this person's characteristics most poetically in the *beliot* case:

"The classical touchstone for obviousness is the technician skilled in the art but having no scintilla of inventiveness or imagination; a paragon of deduction and dexterity, wholly devoid of intuition; a triumph of the left hemisphere over the right. The question to be asked is whether this mythical creature would, in the light of the state of the art and common general knowledge as at the claimed date of invention, have come directly and without difficulty to the solution taught by the patent. It is a very difficult test to satisfy."

How to Judge Non-Obviousness?

In order to judge the inventive step, the following question is to be borne in mind – 'Would a non-inventive mind have thought of the alleged invention?' If the answer is 'No', then the invention is non-obvious. In UK, the principal test for obviousness is named after the English barrister, Sir Stafford Cripps, who suggested it in the 1920's: "The real question is: was it for all practical purposes obvious to any skilled chemist in the state of chemical knowledge existing at the date of the patent ... that he could manufacture valuable therapeutic agents by making the high alkyl resorcinols."

The test for obviousness is still based on the Cripps or the modified Cripps question, because the standard for the judgement does not change along with the development of the technology, but what changes is the benchmark to which the standard is to be judged. This yardstick includes the person skilled in the art; the common general knowledge in a particular field of invention, which this skilled person brings to the task; and the prior art, against which the person skilled in the art will determine the question of non-

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Table—Comparison of inventive step determination in USA, Europe and Japan

The United States	Europe	Japan
Basic Approach: Graham (Graham approach is the one adopted in <i>Graham v John Deere Co</i> , 383, US 1(1996))	Basic Approach: Problem and Solution	Basic Approach: Like Graham
Prior Art: Everything that is applicable under Section 102 of US Patent Act dealing with novelty and Section 103 dealing with obviousness including prior art	Prior Art: Everything that is applicable for novelty except secret prior art.	Prior Art: Everything that is applicable for novelty except secret prior art.
Claimed features considered relevant in determining obviousness: All.	Claimed features considered relevant in determining inventive step: Only those that contribute to the solution of the objective problem.	Claimed features considered relevant in determining inventive step: All.
A person with ordinary skill in the art: No concept of 'A team of experts'.	A person with ordinary skill in the art: 'A group of persons' for highly advanced and complex technology.	A person with ordinary skill in the art: 'A team of experts' for highly advanced and complex technology.
Hindsight: Not allowed.	Hindsight: Nominally not allowed, but inherent in problem and solution approach, even though solution reached in the invention should not form part of the reformulated problem.	Hindsight: Not allowed.
More weight on commercial success	Less weight on commercial success	Less weight on commercial success

Source: <http://www.law.washington.edu/casrip/Harmonization/PDF/obviousness.pdf>

obviousness. The determination of obviousness is a factual determination because there must be a determination of the invention, or the problem to which the invention is directed.

Some Indications of Non-Obviousness are:

- A surprising result
- The solution to a long-standing problem
- The fulfilment of a long-felt need
- A great technical progress
- The overcoming of a prejudice
- The trying in vain of other skilled artisans
- Accolades for the invention from experts in the field
- Commercial success linked to the merits of the invention

The determination of obviousness is not only factual but also subjective. The patent examiner, or the Patent Appellate Board, or the judges in the courts must place themselves in the shoes of a fictitious skilled person at the time the invention was made, or at the time at which obviousness is to be judged, and determine whether the advancement made in the art is merely a workshop improvement, or the result of an exercise of the inventive faculty. Therefore, during examination, the patent examiners have to review

scientific or technological literature including other patent documents, which show the state of the art by putting themselves in the position of this person skilled in the art to make the necessary judgement. This is one of the reasons why patent examiners should have scientific or technological qualifications.

In general, all prior art relevant to the determination of novelty is relevant to obviousness. This includes the so-called 'secret art', i.e., pending patent applications that have not been published or issued. But art applied to show obviousness must meet the additional requirement that the art be from an analogous field. A reference is considered to be in an analogous field if a person of ordinary skill in the art would have consulted the cited reference. For novelty, the requirement holds that all measures from the independent claim are described in a single document. When even a single, possibly trivial measure is missing, the claim is novel anyway. It is also necessary that all measures be described in the same combination in the single document.

A combination of documents describing all elements from a claim is required for citations on lack of inventive step. But the enquiry shall be on why a skilled person would (not merely could) combine those documents so as to arrive at the claimed

invention. In this argumentation, it is not permitted to apply hindsight. Here the reasoning must be based on the situation the day before the date of filing of the patent application and the knowledge a skilled person had on that day. The most common way to attack a claim based on lack of inventive step is to identify a problem in the first document that is solved by the second document. The argumentation then is that the skilled person would identify that problem, and while searching for a solution would encounter the second document and apply the solution described therein. This then results in the invention. If the above combination of document misses a measure, which can be considered to be common technical knowledge, then the invention is still obvious. During prosecution, the burden is initially upon the examiner to make a *prima facie* case of obviousness, and, if he does, the burden shifts to the applicant to rebut it.

The method of determination of the inventive step is not uniform in all countries. The inventive step may be considered obvious in some countries, but may be regarded as surprising in others. So, setting the level of inventive step required is a choice open to every

WTO member. While all features of the claimed invention are considered in the US and Japan, only features of the claimed invention that contribute to the solution of the objective problem are relevant to the determination of inventive step in the European problem and solution approach (see Table).

The following steps are involved in the determination of inventive step in Japan and US:

- (i) What is the prior art?
- (ii) What are the differences between claimed invention and the prior art?
- (iii) Would the invention be obvious to a person with ordinary skill in the art?

The steps involved in the European problem and solution approach are:

- (i) What is the closest prior art?
- (ii) What is the objective problem solved by the invention?
- (iii) Was the solution reached by the invention obvious to a person with ordinary skill in the art?