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**DRAWN UP BY:** Daniel Alge,- Chair, CET 4

**SUBJECT:** Preparatory document (+ Annexes 1, 2, 3, 4)  
for discussion on Inventive Step

**PURPOSE:** For discussion

**TABLED TO:** All attendees



## PREPARATORY EXCO INFORMATION:

# INVENTIVE STEP

**For the FICPI EXCO Meeting in Seville, Spain 4-7 November 2007**

### CET-Component: Inventive Step

One of the major topics to be discussed by the ExCo during the CET component is INVENTIVE STEP. This topic has gained momentum by the recent KSR-Decision of the US Supreme Court<sup>1</sup>. Also in Australia, the High Court made an extensive review on inventive step in a recent decision<sup>2</sup> including the history and background of this stipulation (see paragraphs 38-66 of this decision). Also in Europe and Japan, discussions about the “level of inventive step” are taking place on every level of the patent system.

### The history:

Historically, the patentability requirement of inventive step or non-obviousness has evolved from different angles. Previously, most patent laws required a patented invention to be novel<sup>3</sup> and technically useful<sup>4</sup>. Patents have been regarded as being useful tools to

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<sup>1</sup> KSR INTERNATIONAL CO. v. TELEFLEX INC. ET AL. US Supreme Court No. 04–1350 (April 30, 2007)

<sup>2</sup> Lockwood Security Products Pty Ltd v Doric Products Pty Ltd (No 2) [2007] HCA 21; (2007) 235 ALR 202; 81 ALJR 1070 (23 May 2007)

<sup>3</sup> Novelty was often defined locally, both with respect to written prior art and (public) disclosure

<sup>4</sup> Often defined by the termini “utility“, “industrial applicability“, “progress” or simply by the word „invention“



foster innovation. A patent was seen as a reward for providing new technical teachings and a further incentive to innovate (in order to circumvent already existing patents). It was, however, recognised that granting patents for minor developments is hindering progress. It was found that there is a public need for free developments. This free space was defined as the “normal development”. Accordingly, patents were not granted for obvious developments.

#### Inventive/non-Inventive: Laws

The borderline between inventive subject matter and non-inventive subject matter is, however, difficult to find. Nevertheless, this borderline was defined in various patent laws all over the world (mainly in the second half of the previous century). Here are some definitions from the laws:

US (35 U.S.C. 103 (a) 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 negated by the manner in which the invention was made.”

Europe: (Art.56 EPC Inventive step):

“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.**”

Japan (Art. 29(2) JPA Conditions for patentability):

“Where, prior to the filing of the patent application, **a person ordinarily skilled in the art of the invention would have been able to easily make the invention based on an invention prescribed in any of the items of the preceding paragraph** [= prior art], a patent shall not be granted for such an invention notwithstanding the preceding paragraph.”



Australia (Art. 7 (2) and (3) Patents Act 1990 Novelty and inventive step):

“(2) For the purposes of this Act, an invention is to be taken to involve an inventive step **when compared with the prior art base unless the invention would have been obvious to a person skilled in the relevant art in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim**, whether that knowledge is considered separately or together with the information mentioned in subsection (3).

(3) The information for the purposes of subsection (2) is:

- (a) any single piece of prior art information; or
- (b) a combination of any 2 or more pieces of prior art information; being information that the skilled person mentioned in subsection (2) could, before the priority date of the relevant claim, be reasonably expected to have ascertained, understood, regarded as relevant and, in the case of information mentioned in paragraph (b), combined as mentioned in that paragraph.”

Canada: (Section 28.3 Patent Act Invention must not be obvious):

“The subject-matter defined by a claim in an application for a patent in Canada must be **subject-matter that would not have been obvious on the claim date to a person skilled in the art or science to which it pertains**, having regard to

- (a) information disclosed more than one year before the filing date by the applicant, or by a person who obtained knowledge, directly or indirectly, from the applicant in such a manner that the information became available to the public in Canada or elsewhere; and
- (b) information disclosed before the claim date by a person not mentioned in paragraph (a) in such a manner that the information became available to the public in Canada or elsewhere.”

Inventive/non-Inventive: Decisions and Practice:



Despite the different definitions of the inventive character of a patentable invention in different countries, courts have tried to give the general definitions in the law a more definite character. However, since the question of inventiveness is mostly dependent on the peculiarities of every single case, the guidance of the courts can also be interpreted differently, depending on whether one argues as an opponent or a patentee.

In the US, the Supreme Court has re-affirmed the full applicability of the Graham/Deere decision<sup>5</sup> in the KSR decision and overturned the general applicability of the “teaching, suggestion, or motivation” test (TSM test), under which a patent claim is only proved obvious if “some motivation or suggestion to combine the prior art teachings” can be found in the prior art, the nature of the problem, or the knowledge of a person having ordinary skill in the art.

The European Patent Office almost exclusively applies the “Problem/Solution-Approach” under which first the so-called closest prior art has to be identified. Then, the “objective technical problem” to be solved by the invention is established. Finally, it is considered whether or not the claimed invention, starting from the closest prior art and the objective technical problem, would have been obvious to the skilled person. In this final stage the question to be answered is whether there is any teaching in the prior art as a whole that would (not simply could, but would (“could/would” approach) have prompted the skilled person, faced with the objective technical problem, to modify or adapt the closest prior art while taking account of that teaching, thereby arriving at something falling within the terms of the claims, and thus achieving what the invention achieves.

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<sup>5</sup> “Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved 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.”



In the “Lockwood” decision the Australian High Court reflects on this “Problem/Solution-Approach”<sup>6</sup> as being sometimes “particularly unfair to an inventor of a combination, or to an inventor of a simple solution”:

“[...] that statement may reflect the "problem and solution" approach apparently mandated by the European Patent Convention. That "problem and solution" approach has the inevitable effect that an idea which constitutes an addition to the existing stock of knowledge needs to be specifically characterised as an idea of doing a new thing, or an idea of the way of achieving a previously known goal, or the idea of a particular solution in relation to achieving a certain goal.

Although the recognition of the need to identify an "inventive idea" justifying a monopoly is not new in Australia, the developments in the United Kingdom, which emphasise the need to identify the "inventive concept" in terms of "problem and solution", have raised the threshold of inventiveness. This has been exemplified by a number of relevant English cases since 1977.

Such developments were considered and distinguished [.. by this court]. This Court rejected confining the question of obviousness to a "problem and solution" approach, particularly with a combination patent. This should not be misconstrued. The "problem and solution" approach may overcome the difficulties of an ex post facto analysis of an invention, which may be unhelpful in resolving the question of obviousness. However, it is worth repeating that the "problem and solution" approach may 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. Ingenuity may lie in an idea for overcoming a practical difficulty in circumstances where a difficulty with a product consisting of a known set of integers is common general knowledge. This is a narrow but critical point if, as here, the circumstances are that no skilled person in the art called to give evidence had thought of a general idea or general method of solving a known difficulty with respect to a known product, as at the priority date.

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<sup>6</sup> Paragraphs 63 to 65 of the decision



Inventive/non-Inventive: other ways of defining inventiveness:

There have been many definitions published for a better definition of what makes a patentable invention. In the German literature (specifically of the 60ies and 70ies), complicated formula have been developed to calculate the inventive character of an invention. If it was above a certain level, the invention was patentable, if it was below this level it was not patentable (but might be protectable by a utility model).

Without the claim to be complete (and - intentionally - without references), here are some other definitions for the “inventiveness” of a patentable invention or “non-inventive” character of a non-patentable invention:

"Invention means more than novelty. Novelty alone will not sustain a patent."

"ingenious"

“A patent for a combination which only unites old elements with no change in their respective functions . . . obviously withdraws what is already known into the field of its monopoly and diminishes the resources available to skilful men.”

“When a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious.”

“Inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.”

"obvious" means "very plain"

“The question of determining whether a patent involves an inventive step is also one of degree and often it is by no means easy”



“Obviousness and inventiveness are antitheses and the question is always is the step taken over the prior art an 'obvious step' or 'an inventive step'”?

"It is as well to bear in mind that the question of obviousness involves asking the question whether the invention would have been obvious to a non-inventive worker in the field, equipped with the common general knowledge in that particular field as at the priority date, without regard to documents in existence but not part of such common general knowledge."

“In determining whether the subject matter of a patent claim is obvious, neither the particular motivation nor the avowed purpose of the patentee controls.”

Inventive/non-Inventive: major issues:

**The man skilled in the art:** neither an idiot nor a genius (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”?)

**The state of the art:** everything made available to the public before the priority date (in the field?)

Inventive/non-Inventive: a little bit less ?

In some countries, a second level of inventiveness is often defined for utility models (patents of innovation, etc.).

E.g. in AU, the following definition is given in Sec. 7 (4) to (6) of the AU-Patent Act for “innovative step” (which is required for an “innovation patent” less inventive than the “inventive step” for a (standard) patent (of Sec.7 (2) and (3)):

“(4) For the purposes of this Act, an invention is to be taken to involve an innovative step when compared with the prior art base unless the invention would, to a person skilled in



the relevant art, in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim, only vary from, the kinds of information set out in subsection (5) in ways that make no substantial contribution to the working of the invention.

- (5) For the purposes of subsection (4), the information is of the following kinds:
- (a) prior art information made publicly available in a single document or through doing a single act;
  - (b) prior art information made publicly available in 2 or more related documents, or through doing 2 or more related acts, if the relationship between the documents or acts is such that a person skilled in the relevant art would treat them as a single source of that information.
- (6) For the purposes of subsection (4), each kind of information set out in subsection (5) must be considered separately.”

In the German and Austrian Utility Model Acts, the term “inventive step” (“erfinderischer Schritt”) is used for indicating that this inventive achievement should be less than “inventive activity” (“erfinderische Tätigkeit”) which is the patentability requirement (also according to the EPC; amazingly enough, the term “inventive step” which is the literal translation of “erfinderischer Schritt” has been legally construed to mean something different in German). Whereas the prior decision practice in Germany and the literature have followed this “two-level” system (before the introduction of the EPC, the term for inventiveness was “sufficient degree of inventive ingenuity” (“ausreichende Erfindungshöhe”; literally translatable to “inventive altitude” or “inventive height”).

In a recent decision, the German Federal Court deviated from this view and stated that the “erfinderische Tätigkeit” as required by the EPC represents the lowest level of inventiveness for which an exclusive right should be granted. It was reasoned that lowering the bar further is against the constitutional right for everyone to freely act in a given market and that such a monopoly is not economically justifiable. Accordingly “erfinderische Tätigkeit” was regarded as being equal to “erfinderischer Schritt” (thereby “harmonising” the German and English version of Article 56 EPC).



Inventive/non-Inventive: why bother ?

The final question to be considered is whether the reasons for introducing the inventiveness requirement are still valid (or have shifted compared to the past).

“The key observation here: Patents can encourage innovation and economic growth under certain conditions and hamper it under others. The impact of patents on innovation and economic performance is so complex that a fine-tuned patent system is crucial to ensure maximum benefit for a country's firms and its overall economy.” (from EPO website)

“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 innovation starts once more. And as progress beginning from higher levels of achievement is expected in the normal course, the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle, rather than promote, the progress of useful arts. These premises led to the bar on patents claiming obvious subject matter [...] codified in §103. Application of the bar must not be confined within a test or formulation too constrained to serve its purpose.” (from US Supreme Court (KSR))

“A monopolisation of trivial improvements” “excluding third parties from using [such trivial improvements]” “is not justifiable”; “It is forbidden, however, to regard obvious subject matter as being based on an inventive step [...], thereby excluding all other economic operators [from using this obvious subject matter. Such an extension of rights is not justifiable in view of the [general] freedom to operate for third parties guaranteed by constitution.” (German Supreme Court in considering (denying) whether a lower threshold for inventive step than for patents should be accepted for utility models)



How much innovation is required to justify patent protection from an economical point of view?

Is this varying from field to field or even depending on the level of creativeness in a given field at a given time (the skilled man in the art is more creative in one field with a high number of patent applications filed (biotech? information technology?) compared to another field where a low number of patents is filed (mechanics?)? (a new concept of the “flexible person skilled in the art”)

Since the call for “raising the bar for the level of inventive step” is mainly heard as being a means for competing with the steadily rising number of patent applications filed: Should one raise the bar now and lower it, once the number of applications decrease ?

The US Supreme Court has indicated that the TSM-test is not always applicable for defining the non-obviousness of an invention thereby criticising the CAFC’s routine decision practice. In Europe, the “inventiveness question” has often been based on some European patents which “went through” and were granted erroneously. Criticism of the general standard applied by the Boards of Appeal is not present in a visible amount. Is therefore the call for “raising the bar” justified at all in the European Patent System or is the task to even more ascertain quality of the patents to be granted by the EPO ? In Japan, one can currently observe that most of the patents in nullity proceedings are invalidated on the basis of lack of inventive quality. Does the nullity judge apply different standards as the JPO ?

How can users anticipate future amendments in practice and law with respect to inventive step (an application should be made in view of 20 years patent term) ?

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