

# **Study on Inventive Step**

Standing Committee on the Law of Patents (SCP)  
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**Presentation by the Secretariat**

# Introduction

SCP/22/3 (EN only)

SCP/22/3 Summary (six languages)

Study on inventive step

- Definition of the person skilled in the art
  - Methodologies employed for evaluating inventive step
  - The level of inventive step (obviousness)
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- Based on the information provided by MSs (available on the SCP electronic forum website: <http://www.wipo.int/scp/en/>)
  - A collection of factual information without analysis or recommendation



# General Description and History

# Inventive Step (non-obviousness) - Rationale

Exclusive patent rights for incentive to innovate

Public disclosure of invention for dissemination of knowledge

- An invention that is simply obvious in relation to the existing art would contribute very little, if anything at all, to the society.
- Granting the exclusive patent rights on inventions with minor improvement to the existing art would prevent others from engaging in daily modifications and ordinary progresses.
  - Social costs

# History of inventive step requirements

French Patent Law (1791): Simply “changing the form or proposition” of any kind is not deemed to be an invention.

## US

- The similar provision in the US 1793 Patent Act. The elimination of that provision in 1836 merely encouraged the development of case law.
  - *Hotchkiss v. Greenwood (1851)*: Every invention must be the product of more ingenuity and skill than were possessed by an ordinary mechanic acquainted with the business .
- Codification of non-obviousness in the US 1952 Patent Act

## UK

- England in the 19<sup>th</sup> century: In deciding cases involving a known device used in a different but analogous manner, some courts started to apply a broader concept of the novelty (legal fiction).
  - Concept of “invention” (kind of inventiveness)

# History of inventive step requirements

- *Vickers, Sons & Co v. Siddell (1890)*: the question is whether the invention is “so obvious that it would at once occur to anyone acquainted with the subject and desirous of accomplishing the end, or whether it required some invention to devise it”.
- Codification of non-obviousness in 1932 (grounds for revocation), 1949 (grounds for opposition) and 1977 (requirement for grant)

## DE

- 1877 Imperial Patent Act required novelty and industrial applicability.
- Aspects of:
  - “inventivity” (*Erfindungshöhe*)
  - “technical advancement in the art” (*technischer Fortschritt*)
- Codification of the “inventive step” (*erfinderische Tätigkeit*) in 1978 Patent Act

# Inventive step (non-obviousness) requirement

## National/regional laws

- Having regard to the relevant prior art, the invention is not obvious to a person skilled in the art. (majority)
- The person skilled in the art would not have been able to easily make the invention based on the relevant prior art. (JP, KR)
- The invention constitutes an inventive progress and cannot be easily created by a person skilled in the art. (VN)
- Compared with prior art, the invention has prominent substantive features and represents a notable progress. (CN)
- The invention differs essentially from the state of the art. (Nordic countries)
- A feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art. (IN)

# Inventive step (non-obviousness) requirement

- In general, inventive step (non-obviousness) provisions in the laws lay down **general principles**.
    - Suitable for the application of the patentability criteria to each inventions on its merits.
    - Accommodate future unforeseeable technological developments.
  - Challenges: Compared with the assessment of novelty, assessment of inventive step uses a vaguer, qualitative yardstick.
- Judicial interpretation and administrative guidelines play an important role in providing guidance to examiners, applicants and third parties.
- Objectivity and consistency of inventive step assessments
  - Legal certainty

Guidelines and Manuals of National/Regional Patent Offices

<http://www.wipo.int/patents/en/guidelines.html>





# **Definition of the Person Skilled in the Art (PSIA)**

# Person skilled in the art (PSIA)

## National/regional laws

- “Person skilled in the art”
- “Person having/with ordinary skill in the art”
- “Person with average skill in the art”
- “Person having ordinary knowledge and skill in the art”

# PSIA

A PSIA is a hypothetical person.

- A PSIA is a fictitious person (not the inventor or a patent examiner).
- Assessing the claimed invention from the eyes of a fictitious person assists the objective analysis of the invention.

A PSIA is deemed to have an ordinary or average skill in the relevant art on the filing date (priority date).

- The PSIA's knowledge, skill and abilities are what is expected from an ordinary, duly qualified practitioner in the relevant art.
  - The level of knowledge and skill depend on the nature of the claimed invention in the relevant technology.
    - The PSIA is presumed to have access to all publicly available state of the art information.
    - The PSIA is able to comprehend all technical matters in the relevant art, including adjacent art or in the field relevant to the problem to be solved by the invention.

# PSIA

- The PSIA possesses:
  - ordinary knowledge of the technology in question.
  - ordinary practical skill in the technical field, such as workshop technique.
  - common general knowledge in the relevant field.
    - Public knowledge is not necessarily common general knowledge.
    - Common general knowledge: Some countries require support by documentary evidence.
- The PSIA is able to use ordinary technical means.
- The PSIA is availed of the normal means and capacity for routine experiments (ex. to clarify ambiguities on known technology)
- The capacities and knowledge of the PSIA may correspond to those of a team of persons in various relevant fields.
  - If the problem prompts a search for solutions in another technical field, a PSIA in that field should be considered.

# Inventive capacity of the PSIA

*A PSIA is a person of ordinary creativity, not an automaton. (US)*

*A PSIA is not a dullard and has certain modicum of creativity. (IN)*

The PSIA is ....

- The PSIA is capable of exercising the usual faculty of logic and rational reasons based on his knowledge.
  - The PSIA has the ordinary creativity in selecting appropriate materials, optimizing a numerical range of the inventions and replacing the inventions with equivalents (KR) or in selecting materials and changing designs (JP).

The PSIA is not ....

- The PSIA does not exercise inventive imagination.
  - The PSIA does not possess intuition or the skills of deduction. (CH)
  - The PSIA does not question the established views regarding the relevant technology. (SE)

# **Methodologies Employed for Evaluating Inventive Step**

# Evaluating inventive step: Methodologies

## Nature and objective of standard methodologies

- “recommendation”; “guide”; “useful tool”
- Case by case, as appropriate
- To support the objectivity and consistency of inventive step assessment
- To avoid hindsight

## Essential elements

- Identification of the claimed invention
- Identification of a PSIA
- Identification of the relevant prior art
- Comparison between the claimed invention and the relevant prior art
- Assessment of presence or lack of inventive step (non-obviousness)

# Guatemala and the US

## Factual inquires

- (i) Determine the scope and content of prior art
- (ii) Ascertain the differences between the prior art and the claimed invention
- (iii) Resolve the level of ordinary skill in the pertinent art
  - Evaluation of relevant objective evidence, including
    - commercial success, long identified but unmet needs, failure of others and unexpected results.



# Singapore (*Windsurfing* approach)

- (i) Identify the claimed inventive concept (core of the invention).
- (ii) Assume the mantle of the normally skilled but unimaginative addressee in the art at the priority date and to impute to him what was, at that date, common general knowledge of the art in question.
- (iii) Identify, what, if any, **differences** exist **between the state of the art and the alleged invention**.
- (iv) Decide, without any knowledge of the alleged invention, whether these differences constitute steps which **would have been obvious** to the PSIA or whether they require any degree of invention.

# Japan and the Republic of Korea

- (i) Identify the claimed invention.
- (ii) Identify the prior art relevant to the claimed invention.
- (iii) Select the **prior art [closest to the claimed invention (KR)][most suitable for denying the presence of an inventive step (JP)]**, compare the claimed invention and the selected prior art and identify the **[differences (KR)][correspondences and differences (JP)]**.
- (iv) Determine, in view of the relevant prior art and the general common knowledge, **[whether the claimed invention could have been easily made by a PSIA (KR)][the reasons for denying the presence if the inventive step (JP)]**

**Closest prior art (KR)** – the most relevant prior art chosen by a PSIA, which discloses most of the technical features of the claimed invention.

→ Desirable to choose from those in proximate technical field or having the same effect, use or related problem to be solved.

# Problem-solution approach

- (i) Identify the **closest prior art**.
- (ii) Determine the **difference** between the claimed invention and the closest prior art.
- (iii) Define the **technical effect** derived from the difference.
- (iv) Deduce the **objective technical problem** underlying the claimed invention.
- (v) Starting from the closest prior art and the objective technical problem, assess whether the claimed invention **would have been obvious** to a PSIA.

- (i)
- (ii) +(iii)
- (iv)
- (v)

- (i)
- (ii) +(iii) +(iv)
- (v)

Most promising starting point (maximum common features, a similar purpose or effect, same or related technical field)

Technical (distinguishing) features in terms of structural or functional features

Effect that is directly attributable to the distinguishing features

Objective technical problem formulated from the technical effect

# Emphasis on distinguishing features

- (i) Identify the **closest analogue** to the claimed invention (prototype).
- (ii) Identify those **features that distinguish** the claimed invention from the prototype.
- (iii) Identify the **prior art solutions which correspond to the distinguishing features** of the claimed invention.
- (iv) Analyze the prior art solutions: **to what extent the distinguishing features influenced the technical result of the claimed invention?**

- A PSIA cannot identify the known solutions corresponding to the distinguishing features.
- The effect of the distinguishing features on the technical result of the claimed invention is not known.

Involvement  
of inventive  
step



# **Level of Inventive Step**

# Inventive step (non-obviousness)

- Objective qualitative inquiry (not quantitative).
- Lack of inventive step
  - having regard to the prior art, an invention is not obvious to a PSIA;
  - in the judgement of a PSIA, an invention is resulted from the prior art in an evident or obvious manner.
  - Practical assessment of the inventive step requirement involves the assessment of obviousness in many countries.

“Obvious to a PSIA”?

SCP/22/3 does provide:

- high level concepts
- A non-exhaustive list of exemplary rationales, reasonings and indicators

SCP/22/3 doesn't provide:

- An application of principles to certain types of claims and types of inventions or inventions in certain technical fields; Examples.

# Obvious

- Objective and qualitative inquiry (not quantitative).

The claimed invention does not go beyond the normal progress of technology that would be made by a PSIA, but merely follows plainly or logically from the prior art.

→ The progress found in the claimed invention does not involve the exercise of any skill or ability beyond that expected of a PSIA.

- In relation to the problem-solution approach:

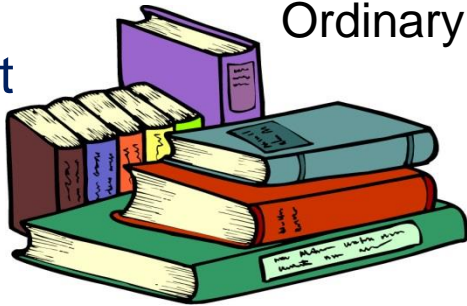
The claimed invention is obvious if there is any teaching in the prior art as a whole that would prompt or motivate a PSIA, faced with the technical problem, to modify or adapt the closest prior art; thus arriving at something falling within the terms of the claim and achieving what the invention achieved.

# Obvious

Common general knowledge  
Well-known technique

Ordinary skill

Prior art



Invention

A PSIA would arrive at the invention by following his/her logical rationale and reasoning.

- The prior art reference as a whole should be taken into account.
- The claimed invention as a whole is obvious.



# Combination of prior art reference

In many cases, new inventions consist of substitution, combination, selection or modification of one or more items of prior art.

## ■ Combination of prior art teachings

(Combination of features that mutually support each other in their effects)

- To be obvious, there should be a **reasonable basis** that the **PSIA would associate** those teachings with each other.

## ■ Mere juxtaposition of features

(Separate features do not produce any non-obvious working interrelationship)

- The claimed invention is obvious if the separate features are known or obvious.

# Exemplary reasoning or rationales

National/regional guidelines provide: (i) non-exhaustive exemplary reasoning, rationales and indicators that may be applied to specific cases; (ii) technical examples.

## Lack of inventive step

- Simple substitution of a known element from another to obtain predictable results or interchange of material with another known material having analogue effect.
- Use of known technique or workshop modification to improve similar products, processes or devices in the same, predictable way.
- Simple and direct extrapolation of known facts, such as change of size, form or proportion, without any unexpected effect.
- Selection from a number of alternative possibilities without any unexpected effect.

In general, technical advantages of the claimed invention over the prior art are also taken into account.

# Exemplary reasoning or rationales

Indicators that may be taken into account for the positive assessment of inventive step (case-by-case analysis)

- The claimed invention solved a **long felt need**.
- Particular **difficulties in solving the problem**.
- Particular **commercial success**.
  - Some guidelines clarify that commercial success must derive from the technical features of the claimed invention.
- The prior art **taught away a PSIA** from the claimed invention.
- The claimed invention produced **unexpected technical effects or results**.
- The claimed invention offers a **surprisingly simple solution**.

Thank you.