Panel Session XII: What's the (technical) problem?

Tuesday, October 17 2017
11:00-12:30
• Dietmar Haug, KNH Patentanwälte PartG mbB (Moderator)

• Marina Cunningham, McCormick Paulding & Huber
• Nobushige Furuhashi, Abe, Ikubo & Katayama
• Yali Shao, Liu, Shen & Associates
When filing internationally, be aware that:

1. Several patent systems require (express or implicit) indication of technical problem in patent specification, e.g. PCT, EPO, Germany, Japan, China;

2. Some other patent systems have no such requirement, e.g. USA, UK;

Provisions for mandatory indication (express or implicit) of technical problem:

**Identical** for PCT & EP appln., similar for DE appln.

„The description shall disclose the invention, as claimed, in such terms that the technical problem (even if not expressly stated as such) and its solution can be understood,……“

cf. Rule 5.1(a)(iii) Regulations under the PCT & Rule 42(1)(c) Implementing Regulations to the EPC; similar in §10 (2) No.3 of German Pat. Reg. (PatV)
Definition of technical problem for EP applications:

„In the context of the problem-and-solution approach, the technical problem means the aim and task of modifying or adapting the closest prior art to provide the technical effects that the invention provides over the prior art. The technical problem thus defined is often referred to as the „objective technical problem“

cf. Guidelines for Examination in the EPO, Part G, Chapter VII, 5.2
The technical problem is necessary (EP and German applications)

for:

(i) determining the **technical field** and the **person skilled in the art**;

(ii) assessing the **inventive step** according to EPO‘s problem-and-solution approach; or

(iii) assessing the **inventive step** according to German approach (problem not based necessarily on „closest prior art“)
(iv) determining whether the **disclosure is sufficient** to **enable** skilled person to carry out the invention;

(v) determining whether there is **unity of the invention**;

in German national litigation (EP and German patents),

for: (vi) determining the **content of the claim** (solution)

(vii) determining the **scope of protection** when infringement by equivalence is at issue;
What’s the (technical) problem in US?

Marina Cunningham
McCormick, Paulding & Huber
Drafting – the “old” way

• Background Section
  – Included a full “story” of what the prior art lacked
  – Specific prior art description and its deficiencies

• Summary Section
  – Stated the “Objects of the Invention”
  – Stated the “Advantages of the Invention”
Drafting – the “new” way

• Background Section
  – Extremely minimal

• Summary Section
  – Either extremely minimal or first claim

• Detailed Description
  – Includes the advantages of the invention and what it does and how it does it better
Drafting – the “Why”

- No requirement to discuss closest prior art
- If discussed, Examiners interpret as “admitted prior art”
- Courts have interpreted and held against the patent owner
- Adds costs to prosecution to draft and then to argue against
Drafting and Prosecution

• First filing in US
  – Short Background
  – Short Summary
  – Detailed Description of the Invention – what it is and how operates and what it accomplishes and how
  – Description of multiple embodiments

• Prosecution of US applications in EU or Asia
  – Generally no issues, but can add the closest prior art reference and brief description, if the Examiner insists

• Second filing in US
  – Generally do not remove the description, but are weary... especially when based on PCT
Litigation

• Anything you say can count against you...
  – Discussion of the problem could lead to “disparagement of prior art solutions” to the problem, which in turn, could result in claim scope disavowal or narrow claim
Conclusion

• Not required in US and can be used against the patent owner during prosecution and during litigation
What’s the (technical) problem in China?

Yali SHAO
Liu, Shen & Associates
Prosecution

• Definition to Invention
  – New technical solution

• Three-element Criterion
  - technical problem
  - technical means
  - technical effect

• Statement of technical problem:
  – Required by the Examination Guidelines, BUT
  – Lacking of statement is not a defect that needs to be corrected
Any technical means?  

Not a patentable subject matter

All features disclosed by one reference?  

No novelty

Determining the closest prior art

Determining the distinguishing features of the invention and the problem actually solved by the invention

A technical problem?  

No technical contribution, no inventive step

Solution to the technical problem is obvious?  

Obvious, no inventive step

Examination involving other clauses
Prosecution

• CLEAR statement of technical problem
  - Pros: Inventive step determination
    Patentable/unpatentable subject matter determination
    e.g. business method related inventions (2017.04 Examination Guidelines)
  - Cons: Binding the indispensable technical features in a claim
    Reformulation of technical problem in OA stage usually not acceptable

• NO statement of technical problem
  - Pros: NO binding to applicant (patentee)’s arguments
  - Cons: applicant (patentee)’s arguments less convincing
Litigation

• How courts consider technical problem
  – Inventive step determination
  – Indispensable technical feature determination
    • Case example
  – Claim Construing, **NO coverage** of:
    • technical solution which involves technical defect (technical problem resolved by invention)
    • technical solution which cannot resolve the stated technical problem
  – Equivalent infringement determination
    • **The equivalent feature:**
      – Substantially the same technical measure
      – substantially the same function
      – substantially the **same effect**
Drafting

• First filing in China
  – General description of prior art
  – Multiple technical problems/disadvantages of prior art
    • One very general problem, several specific problems
    • Using “the invention resolves at least one of the problems/disadvantages ...”
  – Multiple technical effects description
  – Description in Embodiment part

• Second filing in China
  – Considering factors
    • Non technical solution rejection risk in China
    • Paris Convention based filing
    • PCT based filing
Conclusion

• Technical Solution Approach in China

• Statement of technical problem is not strictly required

• Technical problem may affect:
  – Inventive step determination
  – Indispensable technical features determination
  – Claim construing
  – Equivalent infringement determination
What's the (technical) problem in Japan?

Abe, Ikubo & Katayama
Nobushige Furuhashi
What’s the (technical) problem in Japan?

1. Prosecution

1.1 Inventive step
Motivation for applying secondary prior art to primary prior art

(1) Relation of technical fields
(2) Similarity of technical problems
(3) Similarity of operations or functions
(4) Suggestions shown in the content of prior art
What's the (technical) problem in Japan?

1.1 Inventive step

**Similarity of technical problems**

“Similarity of technical problems” is a motivation for applying secondary prior art to primary prior art.

**Example**

[Claim]

| A: Plastic bottle | B: Hard carbon film |

[primary prior art]

| A: Plastic bottle | B': Silicon oxide film |

| A': Sealed vessel | B: Hard carbon film |

| gas barrier properties | gas barrier properties |

Similarity of technical problem
What’s the (technical) problem in Japan?

1.2 Support requirement (written requirement)

Purpose
The purpose of “support requirement” is to prevent a patent from being granted for an invention which is not disclosed to the public.

Requirement
Claim invention does not exceed the extent of disclosure in the description to which a person skilled in the art would recognize that a technical problem would be actually solved.
What’s the (technical) problem in Japan?

1.2 Support (written requirement)

Example

[Claims]
A hybrid car wherein energy efficiency is X% to Y%.

[Description]
Description discloses only an invention with a specified mean (e.g. engine only) to achieve the result.

[Claims]
A hybrid car wherein energy efficiency is X% to Y%.

[Description]
Description discloses an invention with many means (e.g. engine, battery, motor, hybrid control system, etc.) to achieve the result.
What’s the (technical) problem in Japan?

2. Litigation

Five requirements for infringement under a doctrine of equivalents (DOE).

(1) Non essential part
(2) Replaceability
(3) Obviousness of replacement
(4) Accused embodiment not falling within public domain
(5) No special circumstances

(The Supreme Court’s judgment rendered on February 24, 1998 (case number: Hei6(1994 (O))No. 1083, so-called “Ball Spline case”)

“(1) Non essential part“ requirement relates to technical problem.
What’s the (technical) problem in Japan?

2. Litigation

Non essential part (1st requirement of the DOE)

The part of the claim which is different from the structure of the accused product or process ("accused embodiment") is not an essential part of the patented invention

What is “Essential part”?

“Essential part” has to be considered a characterizing portion of a core of the technical idea which forms a base of means for solving the technical problem. (Tokyo district court case number: Hei8(1996) (wa)No. 14828)
What’s the (technical) problem in Japan?

3. Conclusion

(1) Inventive step
Similarity of technical problems is a motivation for applying secondary prior art to primary prior art.

(2) Support
Claim invention does not exceed the extent of disclosure in the description to which a person skilled in the art would recognize that a technical problem would be actually solved.

(3) Non essential part (Requirement of DOE)
“Essential part” has to be considered a characterizing portion of a core of the technical idea which forms a base of means for solving the technical problem.
Thanks for your attention!