



NEW IP CHALLENGES OF IOT AND THEIR IMPACT ON BUSINESS IN EUROPE



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IoT WARS?

- IoT needs standardised connectivity (e.g. 5G)
- Legal patent disputes around 3G and LTE showed the huge value of patents in the telecoms sector
- More than 23,000 Standard Essential Patents for GSM / 3G
- Patent pools / one-stop shop for licensing?
- Considerable costs for (FRAND) licences
 - Android smartphone: price \$400 may include royalties up to \$120
 - Qualcomm license fees for 5G may be up to \$16.25 for each phone



GUIDANCE BY THE EU COMMISSION - 1

1. No “one-size-fits-all” solution to FRAND licensing
2. Right holders cannot discriminate between implementers that are “similarly situated”
3. Account should be taken of efficiency considerations, cross-licensing practices and recognised commercial practice such as global (rather than country-by-country) licensing.
4. The creation of patent pools or other platforms should be encouraged.
5. IP valuation should be focused on the value of the patented technology itself, not value attributed by the fact it has been included in a standard.
6. FRAND rate also should not take into account the market success of the product independent of the patented technology



GUIDANCE BY THE EU COMMISSION - 2

Standard development organisations (SDO)

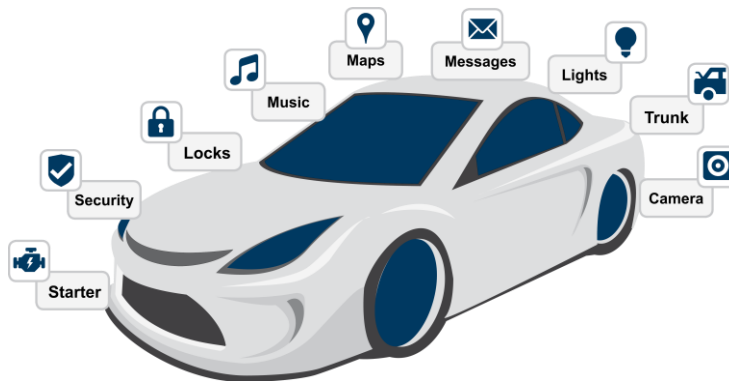
1. SDOs should improve the quality and accessibility of their databases (e.g. user friendly interfaces, data searchable, duplication eliminated, links to patent office databases)
2. Patent holders should review the relevance of their declarations when the final standard is adopted and revised (technical solutions in standards negotiations evolve)
3. Holders should also provide information on the relevant section of the standard, ownership details and the outcome of any relevant litigation
4. Essentiality claims should be more carefully scrutinised



NO GUIDANCE BY THE EU COMMISSION

Remaining issues

1. use-based licensing
2. who needs to take licence (supplier / end user manufacturer) ?
3. licensing to all





ADVICE FOR IOT COMPANIES

- Be aware of the SEP and FRAND issues
- Closely follow developments in Europe
 - the EU Commission is likely to issue more guidance
 - the European Court of Justice will provide case law
- Try to participate in the standardisation process and/or keep close look at SDOs
- Develop own patent portfolio for possible cross licensing

Possible sources for information

<http://www.fair-standards.org/>

<http://www.etsi.org/>



INTERNET OF THINGS AT THE EPO

For the EPO it is “business as usual”:

- a) technical components of IoT examined as usual
- b) software related matter examined as usual according to established practice for computer implemented invention

“Mixed type claims” becoming more relevant in view of IoT



TWO-HURDLE APPROACH

1st hurdle:

Exclusions of patentability

(Art. 52, Rule 42, 43 EPC)

Need for a “**technical** character” of the claimed subject matter

2nd hurdle:

Inventive Step (Art. 54, 56 EPC)

Features with **technical** character need to solve a **technical** problem by providing a **technical** effect resulting in a **technical** contribution over the prior art



1ST HURDLE

1st hurdle: Exclusions of patentability (Art. 52, Rule 42, 43 EPC)

Art 52 EPC

(1) European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

(2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

...

(c) ...programs for computers;

(d) presentations of information.

(3) Paragraph 2 shall exclude the patentability of the subject-matter ... only to the extent to which a European patent application ... relates to such subject-matter ... as such.

The claimed subject-matter must have a **technical character and cannot be direct to software “as such”**. But claims may contain a mix of technical and non-technical features.



WHAT IS “TECHNICAL” ?

- No general definition of what is “technical”:
- Interpretation of technicality by a series of individual Board's of Appeal decisions on a case-by-case basis
- Computer program is not excluded from patentability if, when running on or loaded into a computer, it provides a further technical effect going beyond the “normal” physical interactions between the program (software) and the computer (hardware) on which it is run
- Detailed information for computer programs and presentation of information (user interfaces) to be found in the guidelines

http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_ii_3_6.htm

http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_ii_3_7.htm



2ND HURDLE NOVELTY / INVENTIVENESS

Extended problem solution approach for “mixed type claims”

http://www.epo.org/law-practice/legal-texts/html/guidelines/e/g_vii_5_4_2.htm

- a) Determine the **features contributing to technical character** on the basis of the technical effects achieved in the context of the invention

- b) Determine a suitable starting point as **closest prior art** based on these features



2ND HURDLE NOVELTY /INVENTIVENESS

- c) Determine the **differences** with respect to closest prior art
 - i) Determine their **technical effect(s)** in context of the claim as a whole
 - ii) Identify from these differences the features making a technical contribution and those which do not.
 - a) If no differences (at all) then lack of novelty (Art. 54)
 - b) If no technical contribution then lack of inventive step (Art. 56)



2ND HURDLE

NOVELTY /INVENTIVENESS

c) If differences include features making a technical contribution:

Formulate **objective technical problem** on the basis of the technical effects achieved by these features.

If differences include also **features making no technical contribution**, these features and any **non-technical effect** achieved by the invention may be used in the formulation of the objective technical problem as a constraint to be met.

If claimed technical solution to objective technical problem is obvious to skilled person then lack of inventive step (Art. 56).



CONSEQUENCES FOR APPLICANTS

- The invention must try to solve a **technical problem** and the claimed **solution** has to use **technical** means
- This problem and its solution needs to be clearly described in the description
- The claims need to include the technical features solving the technical problem
- **Non-technical features may not be used as a basis to support inventive step**
- The technical effects achieved by the invention can NOT be asserted during examination => they must be mentioned in the description as filed (or at least is derivable from the description as filed)
- **Fall back positions should be included in the description** (i.e. enough technical details) in case the claims need to be amended by adding more technical features



RESHAPING THE GUIDELINES

- Guidelines are binding for Examiners, not applicants
- Guidelines reflect decisions of Board of Appeals
- Guidelines on CII reviewed yearly
- Guidelines still need to evolve on CII



Do not always accept negative first instance decisions but file an appeal to create case law to further shape the guidelines



**THANKS TO THE
AUDIENCE!**

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