IoT and Standard Essential Patent

March 1, 2018

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Recent Topics in IoT and SEP

Discussions by Intellectual Property Committee

Cited from distributed document of IP Committee No. 20 (April 28, 2017)

"States of IP Systems Supporting Business Models Utilizing IoT"

- What sort of business model inventions can be patented, and how a patent should be practiced are difficult to understand.
- IoT involves every technical field, and difficulty is rising regarding prior art search and examination.

- Reviewing Examination Guidelines
- Ensured application of newly-established patent classifications, etc.

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Newly Established Patent Classification

- New broad Facet classification (ZIT) was established for IoT-related technology (November 2016) and subdivided (May 2017)
- Number of Published Patents (as of February 2018)

	Number of Patent Application Publications (A) ※All cases	Number of Patent Publications (B) ※Active Patents
Broad Facet "ZIT"	1,509	1,132
Comparative Example* Communication×Business Model	About 13,000	About 1,900

*Comparative Example: FI code Classification

(H04B Transmission
H04L Digital Information Transmission
H04W Wireless Communication Network) × (G06F17, 19
G06Q Specific-purposed data processing (Business Model))

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Have Examination Guidelines changed?

Cited from "Examination Guidelines on IoT related technology"

- "Patent examination on IoT-related technologies has faced no problems in being conducted as before, based on current examination guidelines and the like."
- Examination Examples: 23 Case studies were successively added to the Examination Handbook

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Discussions by Intellectual Property Committee

Cited from document of IP Committee No. 20 (April 28, 2017)

"Fast and convenient solution to various patent disputes including SEP issues"

- Risk of increase in IP cost especially in fields using ICT due to the population of IoT.
- Social problems regarding abusive exercise of rights by patent trolls arise in US.

- Introductions of arbitration and ADR (Alternative Dispute Resolution) targeting SEP-related disputes by JPO are under consideration.

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Discussions by Intellectual Property Committee

- Public comment hearing for establishing guidelines related to SEP license negotiations (Sep. 29 to Nov. 10, 2017)
- Intellectual Property Committee No. 23 (Nov. 27, 2017)

- Revelation of cross-sectoral license negotiation issues (between communication industry and other industries) .

- Instead of JPO ADR, evaluation system and guidelines are under consideration.
  - Evaluation System: Comparison of Patent Invention and Virtually-targeted Object
  - Guidelines: Guide for *inter partes* license negotiations

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“Cross-Sectoral” Issues

- Cross Licensing
  - Cancellation of license fees
  - Utilization of patent of the other party

- Calculation Criteria
  - Final Product
  - Units of Parts

- Party to be the Negotiation Counterpart
  - Manufacturer of final product
  - Manufacturer of parts

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Trends in Industrial Fields

- Communication Apparatus Industry = Right holder side
  - Formation of patent pool
  - Avanci (2016–)

- Other Industries = User side
  - Lobbying activities
  - Fair Standards Alliance (2015–)

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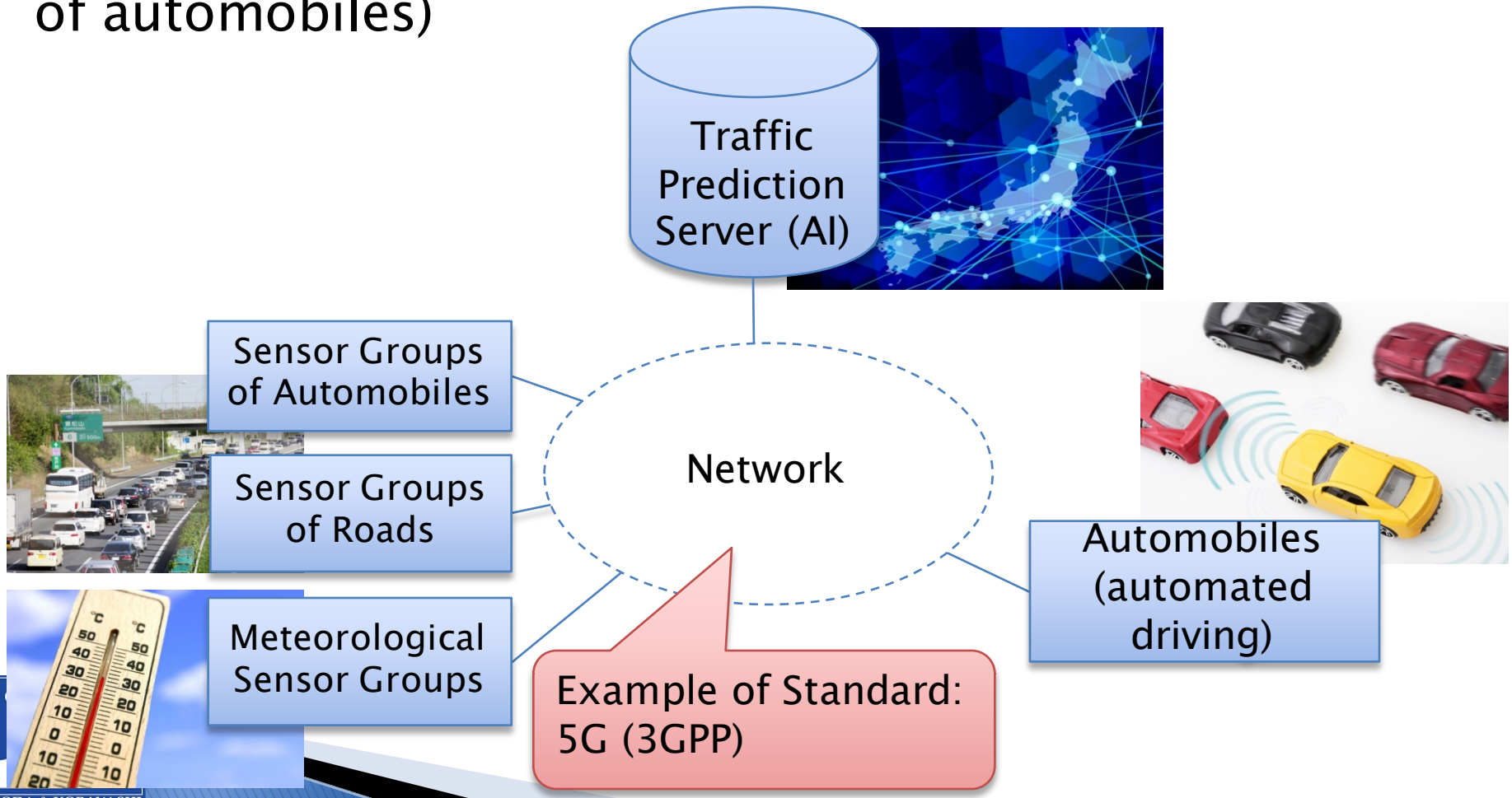
Patents of IoT-Related Technology

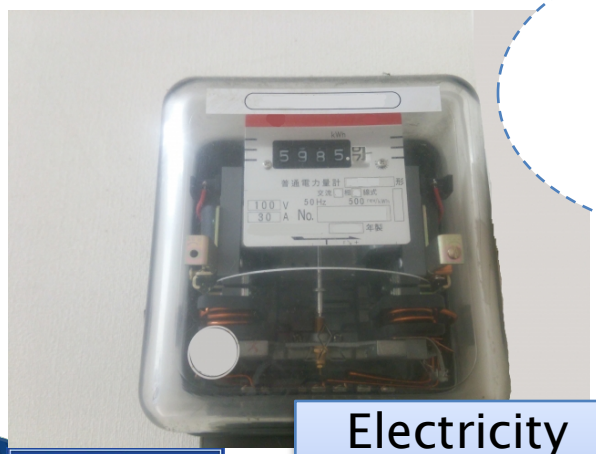
How to obtain patent for IoT-related technology

Virtual case: Automated driving control system (Field of automobiles)



How to obtain patent for IoT-related technology

Virtual case: Smart meter (Field of electric power)



Network

Electricity Meter

Example of Standard: LPWA

Issuing Bills

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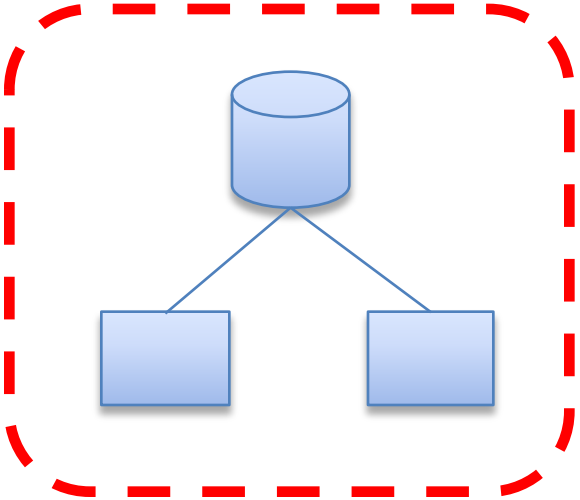
Points on IoT-Related Technology Patents

Case of obtaining patent as “system” or “method” inventions

- Eligibility as Invention
- Difference from conventional business models

*No inventive step for mere transfer of use



- Subject who carries out the invention
- Location to carry out the invention (it is especially difficult to specify location in cloud systems)

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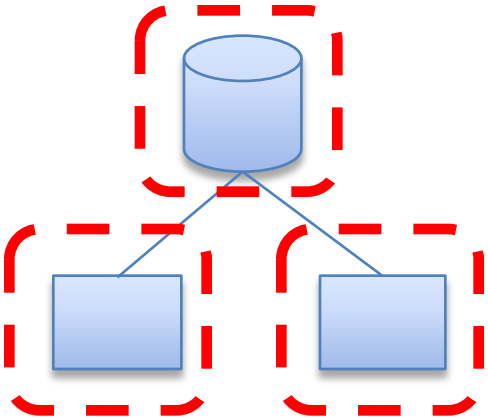
Points on IoT-Related Technology Patents

Case of obtaining patent as "object" invention



- Novelty and inventive step of each "part"
  * Features reside in combinations in many cases rather than in the parts

- Identifying invention by subcombinations

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Standard Essential Patents

Terminology

- Standard Specification
  - de jure Standard
  - Forum Standard
  - de facto Standard

- Essential patent (Standard Essential Patent)

  - Technically essential patent
  - Commercially essential patent
  - Selectively essential patent

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Terminology

- FRAND Terms, FRAND Commitment
  - Abbreviation of Fair, Reasonable And Non-Discriminatory.
  - Different policies to each Standardization Organization.
    - With compensation/without compensation
    - Reciprocity

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Terminology

- Hold-up
  Demand to pay expensive royalty when evading SEP is difficult

- Hold-out
  Refusing to negotiate license fee payment

- Accumulated Royalty, Royalty Stacking
  The sum of license fees (royalties) becoming excessively large when the license fee (royalty) for each SEP is added

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Lawsuits Related to SEP

IP High Court　May 16, 2014

- Claim for provisional disposition order (injunction)
  - Creditor: Samsung, Debtor: Apple

    ⇒　Injunction Denied.
- Claim for confirmation of absence of liability (indemnity)
  - Plaintiff: Apple, Defendant: Samsung

    ⇒　Presence of liability for indemnity Accepted. (about 9.95 million yen)
- Standards: 3GPP UMTS Standards
- Target Products: iPhone 4, iPad 2 Wi-Fi+3G Model

  *No infringement for one generation-older products (iPhone 3GS, iPad Wi-Fi+3G Model)

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Lawsuits Related to SEP

Abuse of Rights related to essential patents

∵ Inhibiting the purpose of patent system to "develop industries"

Decisions

- Injunction Claim ⇒ Cannot be made
- Demand for License Fee Exceeding FRAND Terms ⇒ Cannot be made
- Demand for License Fee within FRAND Terms ⇒ Can be made

Points of Decisions

- (Licenser) FRAND Commitment
- (Licensee) Intention to obtain a license

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Lawsuits Related to SEP

Calculation of License Fees

Product Sales
× Contribution of Standard
× Contribution of Patent
(Upper limit of 5%, unit divisions of essential patents (1/529))

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Impacts of Guideline Establishment on Business

Focus Points

What points will be considered in the guidelines?

- Presence/absence of FRAND commitment

- Importance of negotiation history
  - Intention to obtain license, obligation for sincere negotiation
  - Although this will be outside the scope of the guideline, presence/absence of "abuse of rights" is also important

- Relationship with non-essential patents

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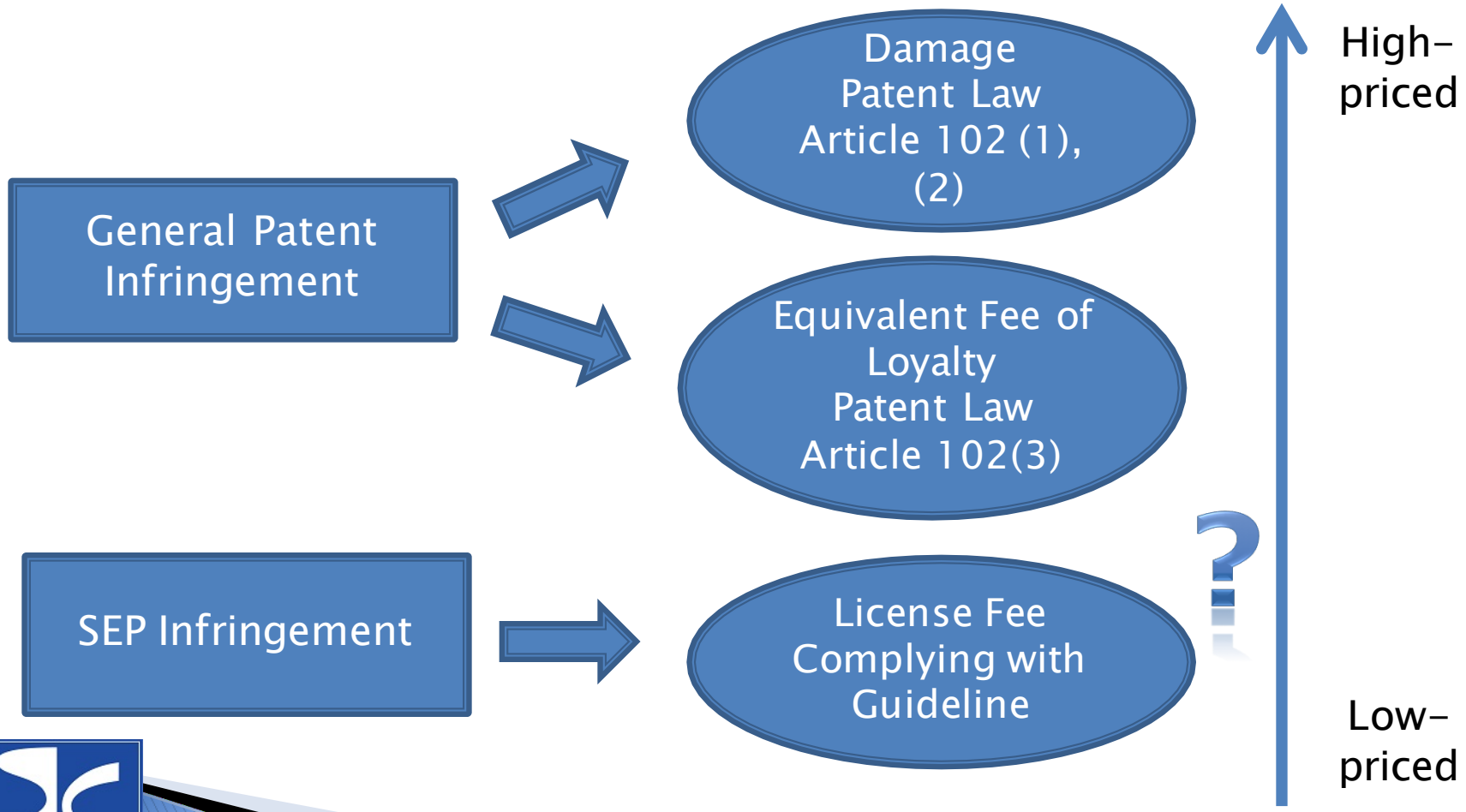
Focus Points

What is the standard line for the license fee complying with the guidelines?



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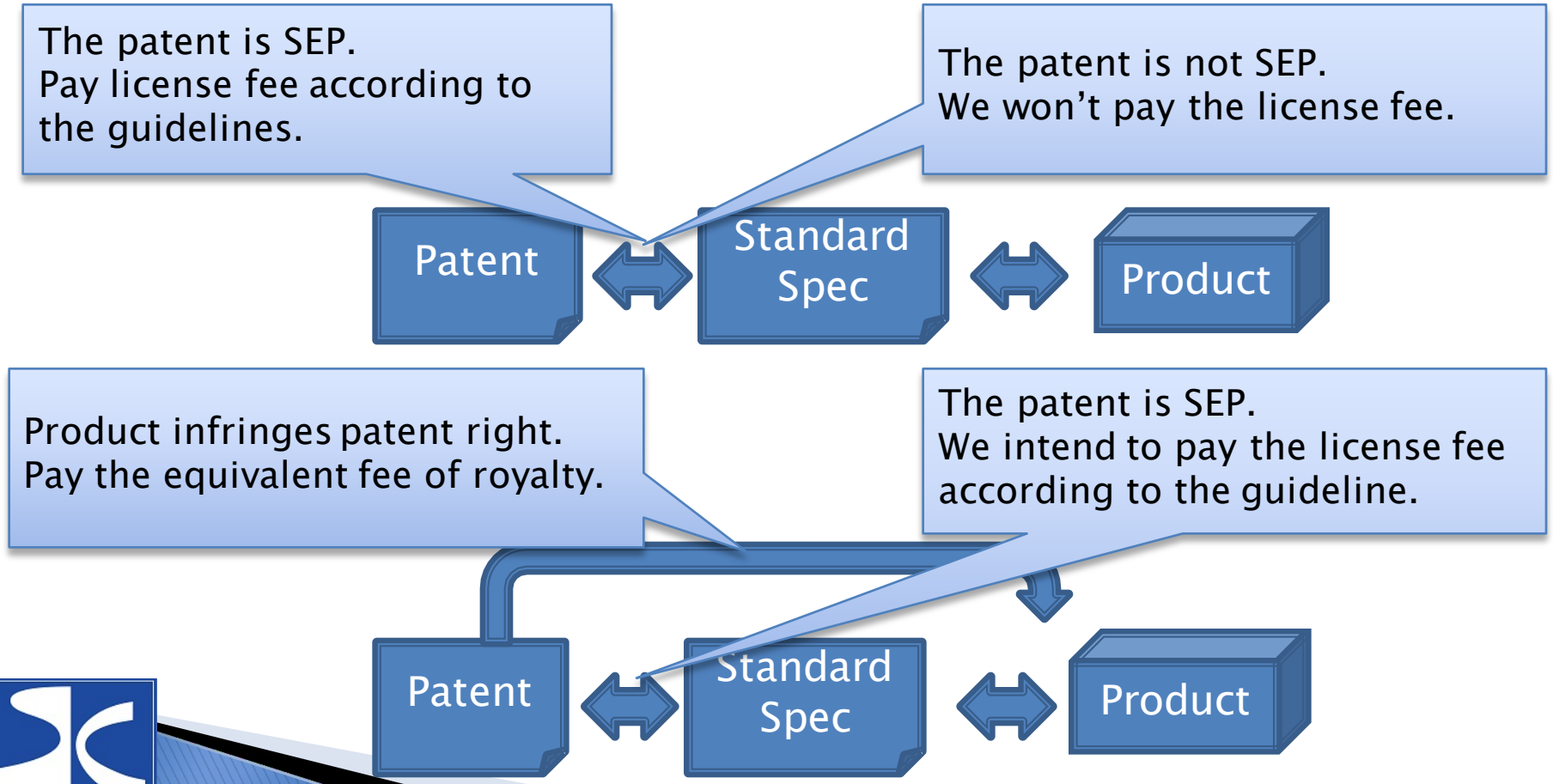
What happens in these cases?

Argument in Evaluation Procedure



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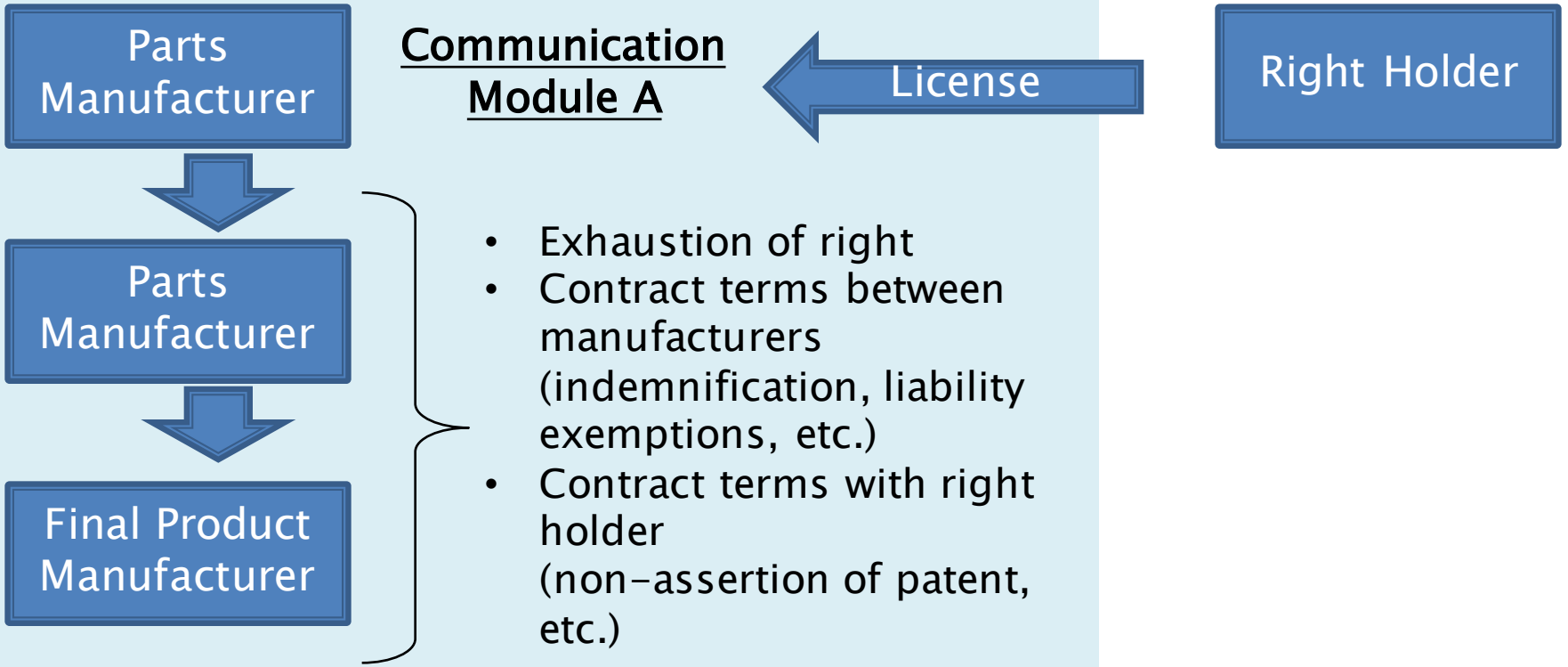
What happens in this case?

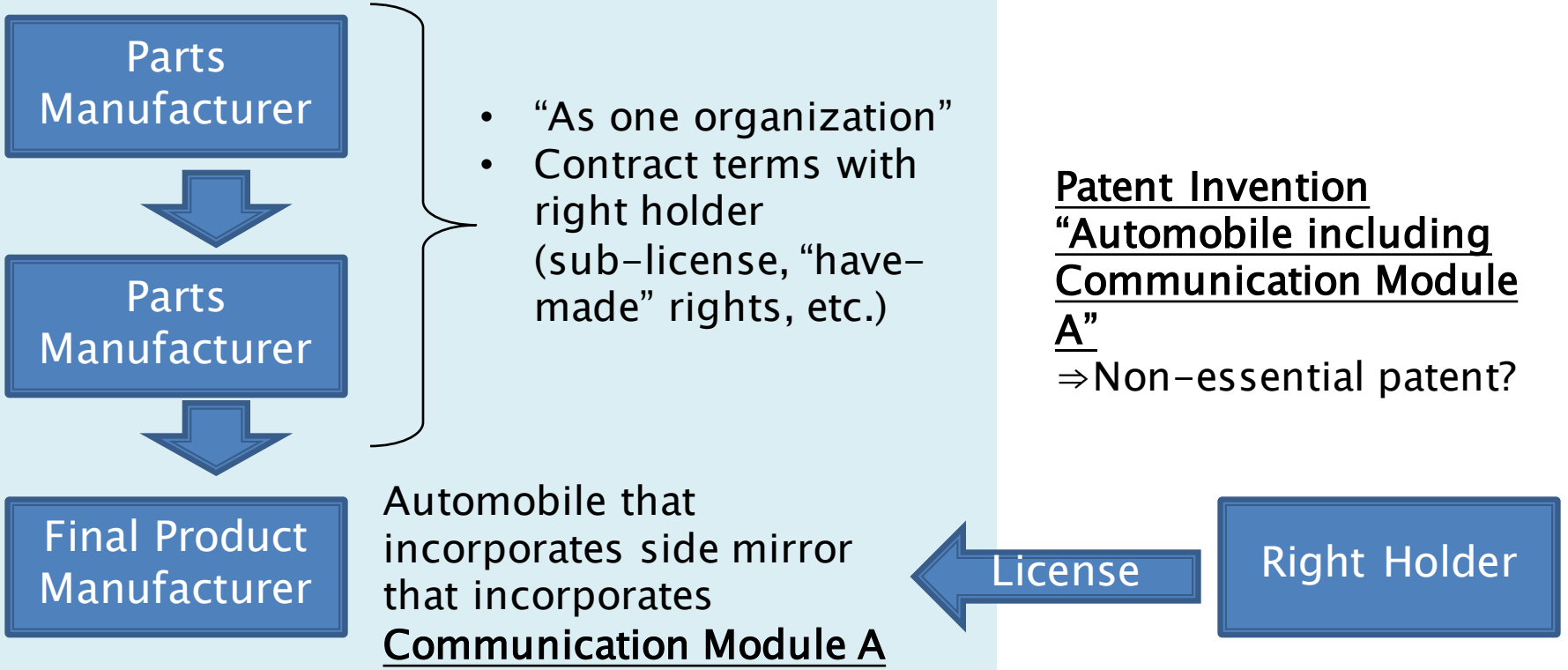
Case of upstream parts manufacturer becoming licensee

Patent Invention "Communication Module A"
⇒SEP



What happens in this case?

Case in which final product manufacturer becomes licensee



Patent Invention "Automobile including Communication Module A"
⇒Non-essential patent?

Thank you!

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