

# IoT and Standard Essential Patent

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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.

# 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

$$\left( \begin{array}{l} \text{H04B Transmission} \\ \text{H04L Digital Information Transmission} \\ \text{H04W Wireless Communication Network} \end{array} \right) \times \left( \begin{array}{l} \text{G06F17, 19} \\ \text{G06Q} \end{array} \right) \text{ Specific-purposed data processing (Business Model)}$$

# 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

# Discussions by Intellectual Property Committee

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“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.

# 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

# “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



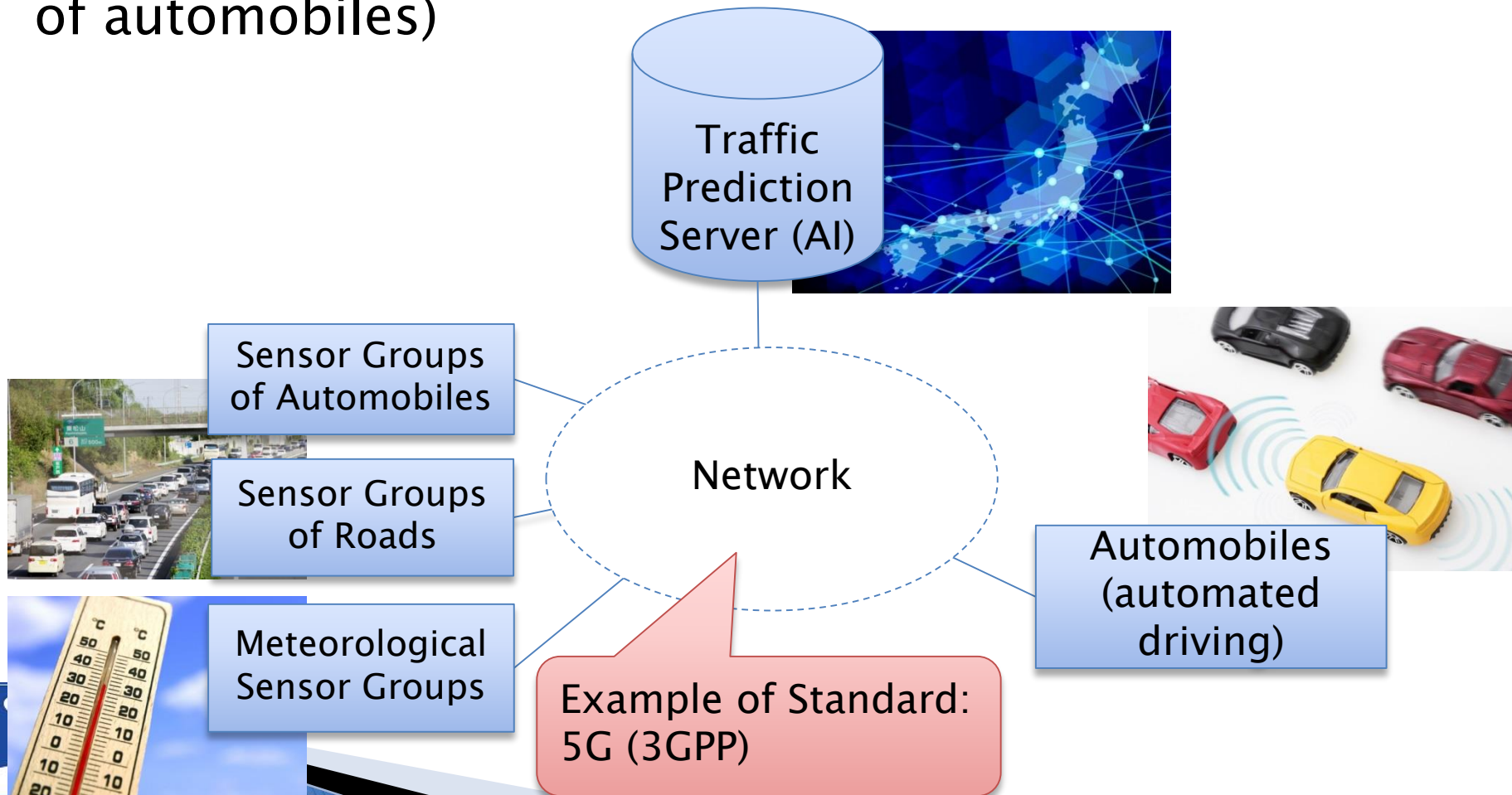
# Trends in Industrial Fields

- ▶ Communication Apparatus Industry = Right holder side
  - Formation of patent pool
  - Avanci (2016–)
- ▶ Other Industries = User side
  - Lobbying activities
  - Fair Standards Alliance (2015–)

# Patents of IoT-Related Technology

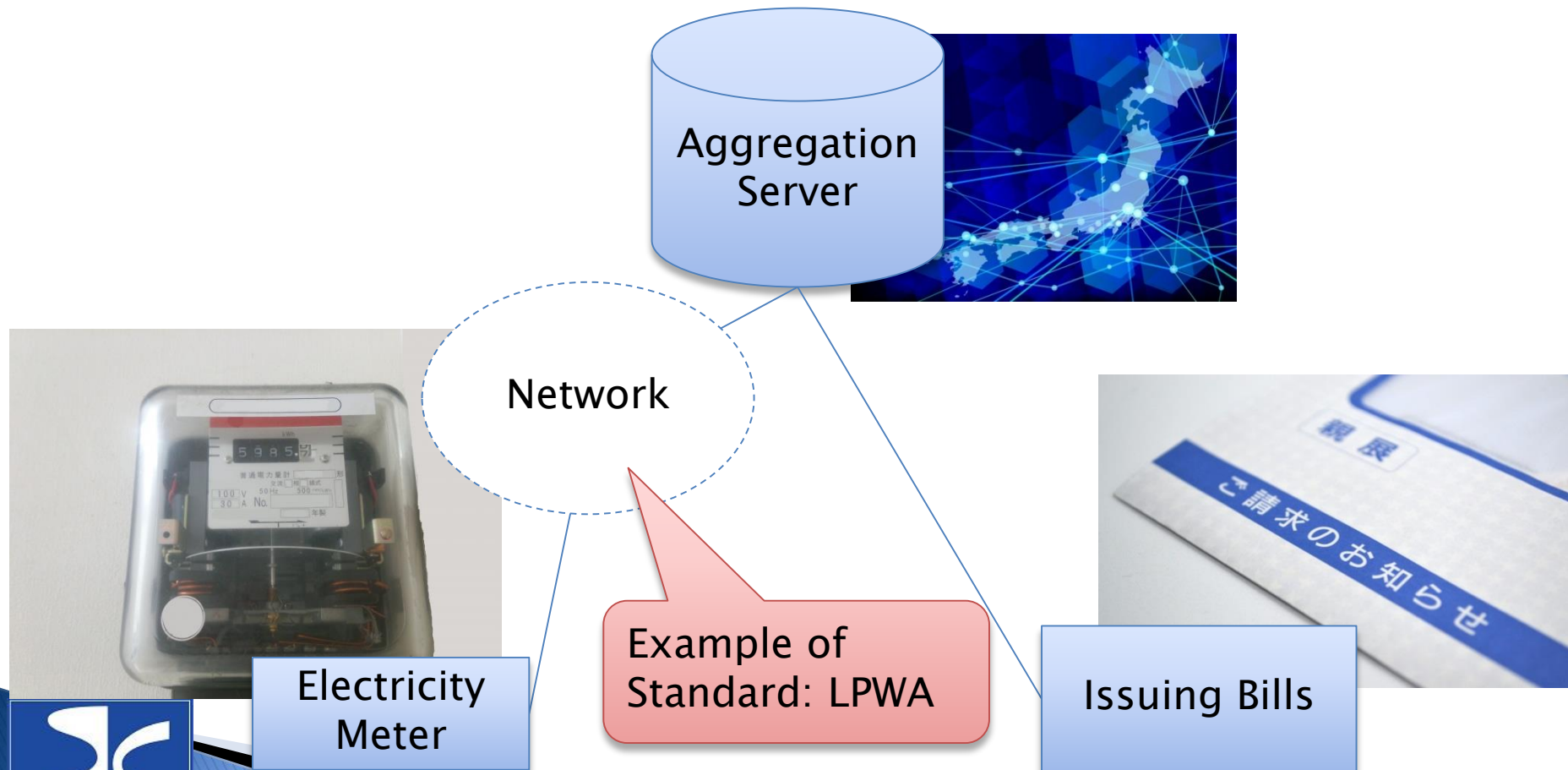
# How to obtain patent for IoT-related technology

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



# How to obtain patent for IoT-related technology

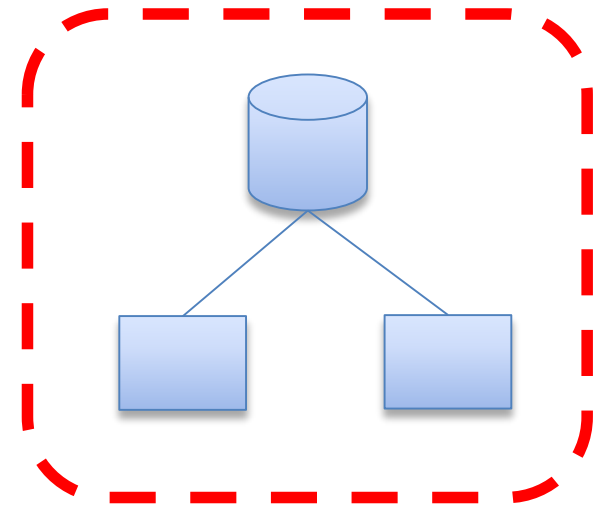
Virtual case: Smart meter (Field of electric power)



# 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

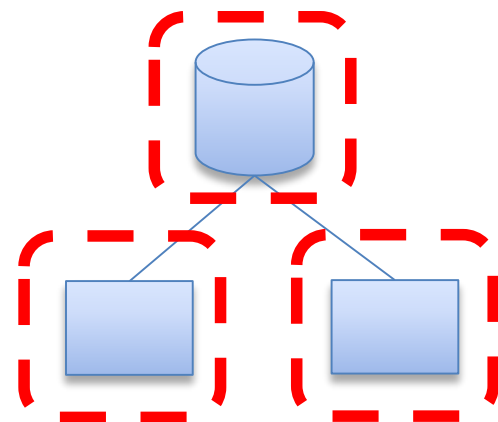


- ▶ Subject who carries out the invention
- ▶ Location to carry out the invention (it is especially difficult to specify location in cloud systems)

# 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



# 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



# Terminology

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

# 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

# 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)

# 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

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

# 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))

# Impacts of Guideline Establishment on Business

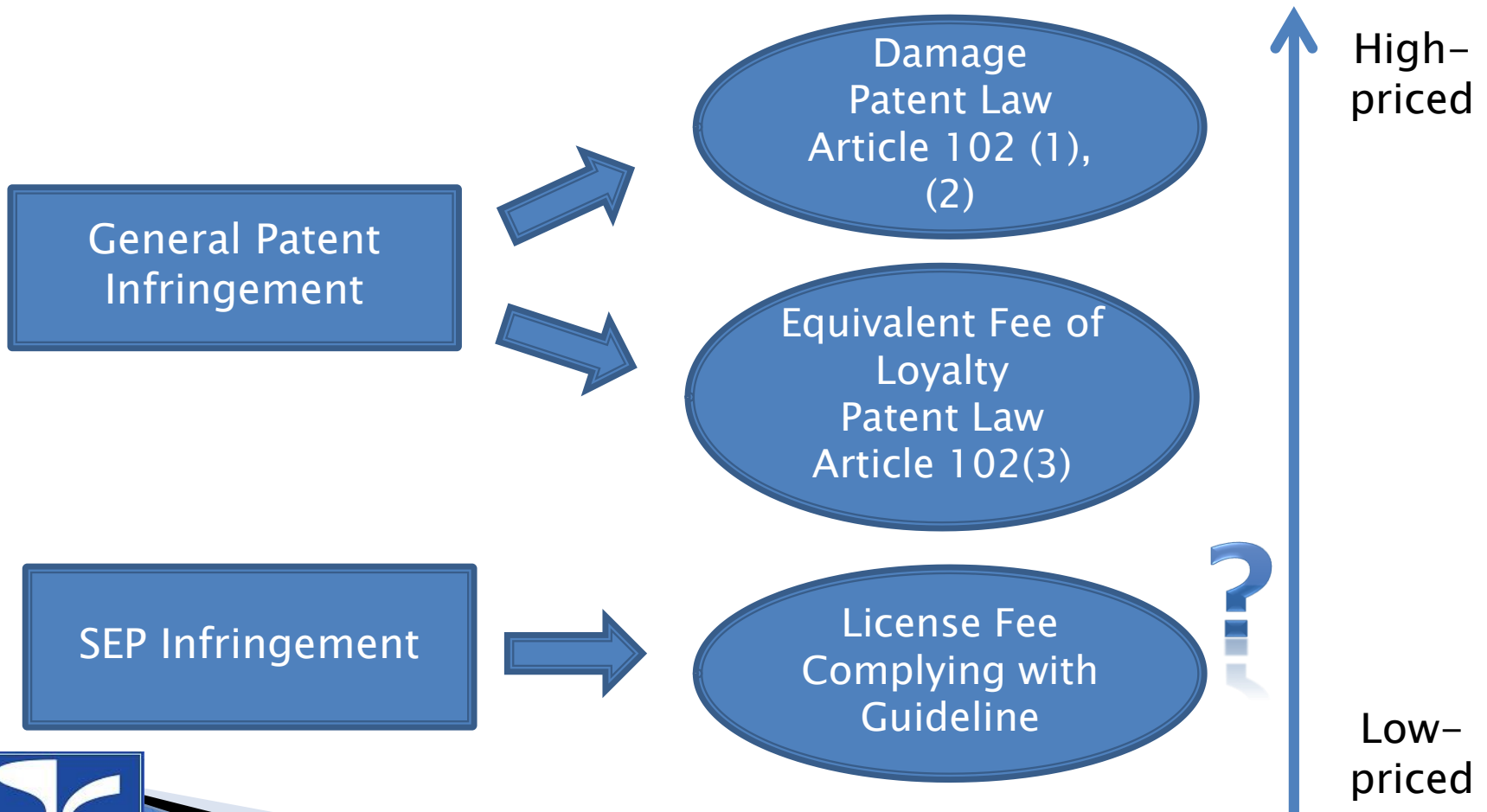
# Focus Points

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

# Focus Points

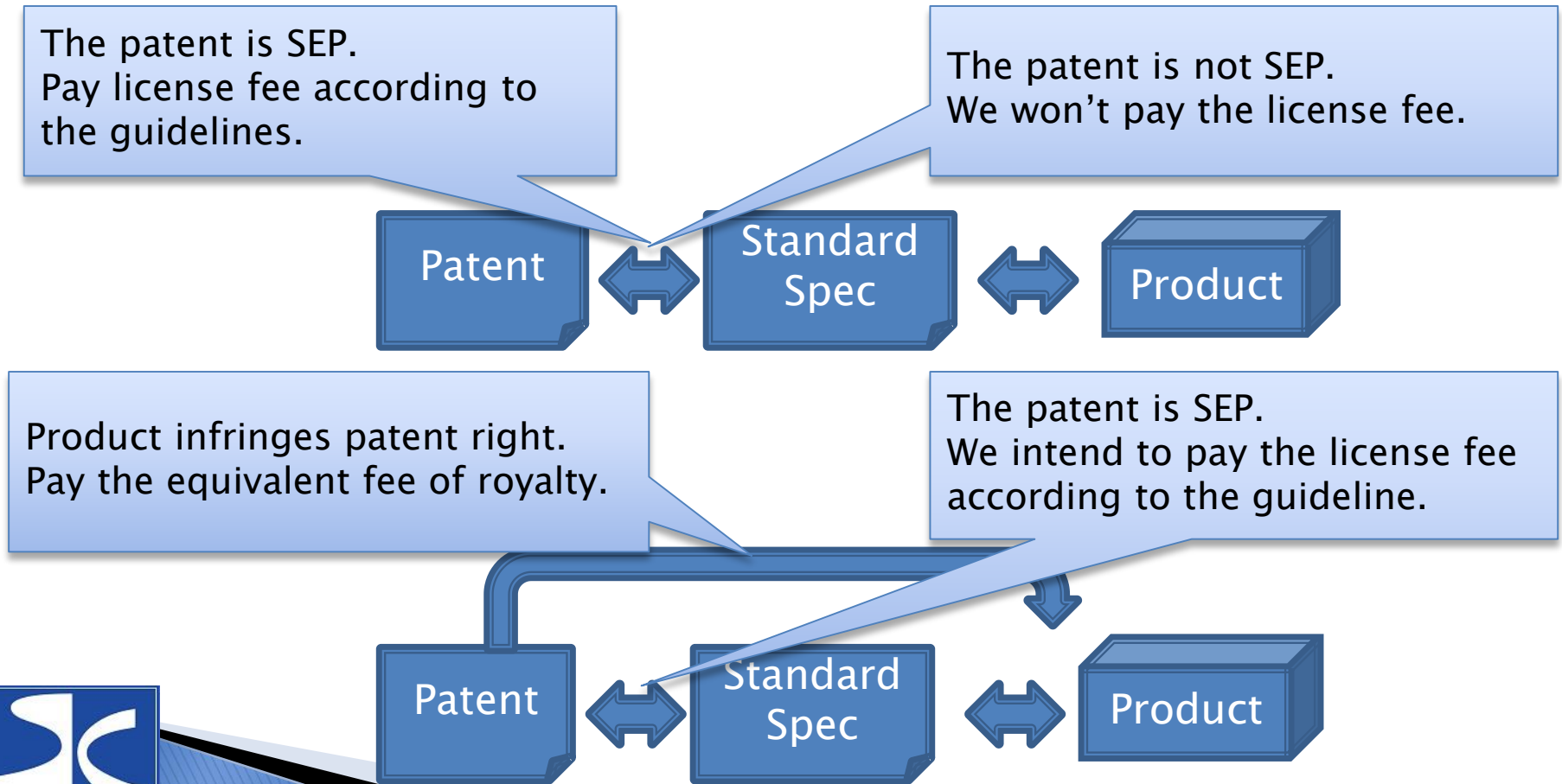
What is the standard line for the license fee complying with the guidelines?





# What happens in these cases?

## Argument in Evaluation Procedure



# What happens in this case?

Case of upstream parts manufacturer becoming licensee

Patent Invention  
“Communication Module A”  
⇒ SEP

Parts Manufacturer



Parts Manufacturer



Final Product Manufacturer

Communication Module A



Right Holder

- Exhaustion of right
- Contract terms between manufacturers (indemnification, liability exemptions, etc.)
- Contract terms with right holder (non-assertion of patent, etc.)

# What happens in this case?

Case in which final product manufacturer becomes licensee

Parts Manufacturer



Parts Manufacturer



Final Product Manufacturer

- “As one organization”
- Contract terms with right holder (sub-license, “have-made” rights, etc.)

Automobile that incorporates side mirror that incorporates Communication Module A

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



Right Holder

# Thank you!



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