JPO's Initiatives on Enhancing the Quality of Patent Examination for the Emerging Technologies

June 2019

Takahiro Higa

Japan Patent Office

Contents

1. Measures on Enhancing Examination Quality for the emerging technologies

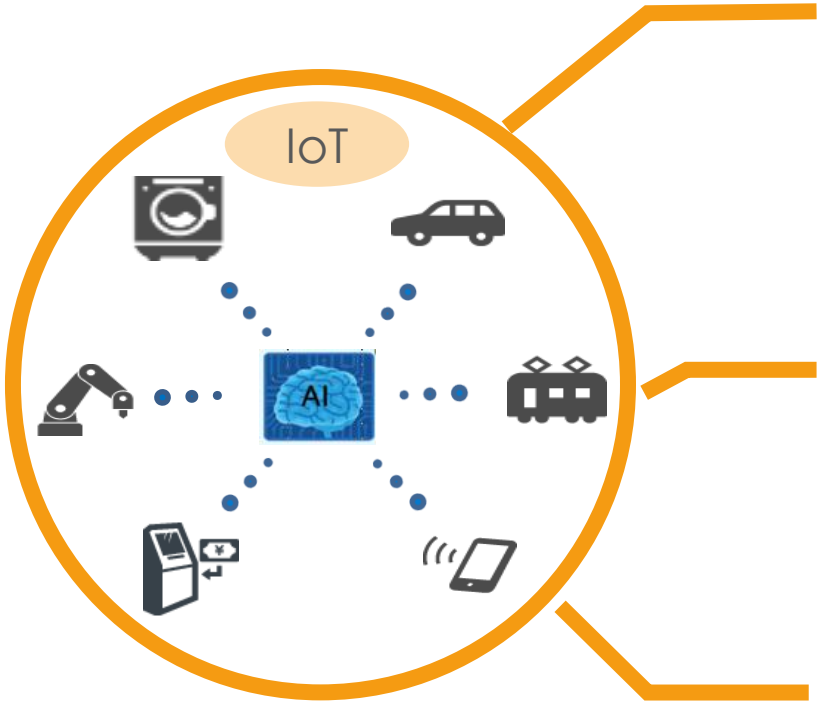
2. Examination case examples of AI-related inventions

Contents

1. Measures on Enhancing Examination Quality for the emerging technologies

2. Examination case examples of AI-related inventions

To obtain patents on **Emerging Technologies**



New Case Examples for IoT and AI*

Clear and easy-to-understand examination practice

* 23 case examples were added in 2016 and 2017.
New AI-related case examples were added in Jan., 2019.

Cross-sectoral Examination team for IoT

Reliable examination in all areas of industry

New Patent Classification on IoT (ZIT)

Better access to Patent Information

Addition of new AI case examples

Patent Examination Guidelines / Handbook

- Added case examples of IoT/AI-related inventions (Sep. 2016, Mar. 2017)
- Clarification of examination guidelines for computer software-related inventions (Apr. 2018)
- Invited public comments on AI-related inventions (Oct. 2018-Nov. 2018)
- **Added more case examples of AI-related inventions (30 Jan. 2019)**

Addition of new AI case examples

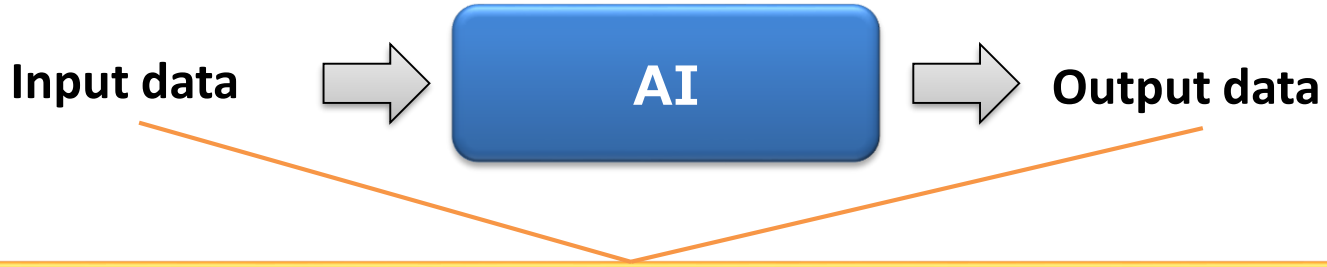
- Add 10 AI-related case examples as to the **description requirement** and **inventive step**
- Select cases from **various field of technologies and industries**
- Keep cases **simple and easy to understand** even for non-AI experts, yet make the points of the Examination Standard at issue clear
- Give both **eligible and ineligible cases** to help a clear understanding of the key points in determining patentability of AI-related inventions

Contents

1. Measures on Enhancing Examination Quality for the emerging technologies

2. Examination case examples of AI-related inventions

Case Examples for Description/Support Requirement



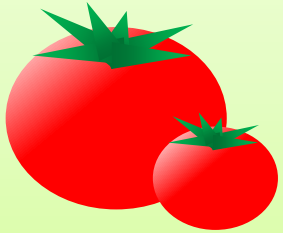
Existence of correlation should be supported by experimental evaluation of trained AI model.

✓ In case that existence of correlation between input and output data is NOT evident from the common technical knowledge at the time of filing.

Sugar content estimation system

Face image of grower

Sugar content of vegetables

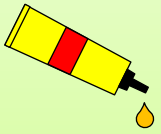


Anaerobic adhesive composition

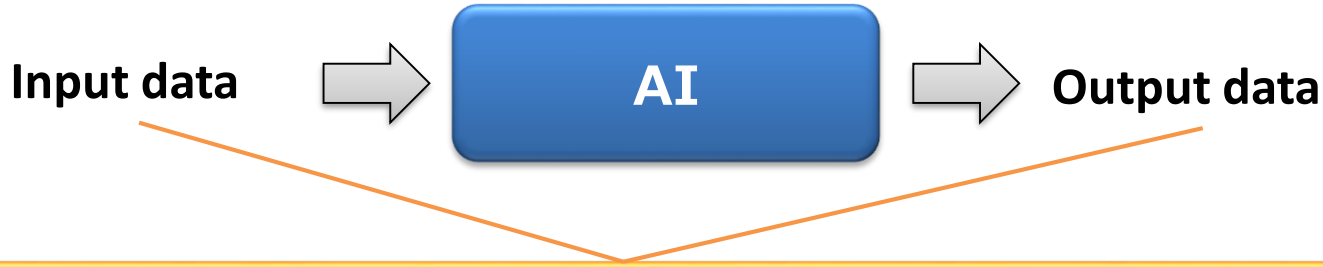
Composition of Adhesive agent

Compound A	%
Compound B	%

Curing strength



Case Examples for Description/Support Requirement



No need to support existence of correlation by experimental evaluation of trained AI model.

✓ In case that existence of correlation between input and output data is evident from the common technical knowledge at the time of filing.

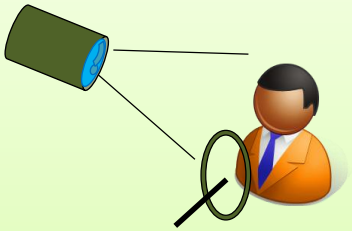
Business plan design apparatus

Number of advertisement /comments on the web

Number of sales

Autonomous vehicle

Captured images of driver's attitudes

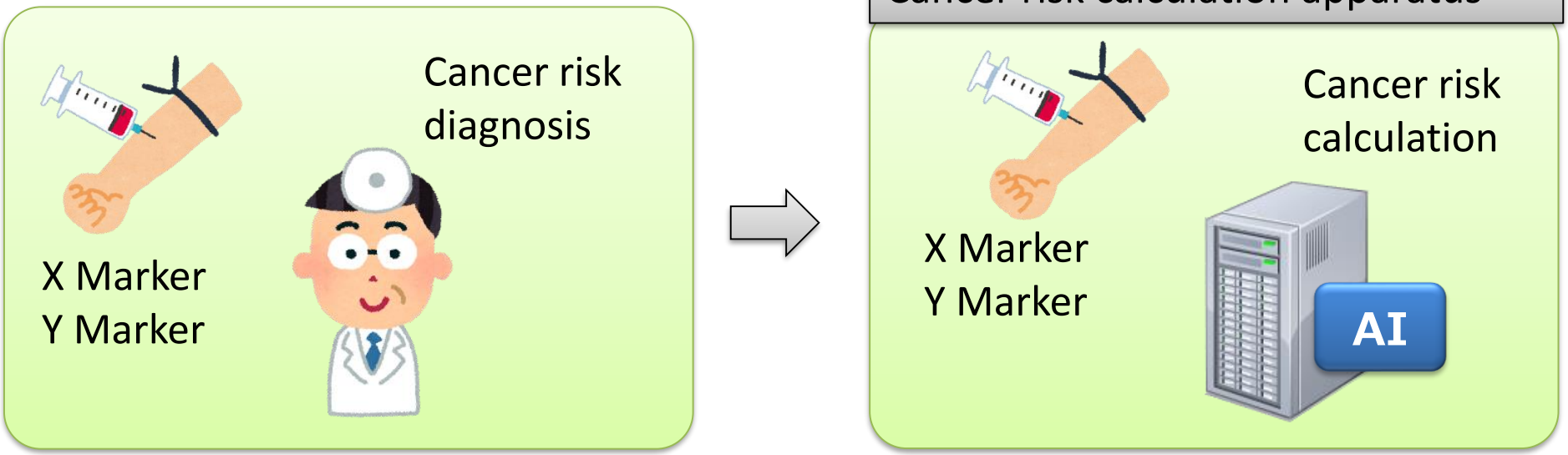


Readiness for driving

Case Examples for Inventive Step

Known procedures or methods → **AI**

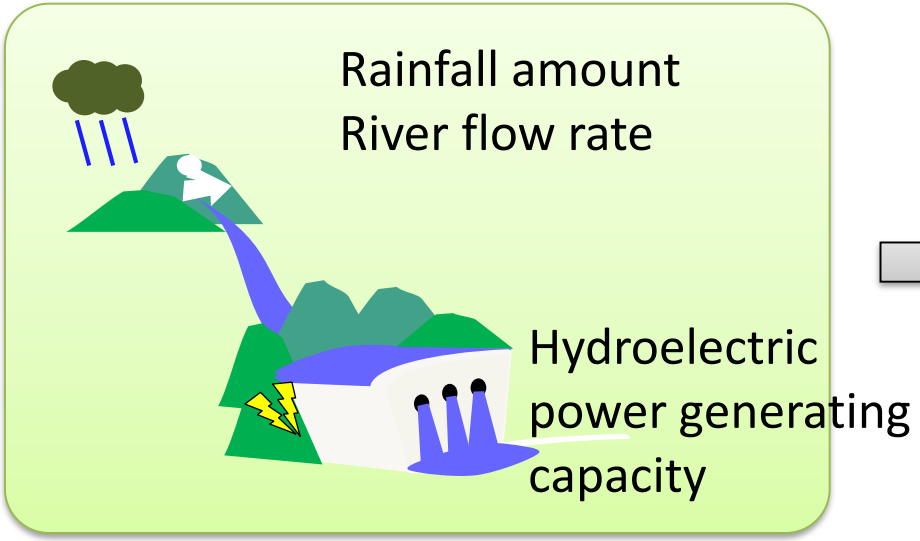
Mere replacement of known procedures or methods does not involve inventive step



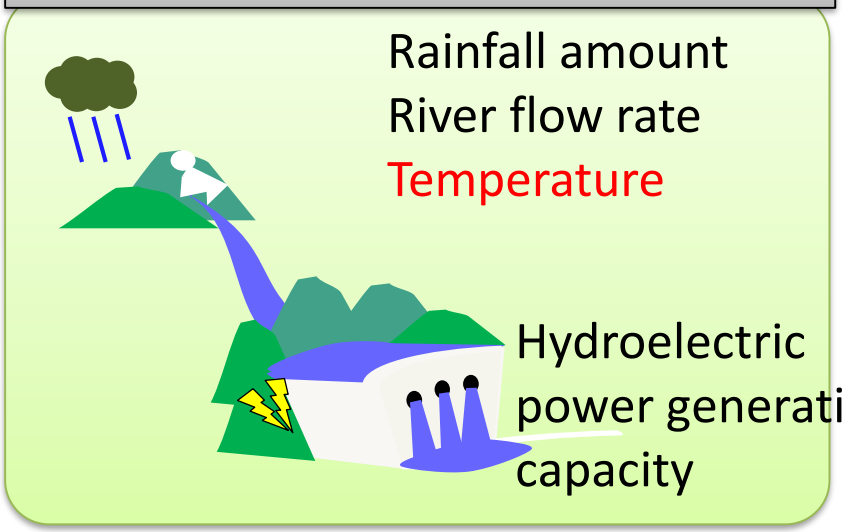
Case Examples for Inventive Step

Input data → AI

Advantageous effects are accomplished by the selection of input data



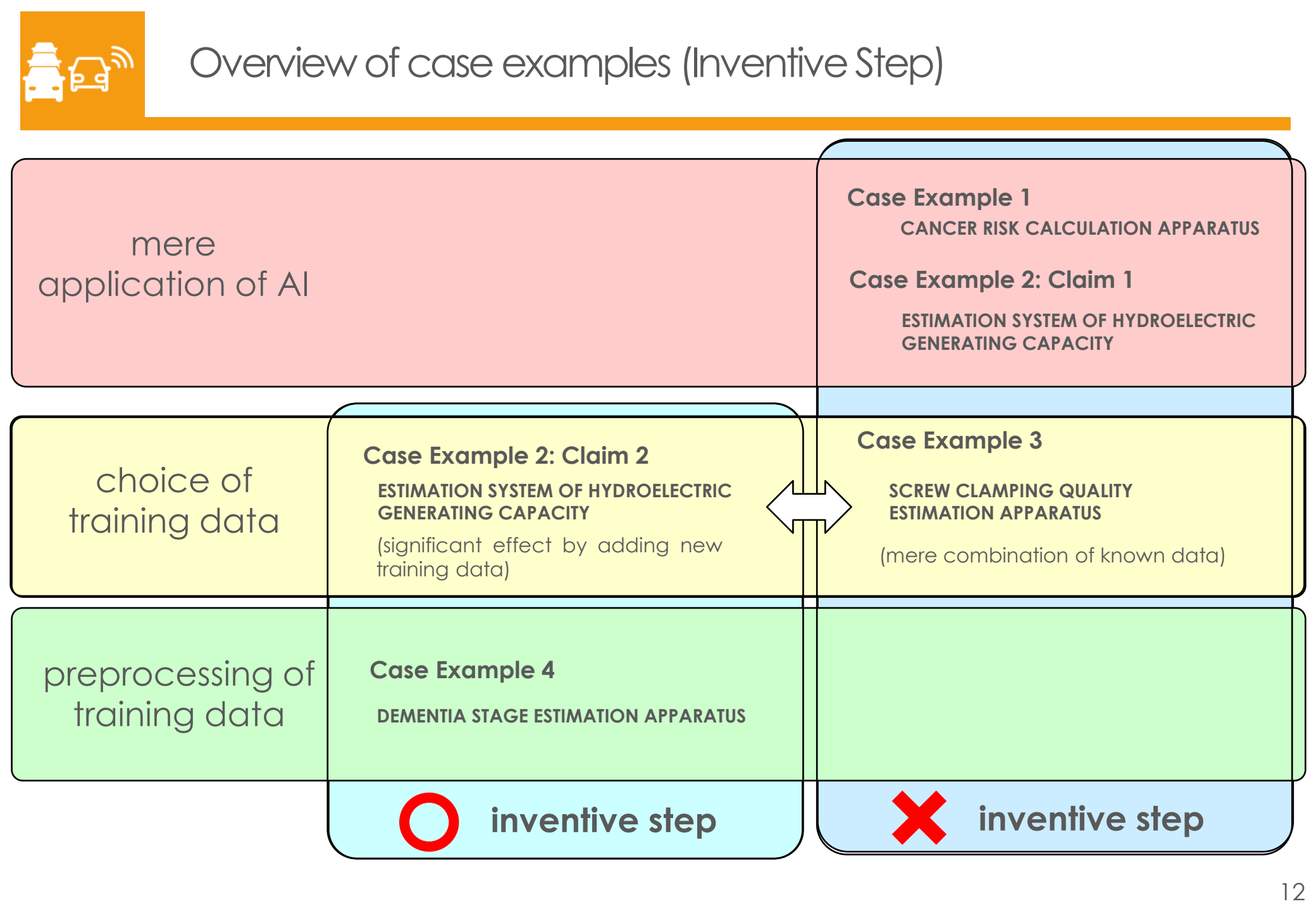
Estimation system of hydroelectric generating capacity



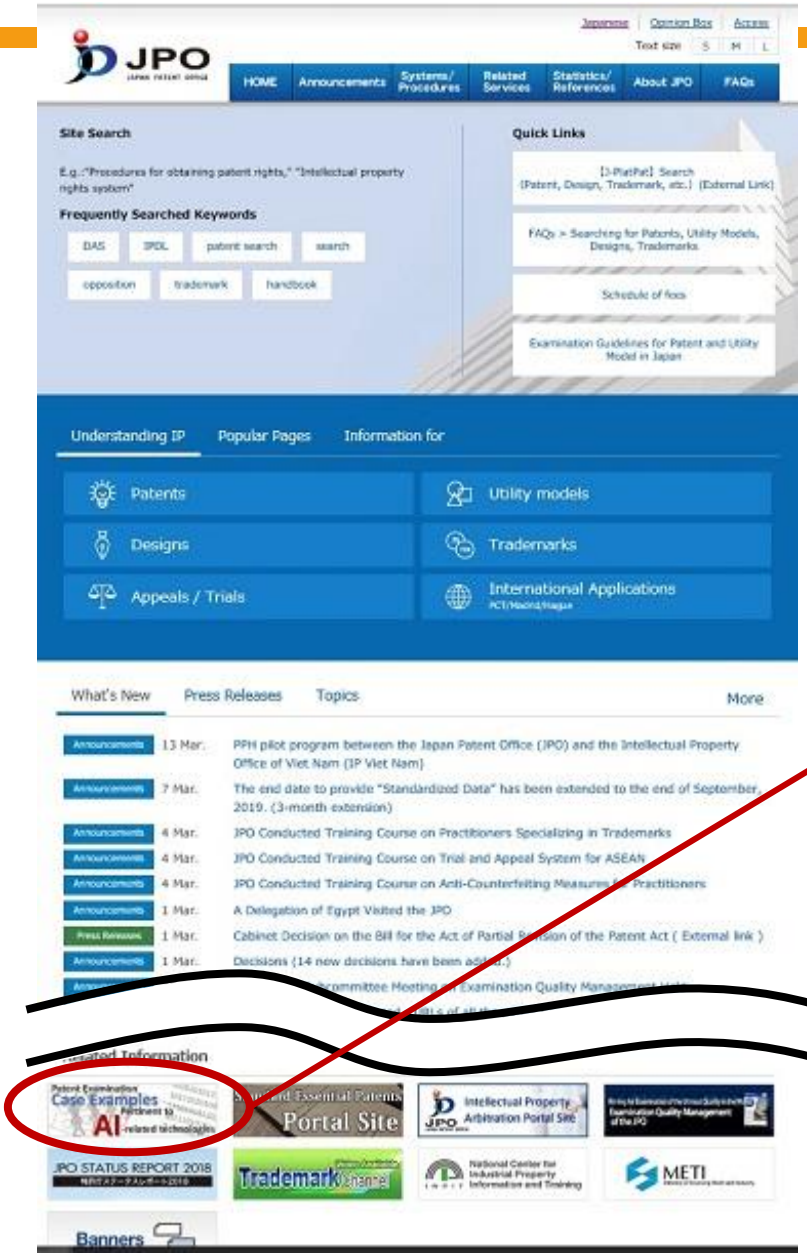
Overview of case examples (Description Requirement)

	Description requirement satisfied	Description requirement NOT satisfied
Inventions relating to AI application in various field		**Case Example 1** **SUGAR CONTENT ESTIMATION SYSTEM** neither common technical knowledge, statistical information nor evaluation result of an actual AI model is shown to prove the correlation
Relation between in/out data is evident	**Case Examples 2 and 3** Yes **BUSINESS PLAN DESIGN APPARATUS** **AUTONOMOUS VEHICLE**	
Relation between in/out data is supported by reasonable explanation or statistical information	**Case Example 4: Claim 2** Yes **BODY WEIGHT ESTIMATION SYSTEM**	**Case Example 4: Claim 1** (broad claim) **BODY WEIGHT ESTIMATION SYSTEM**
Performance of trained AI model is supported by experimental evaluation	**Case Example 5: Claim 2** Yes **METHOD FOR ESTIMATING ALLERGY INCIDENCE RATE OF TEST SUBSTANCE**	**Case Example 5: Claim 1** (broad claim) **METHOD FOR ESTIMATING ALLERGY INCIDENCE RATE OF TEST SUBSTANCE**
Claiming a material inferred by AI to have certain properties		**Case Example 6** **ANAEROBIC ADHESIVE COMPOSITION** Only evidence shown is inference by AI (Suppose it is not a common technical knowledge at the time of filing that AI inference can be a substitute for experiment using actual product)

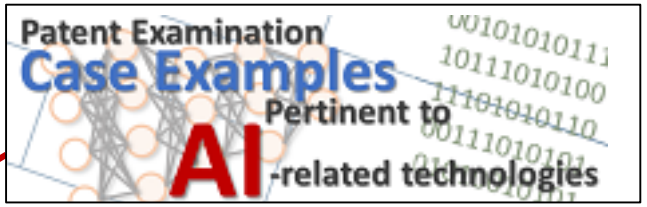
Overview of case examples (Inventive Step)



How to access Case Examples



Click here !



Thank you!!