



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

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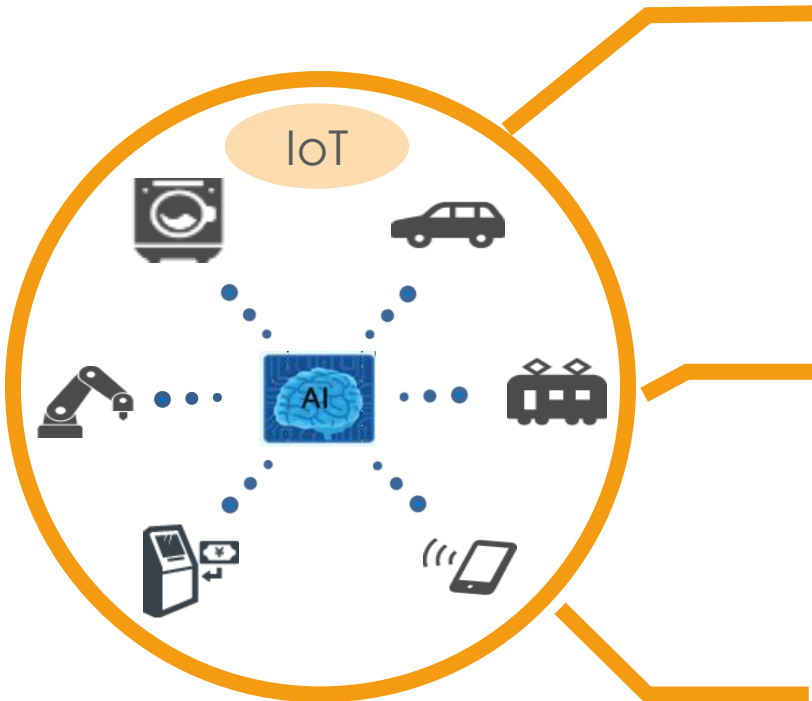
1. Measures on Enhancing Examination Quality for the emerging technologies
2. Examination case examples of AI-related inventions



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



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.

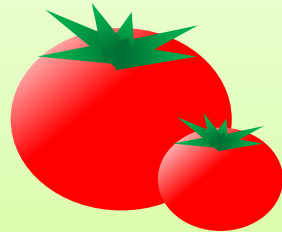
- ✓ In case that existence of correlation between input and output data is **NOT evident** from the common technical knowledge at the time of filing.

Sugar content estimation system

Face image of grower



Sugar content of vegetables

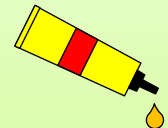


Anaerobic adhesive composition

Composition of Adhesive agent

Compound A %
Compound B %

Curing strength



Case Examples for Description/Support Requirement

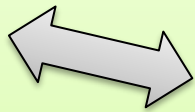
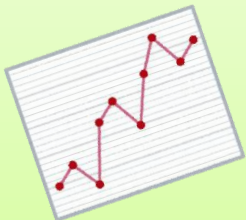


No need to support existence of correlation by experimental evaluation of trained AI model.

- ✓ 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

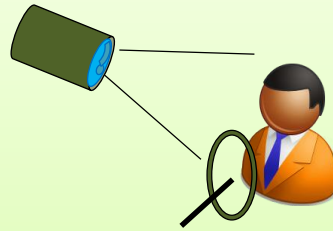


Number of sales



Autonomous vehicle

Captured images of driver's attitudes

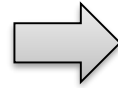


Readiness for driving

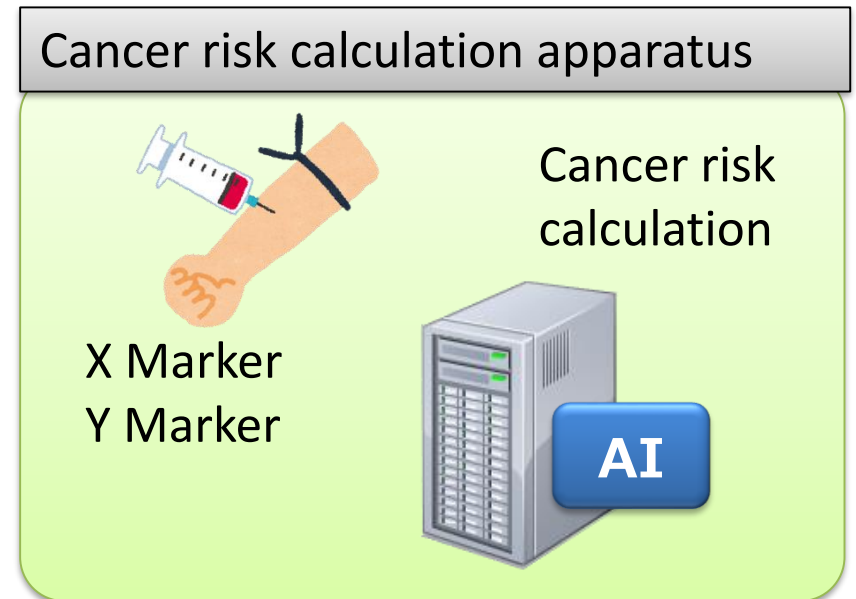
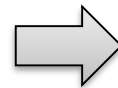
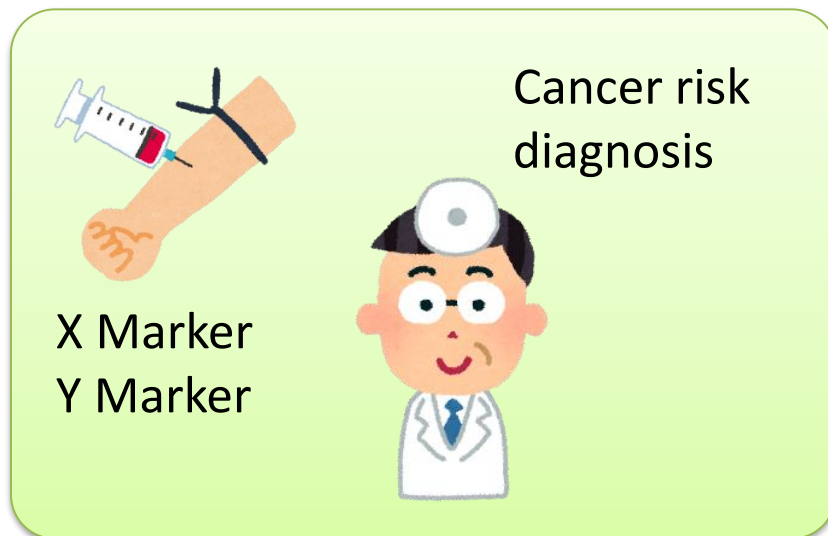


Case Examples for Inventive Step

Known procedures or methods

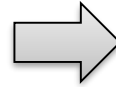


Mere replacement of known procedures or methods does not involve inventive step



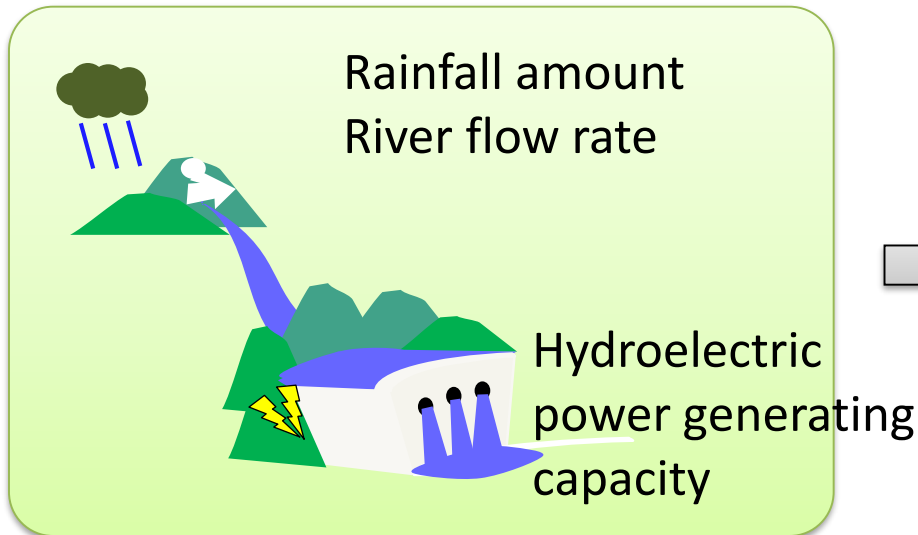
Case Examples for Inventive Step

Input data

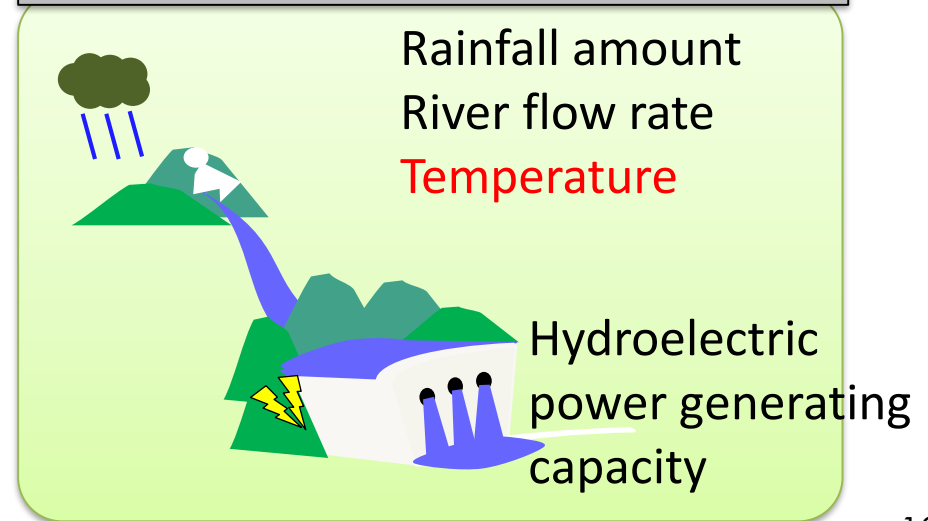


AI

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)

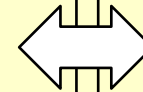
mere application of AI

Case Example 1
CANCER RISK CALCULATION APPARATUS

Case Example 2: Claim 1
ESTIMATION SYSTEM OF HYDROELECTRIC GENERATING CAPACITY

choice of training data

Case Example 2: Claim 2
ESTIMATION SYSTEM OF HYDROELECTRIC GENERATING CAPACITY
(significant effect by adding new training data)



Case Example 3
SCREW CLAMPING QUALITY ESTIMATION APPARATUS
(mere combination of known data)

preprocessing of training data

Case Example 4
DEMENTIA STAGE ESTIMATION APPARATUS



inventive step



inventive step



How to access Case Examples

The screenshot shows the JPO website homepage. At the top, there is a navigation menu with links for HOME, Announcements, Systems/Procedures, Related Services, Statistics/References, About JPO, and FAQs. Below the menu, there is a 'Site Search' section with a search bar and 'Frequently Searched Keywords' including DAS, IPOL, patent search, search, opposition, trademark, and handbook. To the right, there are 'Quick Links' for [J-PlatPat] Search, FAQs, Schedule of fees, and Examination Guidelines. A central section titled 'Understanding IP' contains buttons for Patents, Designs, Appeals / Trials, Utility models, Trademarks, and International Applications. Below this is a 'What's New' section with a list of announcements and press releases. At the bottom, there is a 'Related Information' section with several links, including 'Patent Examination Case Examples Pertinent to AI-related technologies', which is circled in red. Other links include 'Standard Essential Patents Portal Site', 'Intellectual Property Arbitration Portal Site', 'IPO STATUS REPORT 2018', 'Trademark Channel', 'National Center for Industrial Property Information and Training', and 'METI'.

Click here !





Thank you!!