

Latest Trends in AI and IP



Trend



Statistics



IP Issues

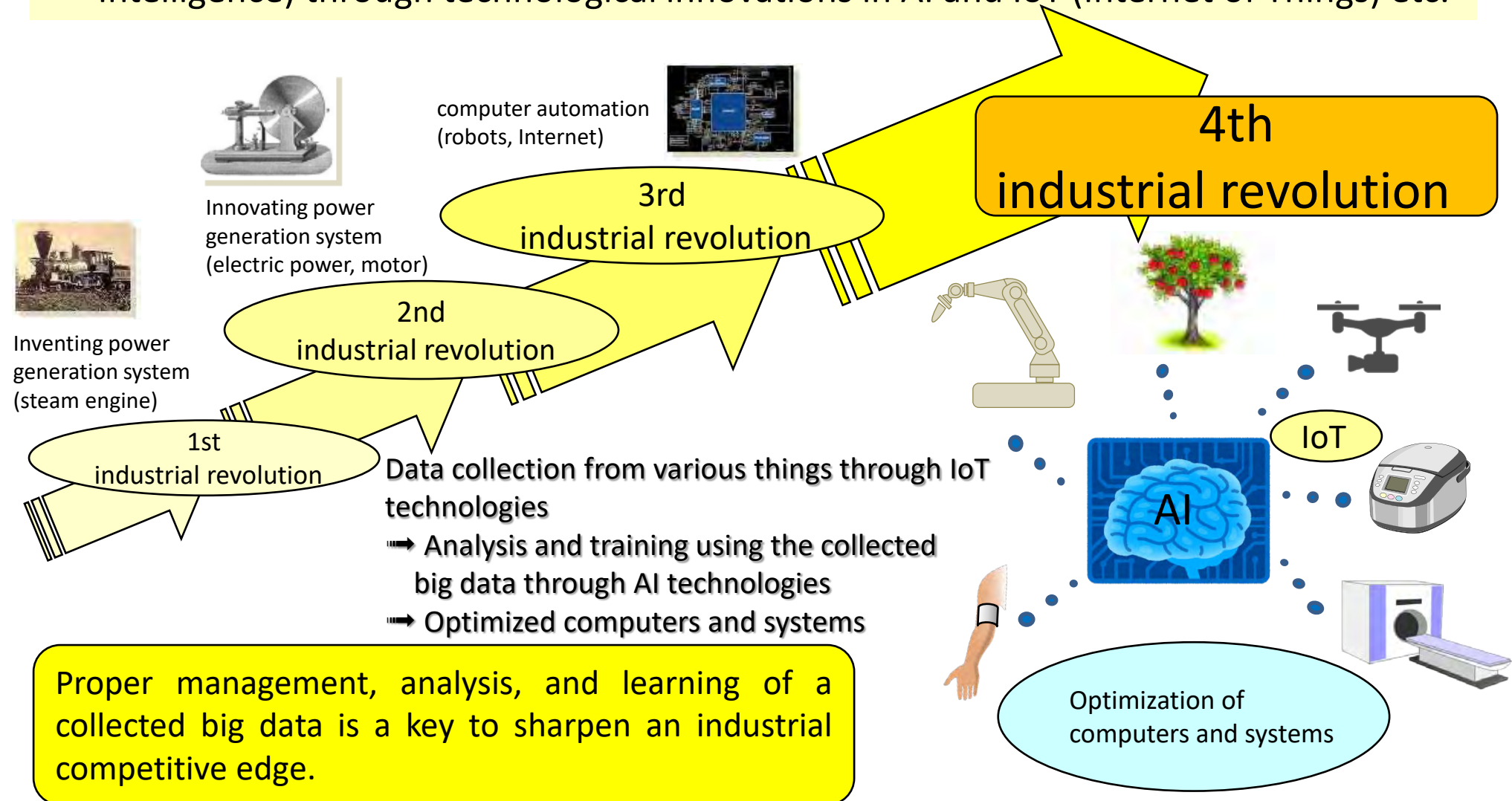


Guideline



Industry 4.0 with AI and IoT technologies etc.

- The fourth industrial revolution is expected with the use of Big Data and AI (Artificial Intelligence) through technological innovations in AI and IoT (Internet of Things) etc.





Publishing Case Examples on IoT Related Technologies

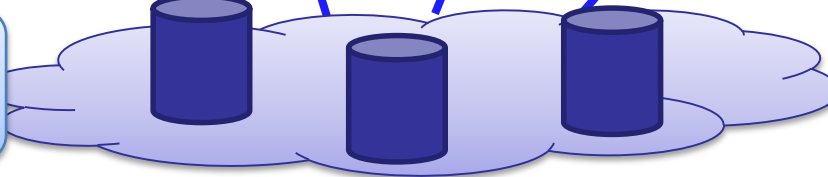
IoT related technologies

Sensing data



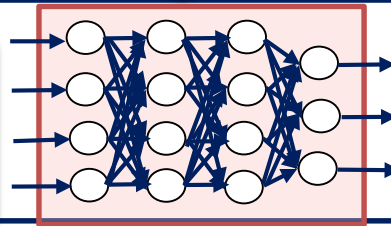
(1) Collecting

- Data management
- Data structure

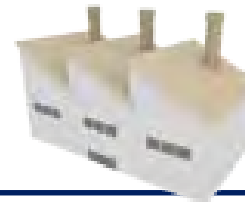


(2) Managing

- Neural network
- Deep learning
- Trained-model



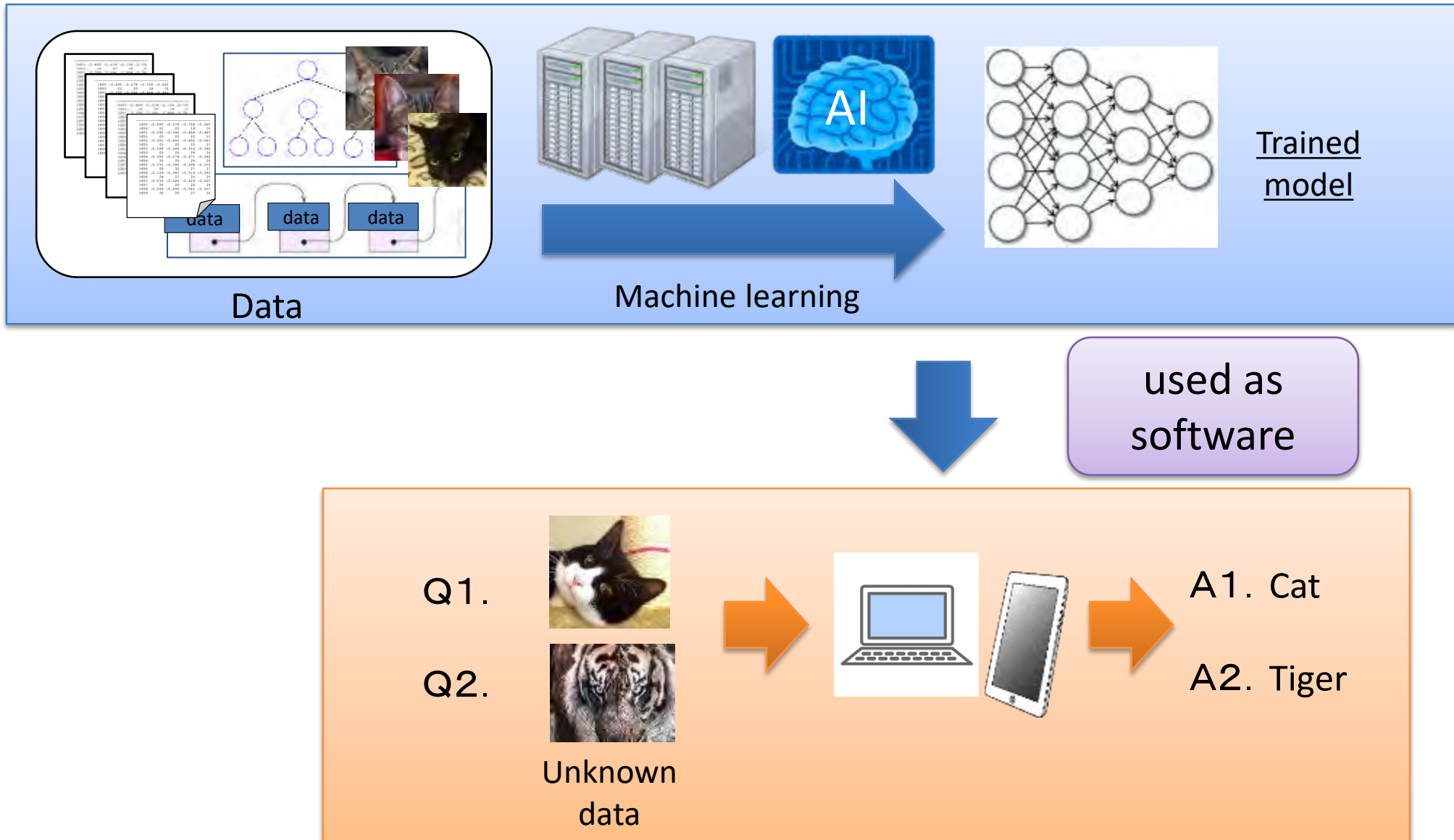
(3) Analyzing and training



(4) Utilizing



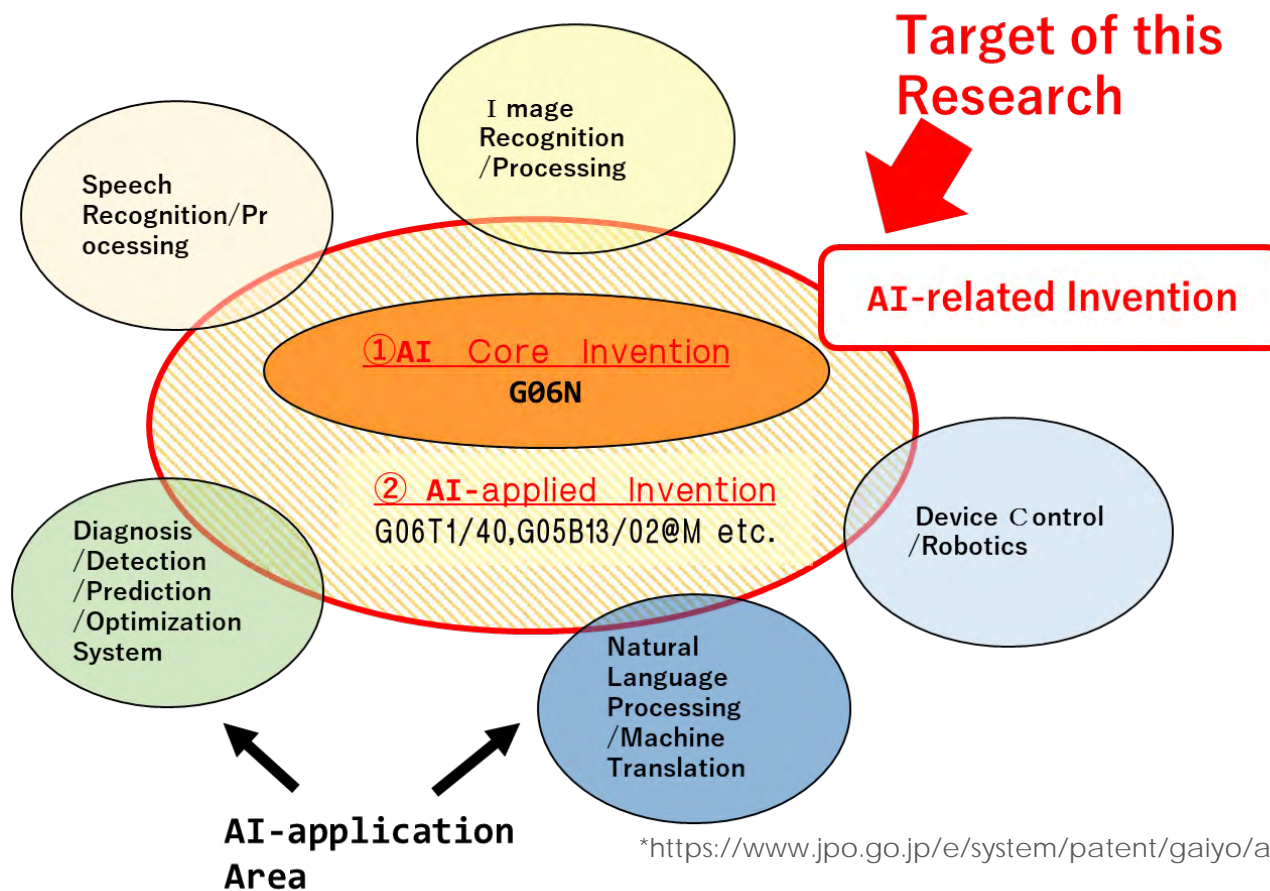
Scope of AI inventions





Report on Recent Trends in AI-related Inventions (Published in July 2019)

- Define “AI core invention” and “AI-applied invention” as “AI-related invention.”
- Extract around 40,000 applications(filed between 1988-2017) by using patent classifications and keywords.
- Detailed research method is opened in the report*.



English

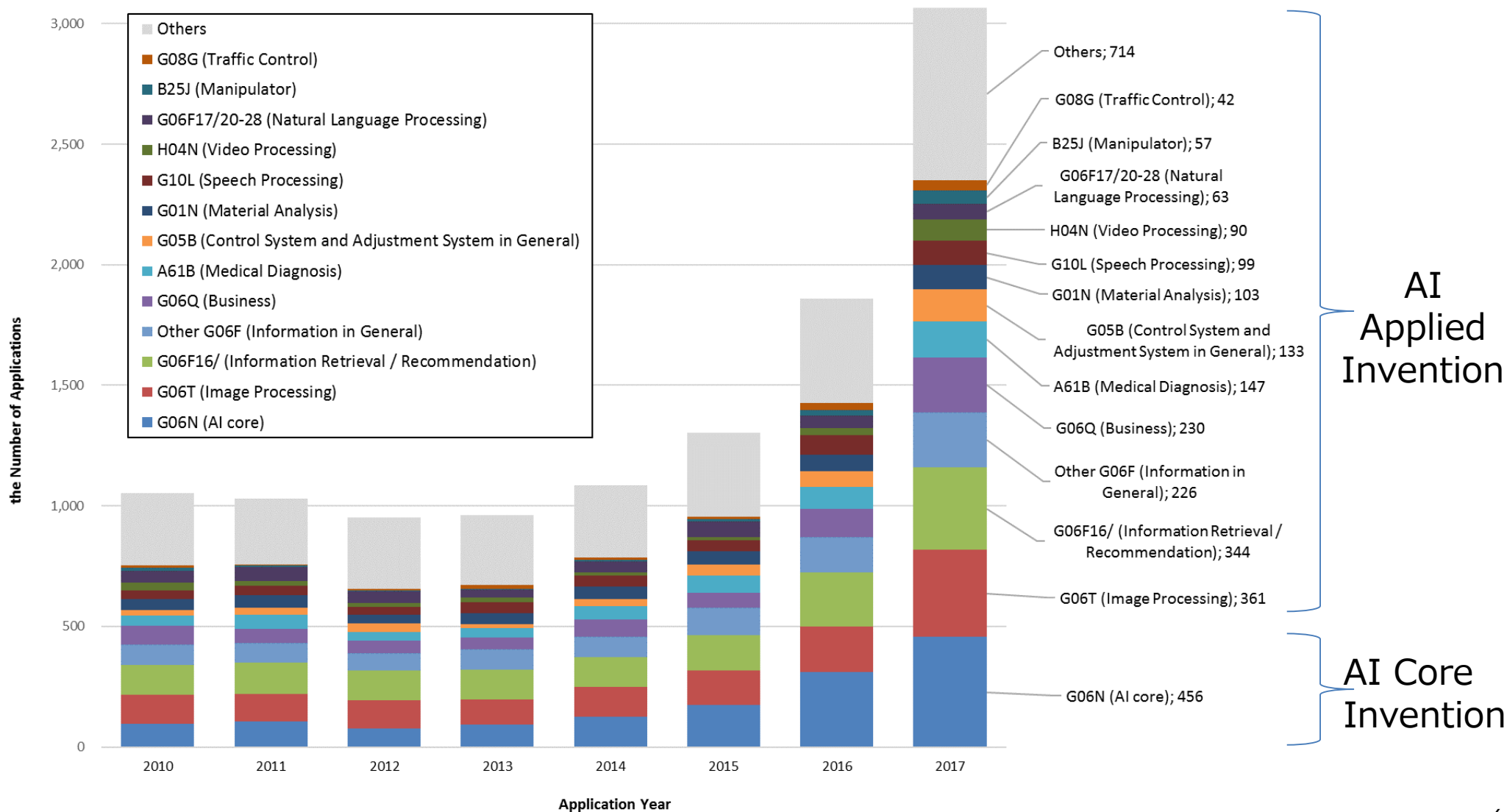


Japanese





Application Status in Japan

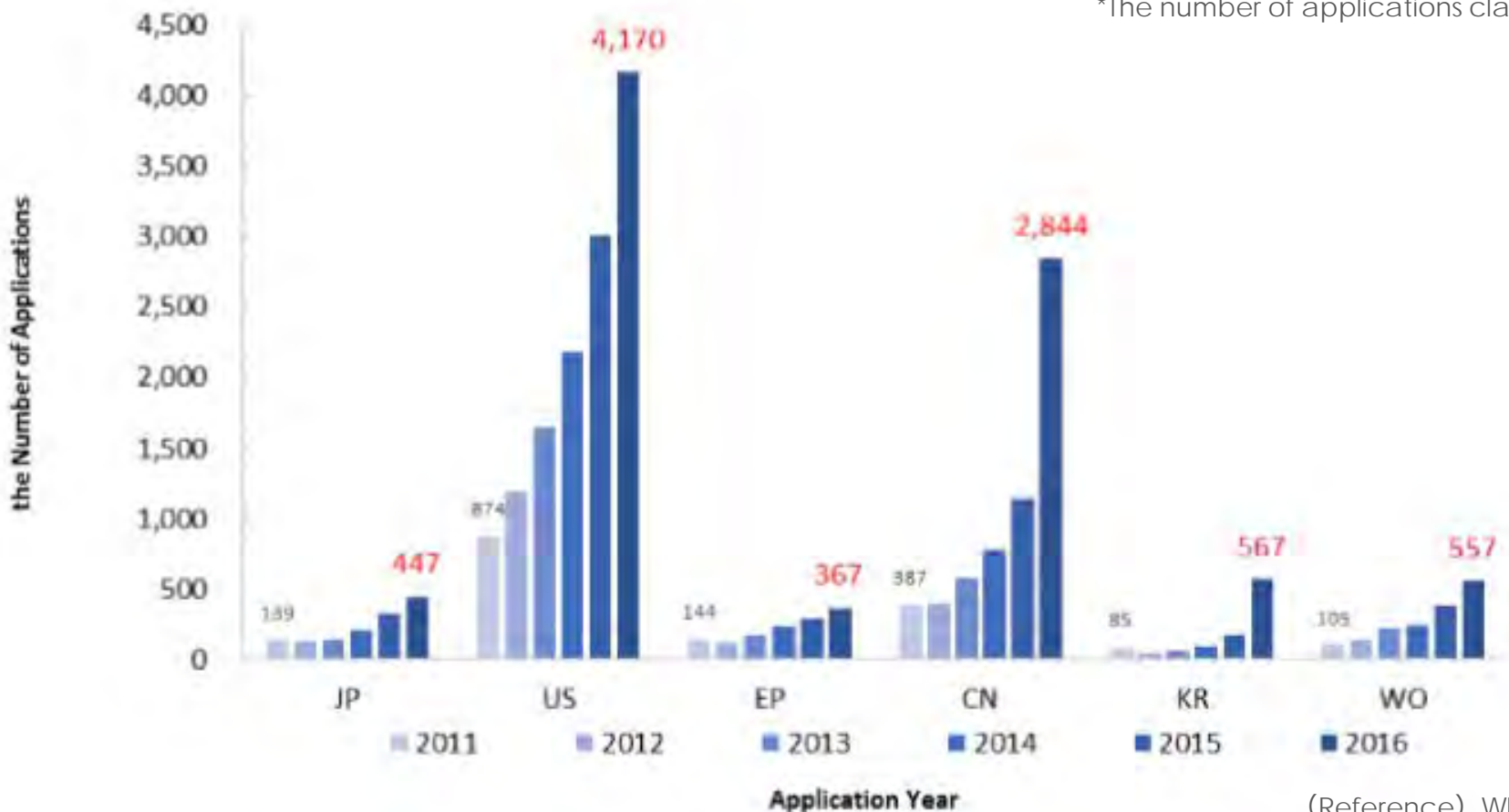




Application Status in each Country

- The number of applications for AI-related technology* has been increasing in each country.
- The United States and China are the major application destinations in the world.

*The number of applications classified into IPC: G06N



(Reference) WIPO PatentScope



AI and IP – Overview –



Jan. 2019
Nov. 2019

Added AI-related Case Examples to the Examination Handbook
International Symposium on Patent Examination Practices on AI-related Inventions



Oct. 2018
Nov. 2018

IP5 expert round table on artificial intelligence
New examination guideline with patentability of AI-related inventions



Mar. 2019

New examination guideline with AI-related case examples



Oct. 2019
Nov. 2019

International Conference on AI and IP
Accepting Public Comments on Examination Guideline Update regarding AI-related Inventions



Aug. - Nov.
2019
Oct. - Dec.
2019

Accepted Public Comments on Patenting Artificial Intelligence Inventions
Accepting Public Comments on IP Protection for Artificial Intelligence Innovation

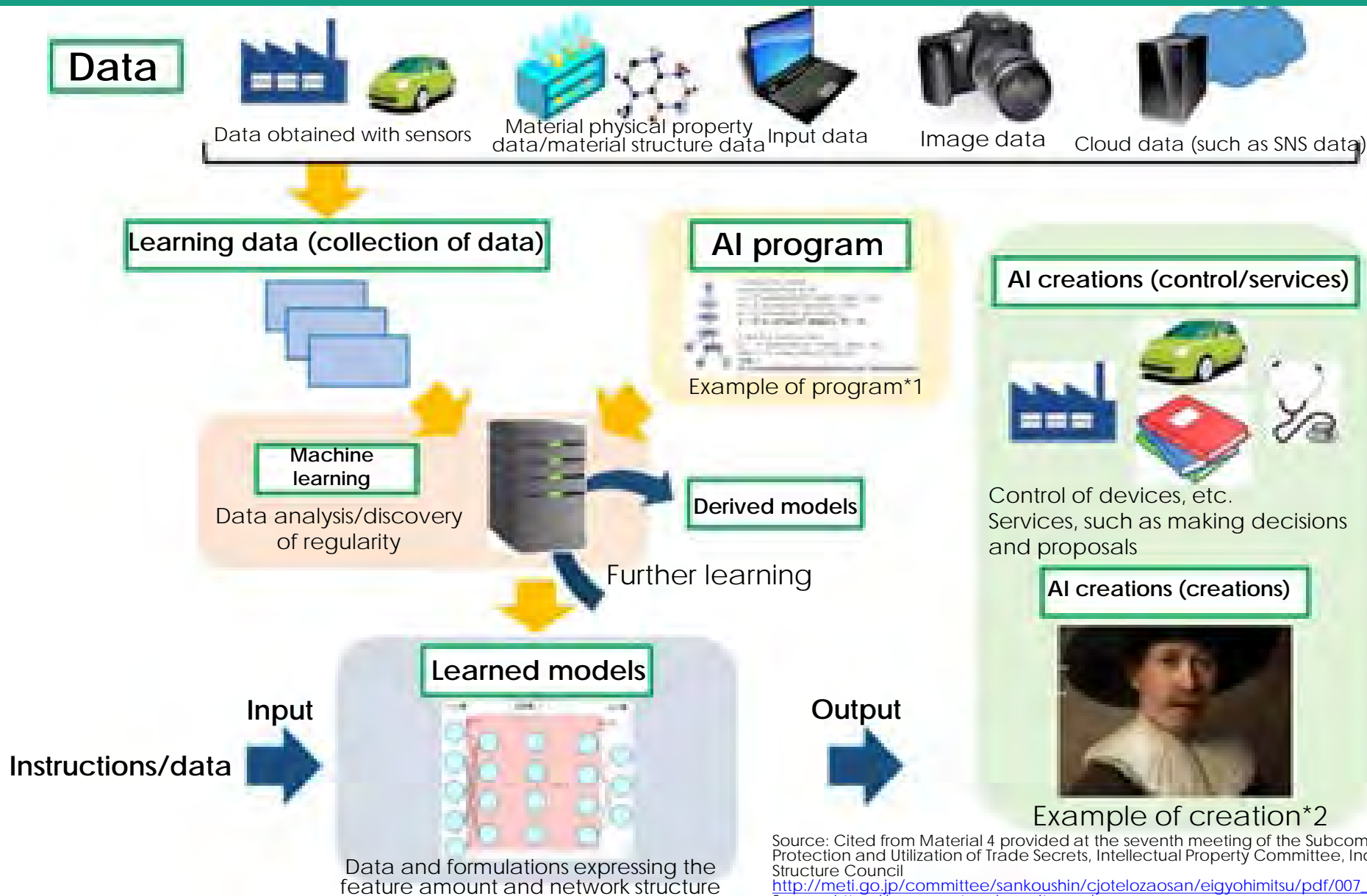


Sep. 2019

WIPO Conversation on Intellectual Property and Artificial Intelligence

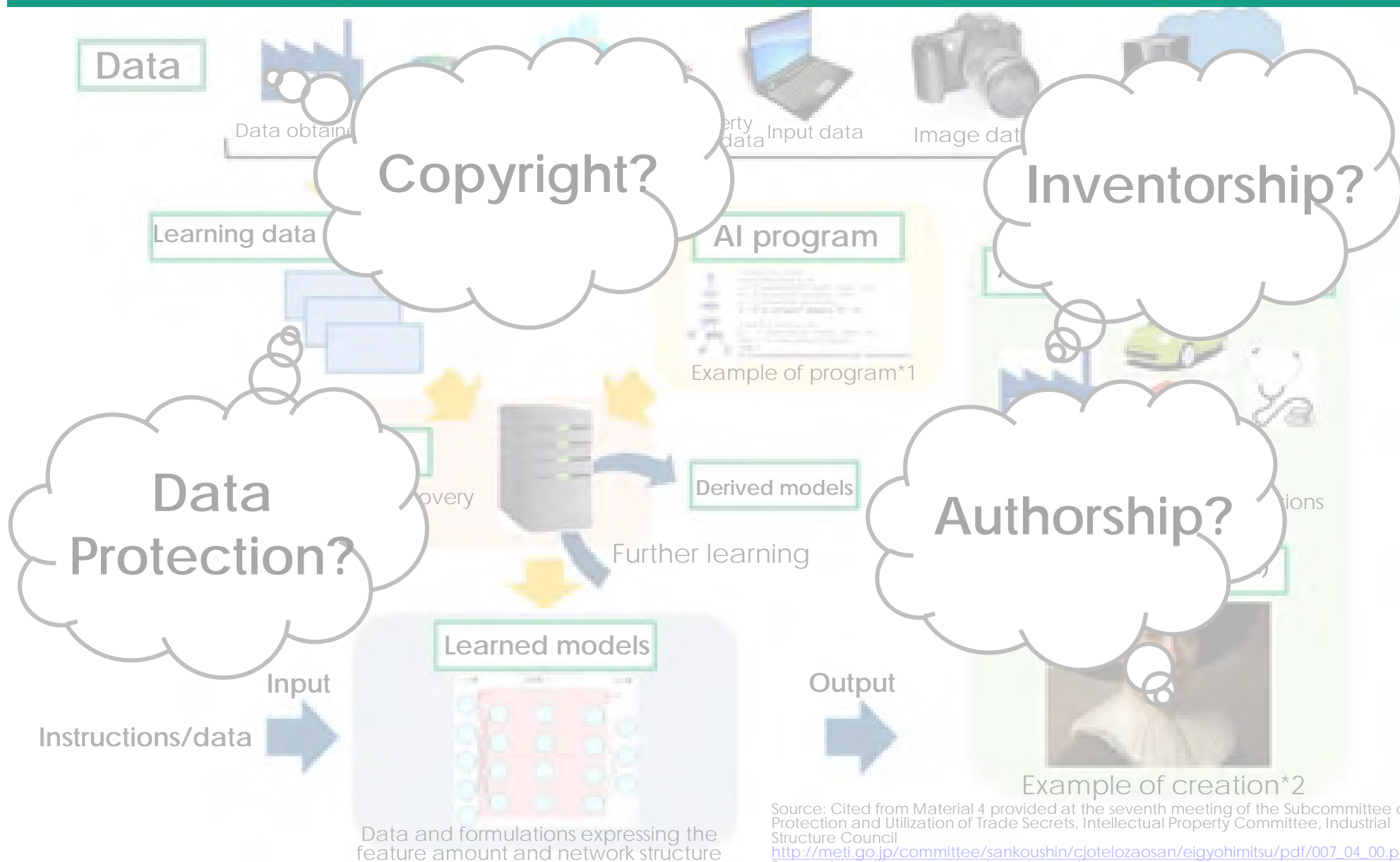


AI and IP – Overview –



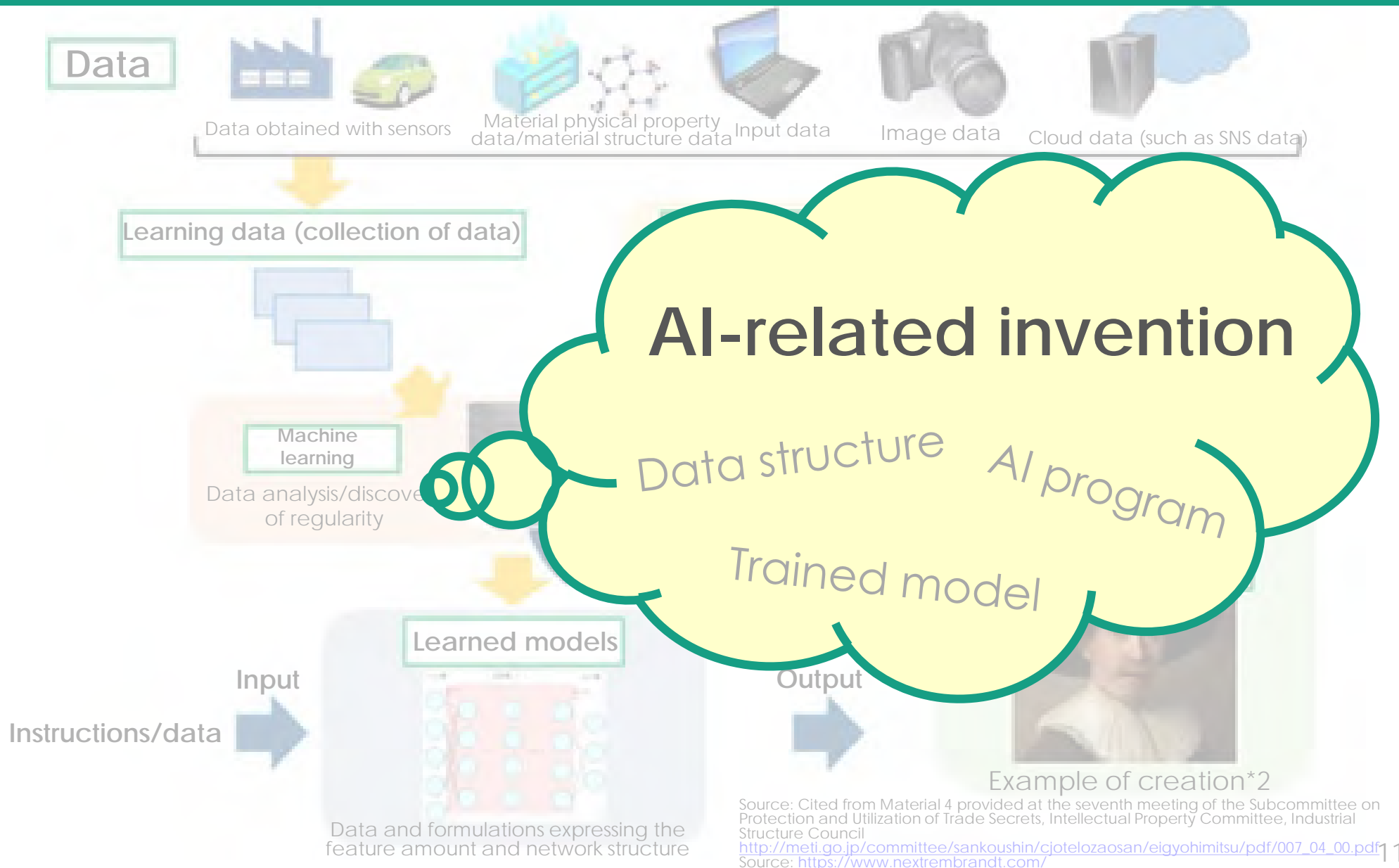


AI and IP – Overview –





AI and IP – Today's scope –





AI and IP – Today's scope –

Inventive step?

Eligibility?

Description Requirement?

Preferred claim?

AI-related invention

Patent examination



Patent Law in general



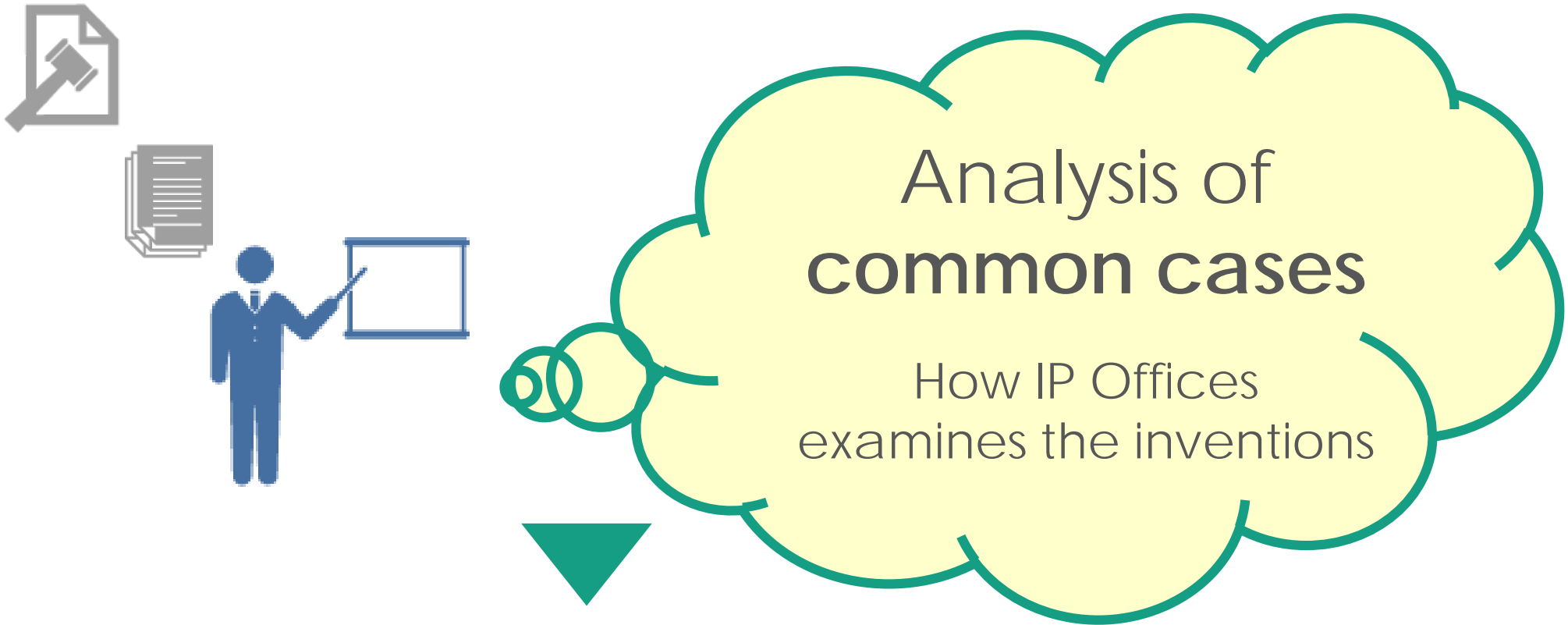
Guidelines for application of law



Case examples for clarification



AI and IP – Today's scope –



Strategies for obtaining patent
in various countries



AI/IoT-related measures by JPO



Patent Examination Guidelines / Handbook



Added case examples of AI/IoT-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)

English



Japanese





Publishing Case Examples on IoT Related Technologies

IoT related technologies

<Corresponding Case Examples>

(1)Collecting

Sugar Content Data of Apples(Eligibility for Patent)

(2)Managing

Tree-structured Area Management Data (Eligibility for Patent, Inventive Step)

(3)Analyzing and training

Trained Model for Analyzing Reputation of Accommodations (Eligibility for Patent)

Quality Management Program of Manufacturing Lines (Inventive Step)

(4)Utilizing

▪ System and Method of Allocating Unmanned Autonomous Vehicle (Eligibility for Patent)

▪ Heavy Rain Point Specifying System (Inventive Step)



Overview of AI 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



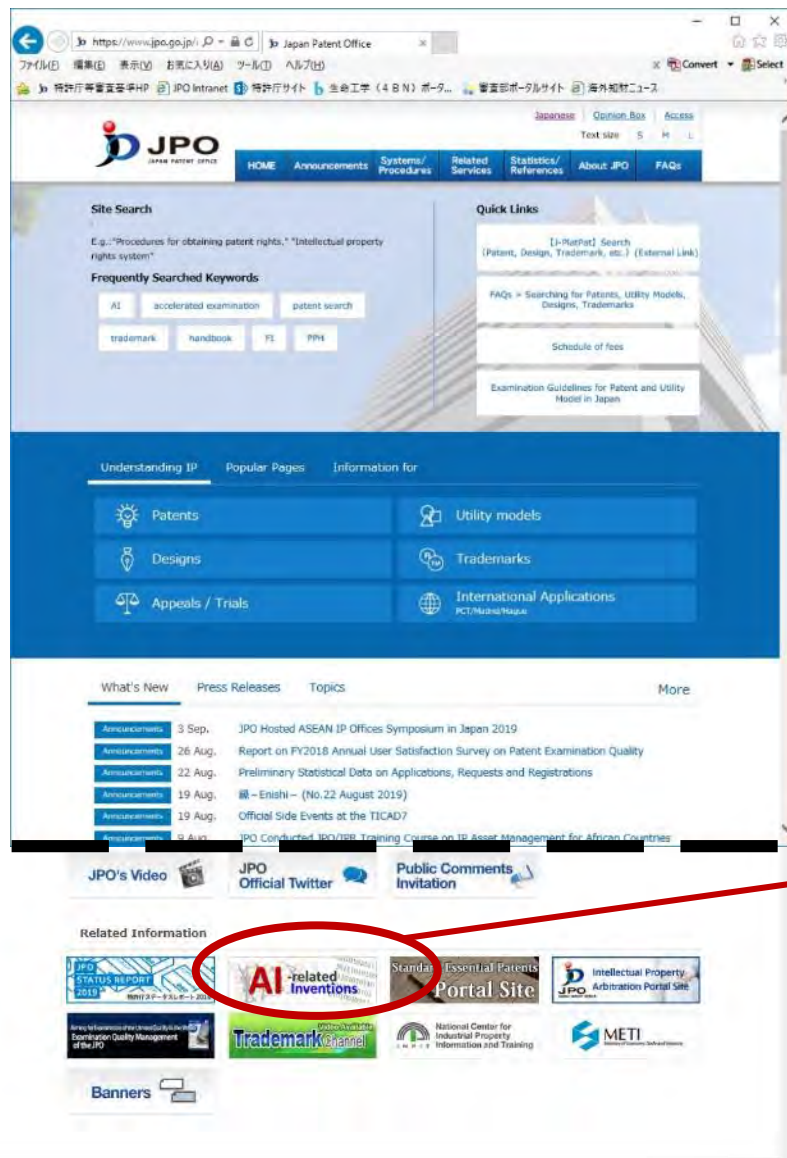
inventive step



inventive step



How to access Case Examples



Japanese

<https://www.jpo.go.jp/>

English

<https://www.jpo.go.jp/e/>



Click here!



The JPO hopes you to enjoy the AI Symposium

