Harmonization Update Procedural aspects incl. AI

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JPO

1. PHEP and NET/AI in IP5

Written Description/Sufficiency of Disclosure

- ➢ In 2014, IP5 offices agreed to initiate a case study using hypothetical cases with respect to Written Description/Sufficiency of Disclosure (JPO lead).
- ➢ In 2018 and 2019, the Case Study Report of this area was published on IP5 website.

- ✓ The PHEP analysed three hypothetical cases on the support requirement in the chemistry field and also analysed three other hypothetical cases to check the clarity and the support requirements in the electric and machinery fields.

- ✓ Users also provided their feedback for all the cases, from the point of the support requirement and/or the clarity requirement.

- ✓ Results showing how the IP5 Offices and users determined these factors were summarized in an easily understandable chart.

- ✓ The IP5 Offices provided not only "yes" and "no" answers on the clarity and support requirements but also included points of laws and regulations supporting their determinations and the reasons for their determinations.

Case 1-3

Case 4-6

Allowable features in drawings

> ➢ In 2021, the IP5 PHEP finalized a detailed new work plan.
> ➢ IP5 Offices have identified common allowable features including the lowest common denominator ("IP5 Safe Format").
> ➢ This JPO-led initiative aims at bringing greater uniformity of allowable features in drawings and, furthermore, at reducing users' costs and efforts arising from the differences in formal requirements across the respective IP5 regions.

Overview highlighting the lowest common denominator (IP5-Safe Format)

Paper size and Margins	Image format	Color / grayscale	Line Drawings	Size of Characters and symbols	Availability of photos
A4 ・・・	There is no IP5-Safe image format. Resolution: 300dpi	Black and White	・・・	There is no IP5-Safe size of characters and symbols.	Acceptable if it is appropriate.

IP5 : Roadmap for cooperating in the fields of NET/AI

- At the IP5 Heads Meeting (2021), the heads agreed on a roadmap for cooperating in the fields of New Emerging Technologies (NET) and Artificial Intelligence (AI).
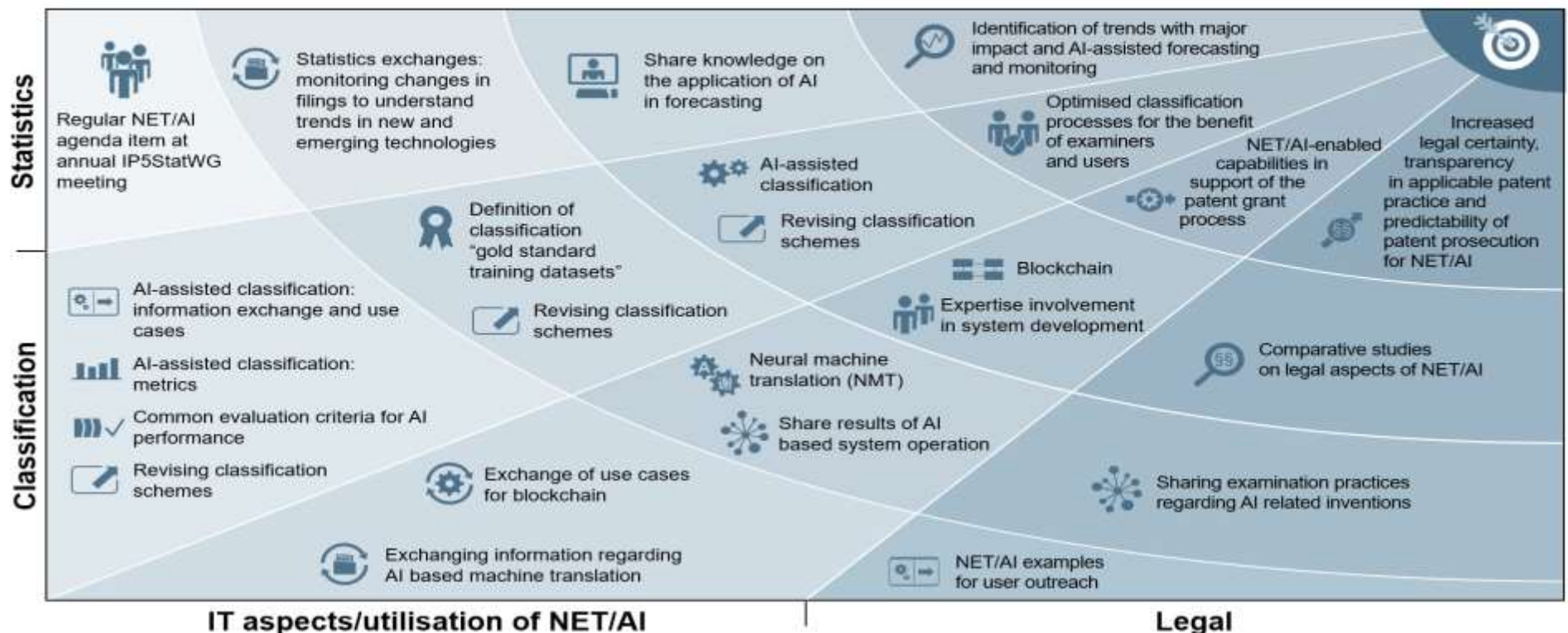
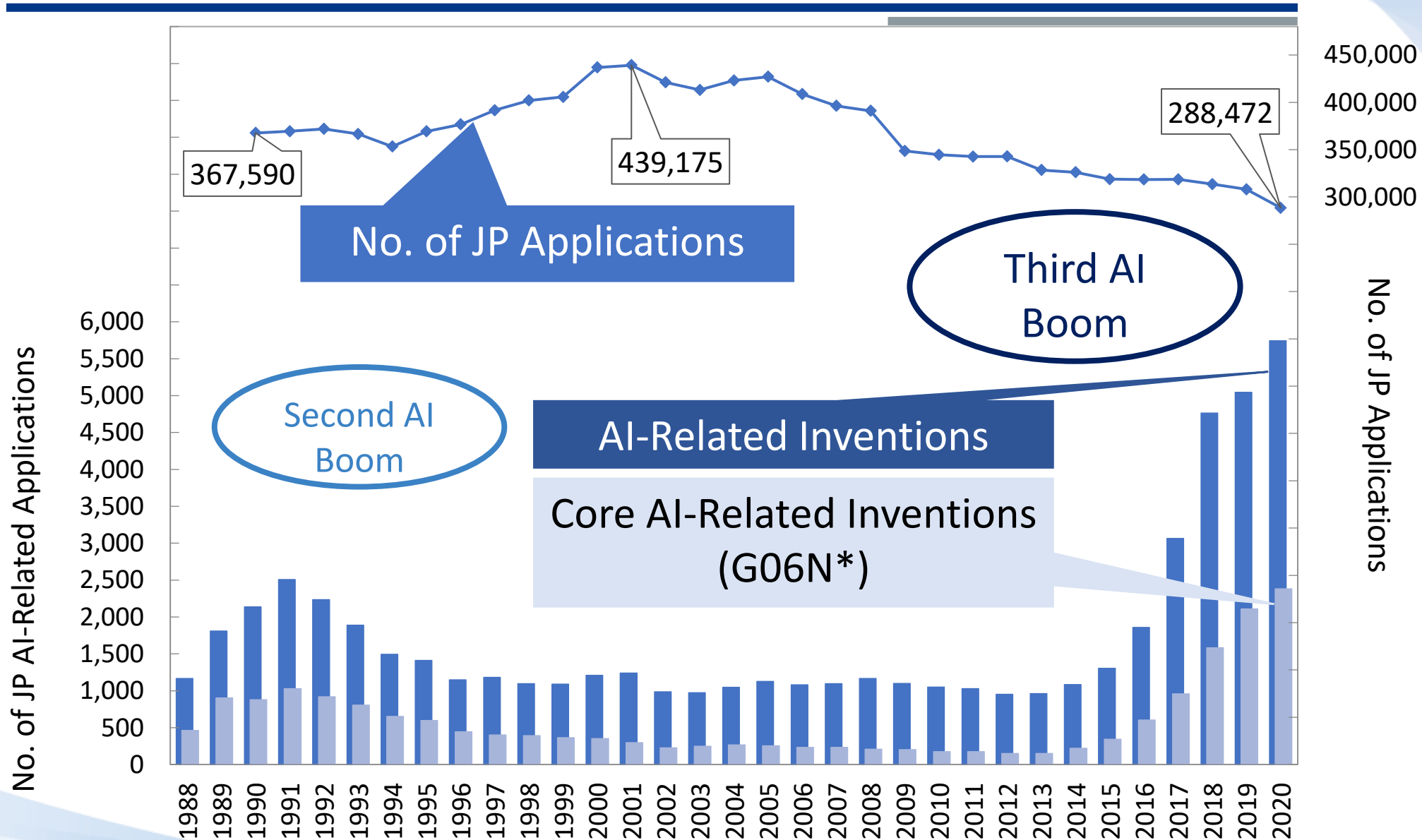# Examination practices on AI-related inventions

- As the first project based on the roadmap, IP5 offices collected materials on the examination practices of the IP5 Offices on AI-related inventions in June 2023.
- The material is presented in the form of hyperlinks to web pages, allowing users to access the most up-to-date material.

EPO	JPO	KIPO	CNIPA	USPTO
Art. 52 EPC [English] [German] [French]	Main Paragraph of Article 29(1) of Patent Act [English] [Japanese]	Article 2, Article 29(1) and Article 32 of Patent Act [English] [Korean]	Article 2, Article 5 and Article 25 of Patent Law of PRC. [Chinese]	35 U.S.C. 101 [English]
Guidelines for Examination in the European Patent Office (2022) [Index for Computer-Implemented Inventions] [G-I] [G-II, 1] [G-II, 2] [G-II, 3.3] [G-II, 3.3.1] [G-II, 3.3.2] [G-II, 3.5] [G-II, 3.6] [G-II, 3.7]	Examination Handbook for Patent and Utility Model, Annex B [Chapter 1, Section 2.1]	Examination practice guide by technology field [Pages 1301~1310, 7301~7306]	The Announcement of Amending Guidelines for Patent Examination (No.343) [Section 6.1.1 and 6.1.2.]	Manual of Patent Examining Procedure [2106 Patent Subject Matter Eligibility] The Subject Matter Eligibility webpage [Link]

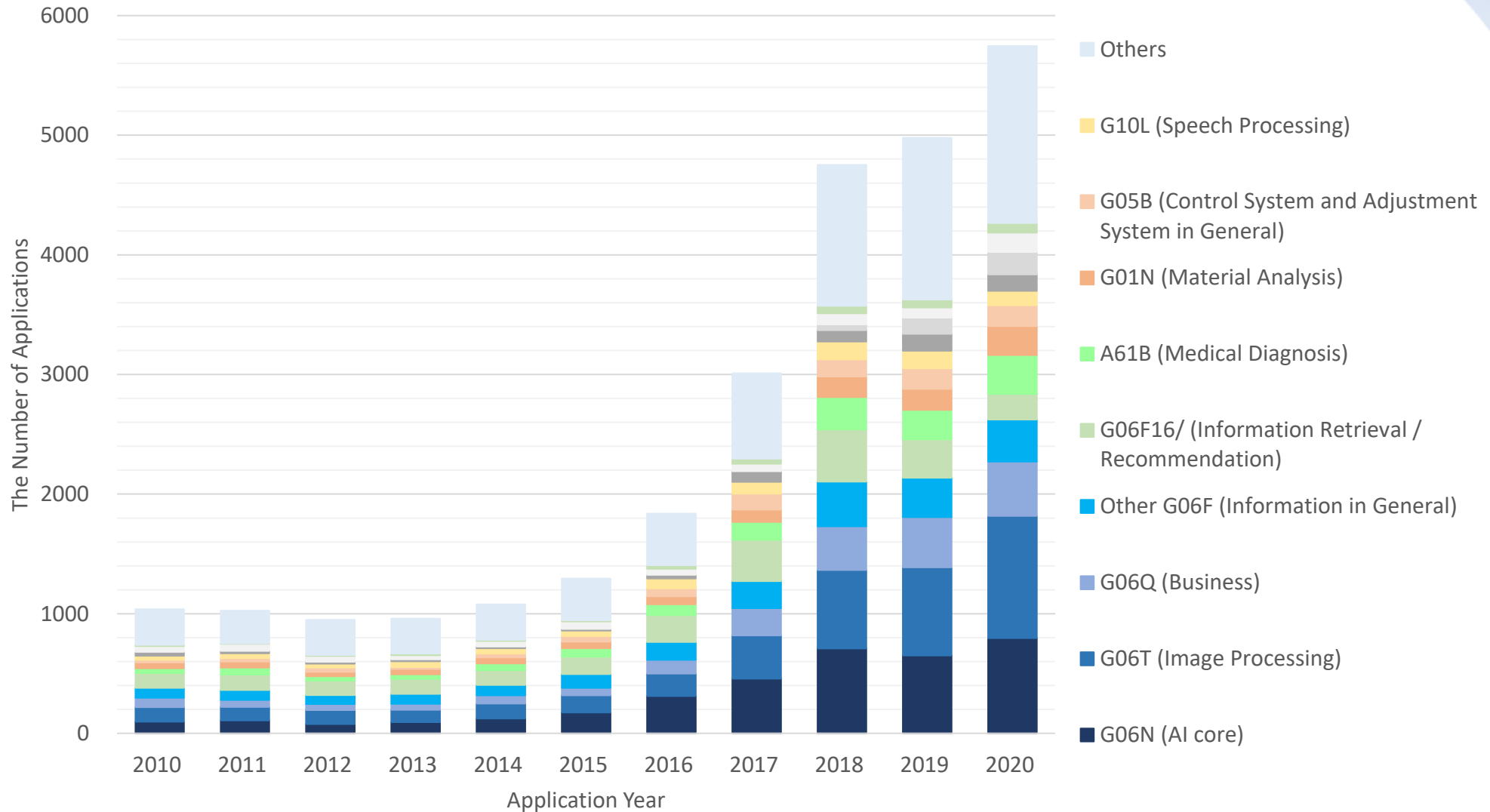# 2. Application Trends of AI-related inventions

Application Trends of AI-related inventions

No. of JP AI-Related Applications

No. of JP Applications

367,590

439,175

288,472

No. of JP Applications

Second AI Boom

Third AI Boom

AI-Related Inventions

Core AI-Related Inventions (G06N*)

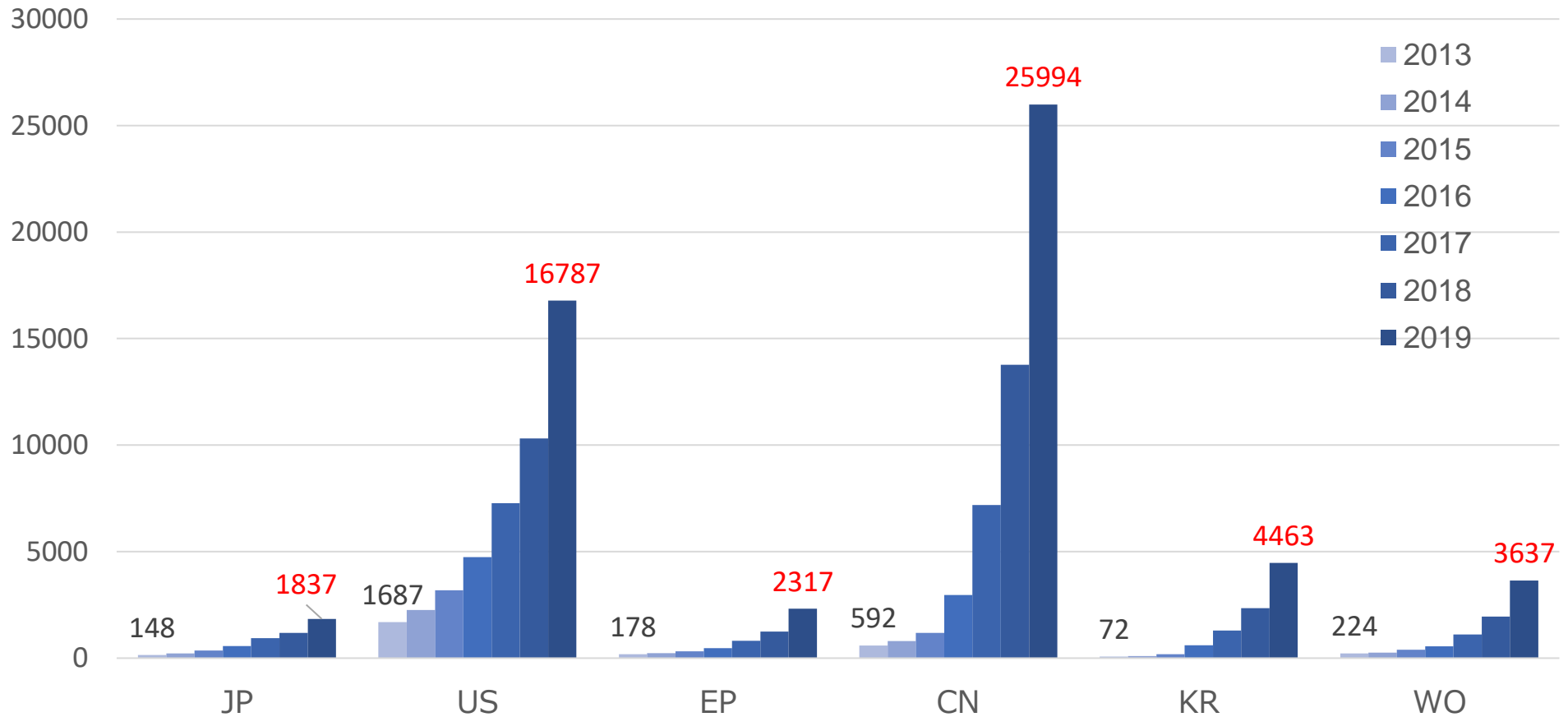*G06N: "Computer systems based on specific calculation model.

Application Trends of AI-related inventions

Composition of main classification of AI-related inventions

Application Trends of AI-related inventions

The number of applications to each country classified into G06N

3. International cooperation
on examination of AI-related inventions

Japan-ASEAN Heads of IP Offices Meeting etc.

- At the Japan-ASEAN Heads of IP Offices Meeting (2021), the Economic Research Institute for ASEAN and East Asia (ERIA) reported the results of Research on Patent Examination Practices for Emerging Technologies in ASEAN Member States.

- At the ASEAN-Japan Heads of IP Offices Meeting (2022), ERIA presented an interim report of their 2nd research findings on patent examination practices for emerging technologies in ASEAN Member States.

- This 2nd research uses case examples pertinent to emerging technologies, including AI and IoT-related technologies, from the JPO Examination Handbook and investigates examination results for each case, judging in accordance with laws and regulations of ASEAN countries.

- Based on this report, topics such as determination of novelty by the IP offices were discussed at the third ASEAN-Japan Patent Experts Meeting (Nov. 2022).

Comparative Study Report on software-related inventions

① Comparative study with the EPO

- The JPO and the EPO conducted a comparative study on software-related inventions and published a report in March 2019.

- Recently, including AI-related inventions, a comparative study was conducted by adding six new case examples concerning description requirements and inventive step, and the report was updated and published in November 2021.

② Comparative study with the CNIPA

- The JPO and the CNIPA confirmed their cooperation at their Heads Meeting in November 2021 and are carrying out a comparative study on examination of AI-related inventions.

Comparative Study with the EPO (AI : Inventive step)

> Differences exist between the EPO and the JPO in the approach to assess inventive step for the CII.

EPO

- Features which do not contribute to the technical character of the invention cannot support the presence of an inventive step.
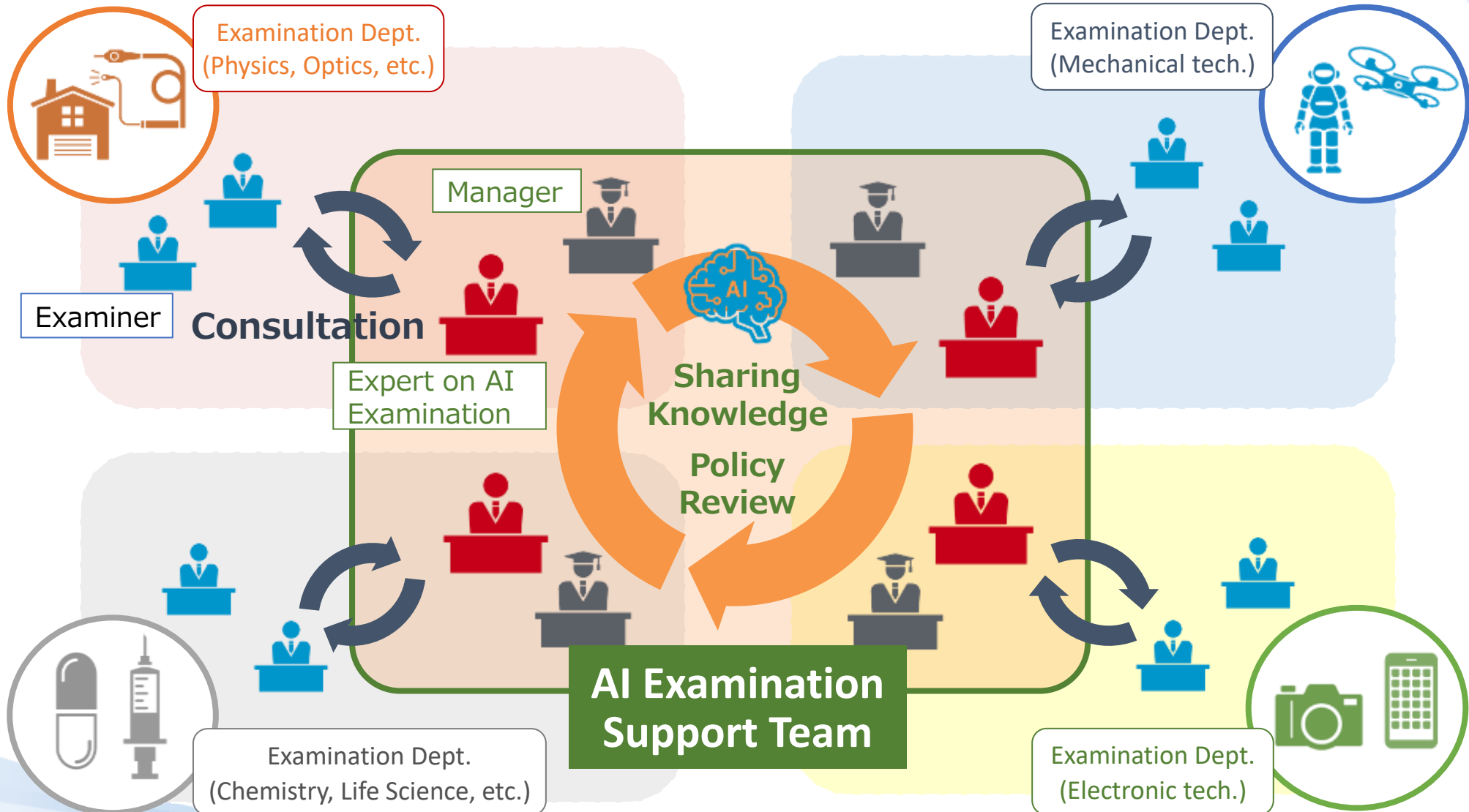- Considering neural networks to be of a non-technical, purely mathematical nature (i.e., Case C-8).

JPO

- The claimed subject-matter is considered as a whole; it is not divided into technical and non-technical features when assessing inventive step.
  - → The inventive step of an invention is seldom rejected solely based on a general-purpose computer as prior art.

		JPO	EPO
Case C-6 (JPO) Estimation system of hydroelectric generating capacity	CL1	×	×
	CL2	○	○
Case C-8 (EPO) Training a neural network ("drop-out")		○	×

# 4. JPO's initiatives for AI
(Patent Applications and AI utilization)

AI Examination Support Team

Examination Dept.
(Physics, Optics, etc.)

Examination Dept.
(Mechanical tech.)

Manager

Examiner

Consultation

Expert on AI
Examination

**Sharing
Knowledge**

**Policy
Review**

**AI Examination
Support Team**

Examination Dept.
(Chemistry, Life Science, etc.)

Examination Dept.
(Electronic tech.)

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Indication of Inventor in Patent Applications in Japan

- ✓ "Shimei" (Last name & First name) of Art.36(1) is interpreted to mean the name of a "natural person".
- ✓ "Shimei" or "Meisho (name of juridical person)" can be indicated as an applicant, whereas only "Shimei" can be indicated as an inventor in the application.
- ✓ The inventor is the entity that has the right to be granted the patent upon completion of the invention. (Art.29(1))
- ✓ The inventor may transfer the said right prior to filing the patent application. (Art.33(1)＆34(1))
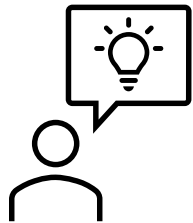
The inventor shall be a "natural person" and meaning a person who has the legal capacity of the right.
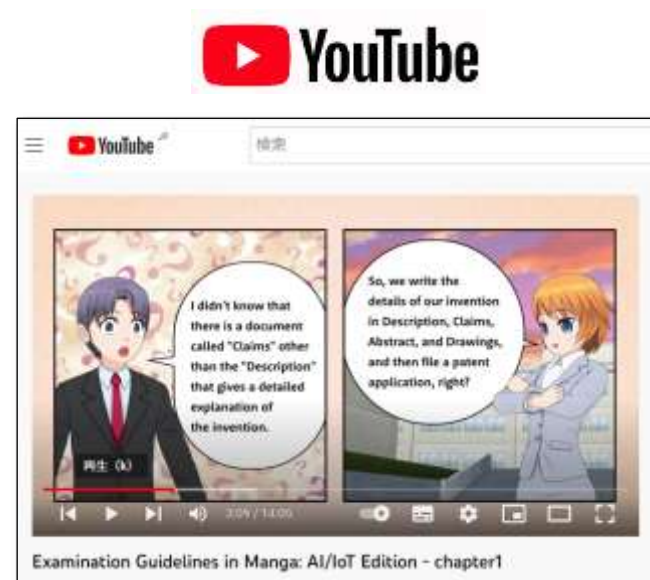
It shall not be permitted to indicate in the column for the inventor of the application an entry that is not a natural person (e.g., machines including AI)

Manga Patent Examination Guidelines – AI/IoT fields –

English "Manga"

- ◆ Patent Eligibility
- ◆ Novelty
- ◆ Inventive Step
  (Multi-Factor Reasoning(MFR))
- ◆ Description Requirements

Manga   YouTube

HP: https://www.jpo.go.jp/e/system/laws/rule/guideline/patent/comic_ai_iot_e.html
YouTube: https://youtube.com/playlist?list=PLGv4h5a07975wBc8QpwOIV5h6bQsx5wLF

AI utilization to Improve Quality and Efficiency

In-house development of
patent examination support system using **AI**

Patent Classification

Non-JP Patent documents
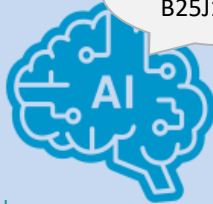
A61B34/35,
B25J13/00, ···

AI

Automatic FI/F-term
Assignment

Concept Search

Re-rank search results
based on ML model

High

Possibility
to be cited

Low

Search Result
1. JP2018-10007A
2. JP2018-10005A
3. JP2018-10001A
···
100. JP1998-10001A

AI

Information Exchange with External AI Experts
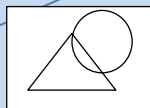
Advanced Search

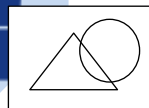Query Suggestion

AI

A61B34/35,
manipulator, ···

Examiner

?

Examiner

Image
Search

Search result

Search query

Examination Management

Examiners

AI

AI-assisted Application
Assignment

Thank you very much.