AIRI
特許庁登録調査機関
株式会社 AIRI

Registered Search Organizations

~ Collaborators in expediting the patent examination process with JPO~

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AIRI Co., Ltd., a registered search organization

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AIRI is the largest private registered search organization in Japan.

Founded in 2006 by Dr. **Teruo Kodama**, the former Director-General of a prestigious national institute under the Ministry of Economy, Trade and Industry (METI), **AIRI** was established with the aim of tackling two significant societal challenges. The first is **to expedite the patent examination process**, thereby contributing to the advancement of Japanese industry. The second is **to provide employment opportunities for senior engineers and researchers**, who often face inadequate recognition and support within Japanese society.

AIRI began with a modest group of just 13 members and has since grown to encompass over 400 members, which includes a cadre of more than 300 seasoned engineers and researchers.

Presently, **AIRI**'s scope of operations has broadened to include **patent search and advisory services for a diverse array of clients, both domestic and international** (companies, governmental organizations).

Dr. Teruo KODAMA

Chairman, Representative Director
AIRI Co., Ltd.

1999 Director-General, Electrotechnical Laboratory, (Present: Nat. Inst. Adv. Ind. Sci. Tech.)
2001 Technical advisor, Osaka Gas Co., Ltd.
2003 Senior Managing Director, KRI. Inc.
2006 established AIRI Co., Ltd.

Self-introduction

1985	Master of Science (Graduate School, University of Tokyo)
1985~ 2010	**Researcher in the chemical physics field**, specifically studying Langmuir-Blodgett films of functional molecules; worked at Electrotechnical Laboratory, METI, Centre de recherche Paul Pascal, CNRS (France) and National Institute of Advanced Industrial Science and Technology (AIST); published ca. 100 scientific papers and obtained 12 patent rights including 1 USA patent.
1993	Ph. D. (Graduate School, University of Tokyo)
2005~2007	Director of R&D Planning Investigation, Research and Development Division, METI
2010~2015	Deputy Director, Nanosystem Research Institute, AIST
2014	Visited National Nanotechnology Center of Thailand (Prof. Sirirurg Songsivilai, Dr. Chalong Laochariyakul) and Chiang Mai University (Prof. Somsorn Singkarat, Prof. Dheerawan Boonyawan)
2015~2019	Deputy Director, Regional Collaboration Promotion Department, AIST
2019~2021	Deputy Director, Tohoku Research Center, AIST
2021	**Moved to AIRI Co., Ltd.**
2023~	Senior Executive Officer, AIRI Co., Ltd.

Outline

Registered Search Organizations

- ◆Why Collaboration?
- ◆What Collaboration?
- ◆Search Business
- ◆Conclusion

Why Collaboration?

Japanese patent policy in early 2000s

2002 **Prime minister Mr. Koizumi declared that the government would vitalize Japan by utilizing intellectual properties** (IPs).

2005 Mr. Koizumi issued "**Intellectual Property Promotion Plan 2005**"

- At that time, the waiting period for patent examinations reached approximately 26 months. This was expected to worsen due to a surge in the number of examination requests, driven by two factors: the reduction in the period for requesting examinations (from 7 to 3 years), and a shift in Japanese corporates' policy towards emphasizing IPs.
- Despite such circumstances, the government set a goal to reduce the waiting period for the first action of the patent examination process (FA) to less than 30 months on average by 2008, and further aimed to reduce it to 11 months by the end of the fiscal year 2013.
- The most significant issue was the shortage of manpower in the Japan Patent Office (JPO). In 2004, the number of cases handled per examiner in Japan was 205, compared to 83 in the United States and 42 in Europe.

Reference) https://www.kantei.go.jp/jp/singi/titeki2/kettei/050610.html#2-1; D. Megro, Gijutsukon 293 (2019) 50.

Acceleration of patent examination was required

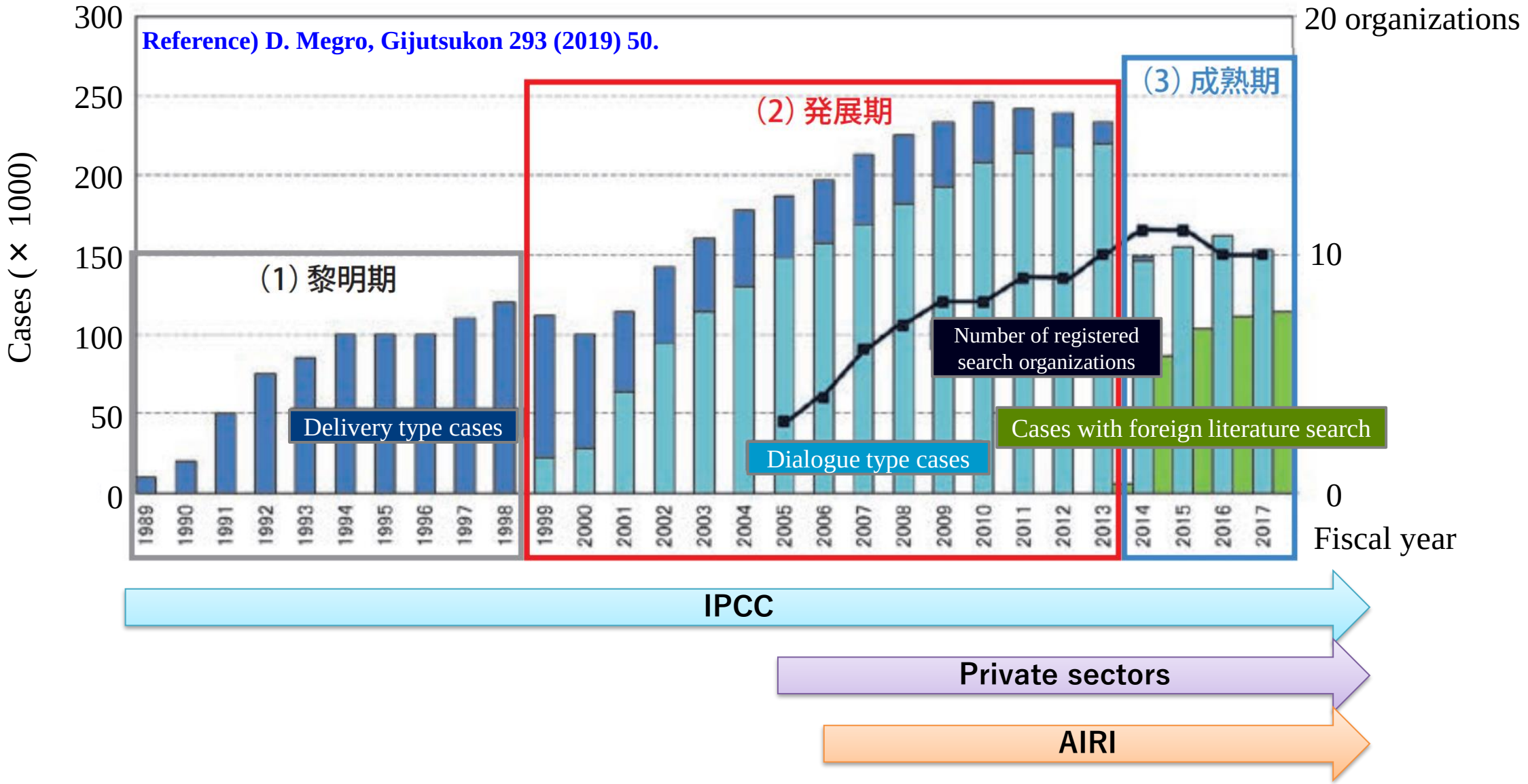
2006 Ministry of Economy, Trade and Industry installed “Headquarters for the Promotion of Acceleration and Efficiency of Patent Examinations”

- Hurdle: Japanese national finances could afford no significant increase in the number of regular patent examiners.
- Approach 1: hiring fixed-term patent examiners.
- Approach 2: enhancing support to patent examiners by expanding outsourcing in the search for prior art literature.

→ Besides the Industrial Property Cooperation Center (IPCC), a semi-public organization, established to support Japanese patent administrations in 1985, purely private companies were also permitted (and encouraged) to enter this business field, as **registered search organizations**.

Reference) https://www.jpo.go.jp/system/laws/sesaku/document/honbu_patent_jinsokuka/01.pdf

Outsourcing in the search for prior art literature



Further demands

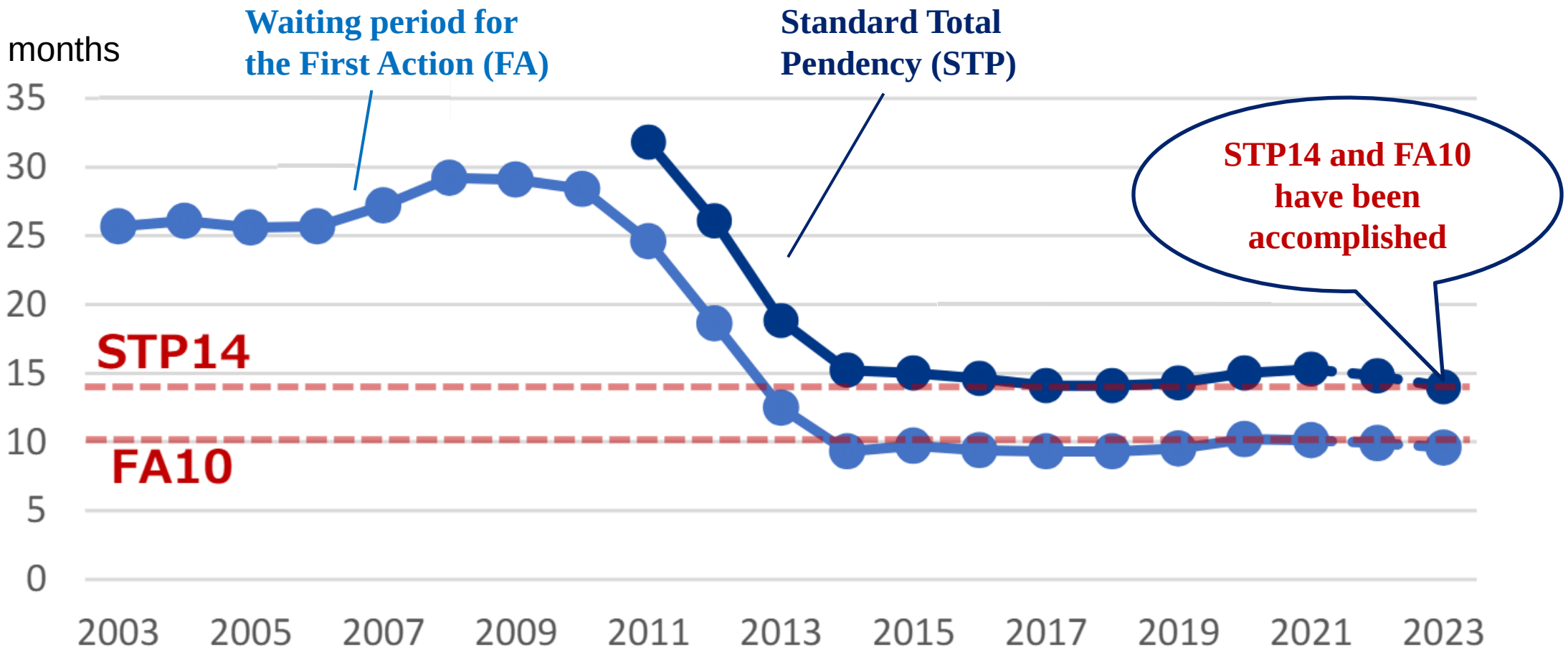
2014 Cabinet Office Intellectual Property Strategy Headquarters issued "**Intellectual property promotion plan 2014**"

- **FA10**: the waiting period for the first action of the patent examination process (FA) should be reduced to 10 months by the FY2023, on average.
- **STP14**: By the same fiscal year, the period from the request for examination of the application to the acquisition of patent rights, referred to as Standard Total Pendency (STP), should be reduced to 14 months, which is half of the averaged value in 2012. (This does not apply if the applicant makes amendments, etc.)

Reference) https://www.kantei.go.jp/jp/singi/titeki2/kettei/chizaikeikaku2014.pdf

STP14 and FA10 have been accomplished

The goals have been accomplished through the collaboration between JPO and registered search organizations.



Reference) https://www.jpo.go.jp/resources/shingikai/sangyo-kouzou/shousai/chizai_bunkakai/document/18-shiryou/03.pdf

What Collaboration?

Patent system in Japan

The objective of the patent system is to stimulate economic growth and enhance the welfare of citizens via technological innovation.

A patent is a form of intellectual property that provides its owner with legal **protection** for their **invention** for a **limited period** (20 years), in exchange for the publication of a comprehensive **public disclosure** of the invention.

- **Invention:** defined as the creation of advanced technical ideas utilizing natural laws.
- **Protection:** serves as an incentive for inventors by preventing others from commercially making, using, selling, importing, or distributing the patented invention without permission.
- **Public disclosure** and **limitation of the protection period:** may encourage the public to use the inventions through licensing contract, and potential competitors of the inventors to create improved inventions.

Reference) https://www.jpo.go.jp/news/shinchaku/event/seminer/text/document/2019_syosinsya/1_2_1.pdf

Patent examination

Since patents grant the owners strong exclusive rights, the interests of all parties (i.e., the inventors, the public, and society as a whole) should be **well balanced** in order to promote innovation and technological progress, leading to economic growth and the welfare of citizens. Therefore, **patent examination should be rigorous to ensure that patents are granted only for inventions that fully meet all the legal requirements for patentability.**

Major legal requirements for patentability

- **Industrial Applicability:**

  An invention must be capable of industrial application. Methods of surgery, treatment, or diagnosis performed on humans, methods that are solely for academic or experimental purposes, and methods that are clearly impractical to implement cannot be patented.

- **Novelty:**

  Inventions that become publicly known before the application cannot be patented, even if the invention is the applicant's own.

- **Inventive step:**

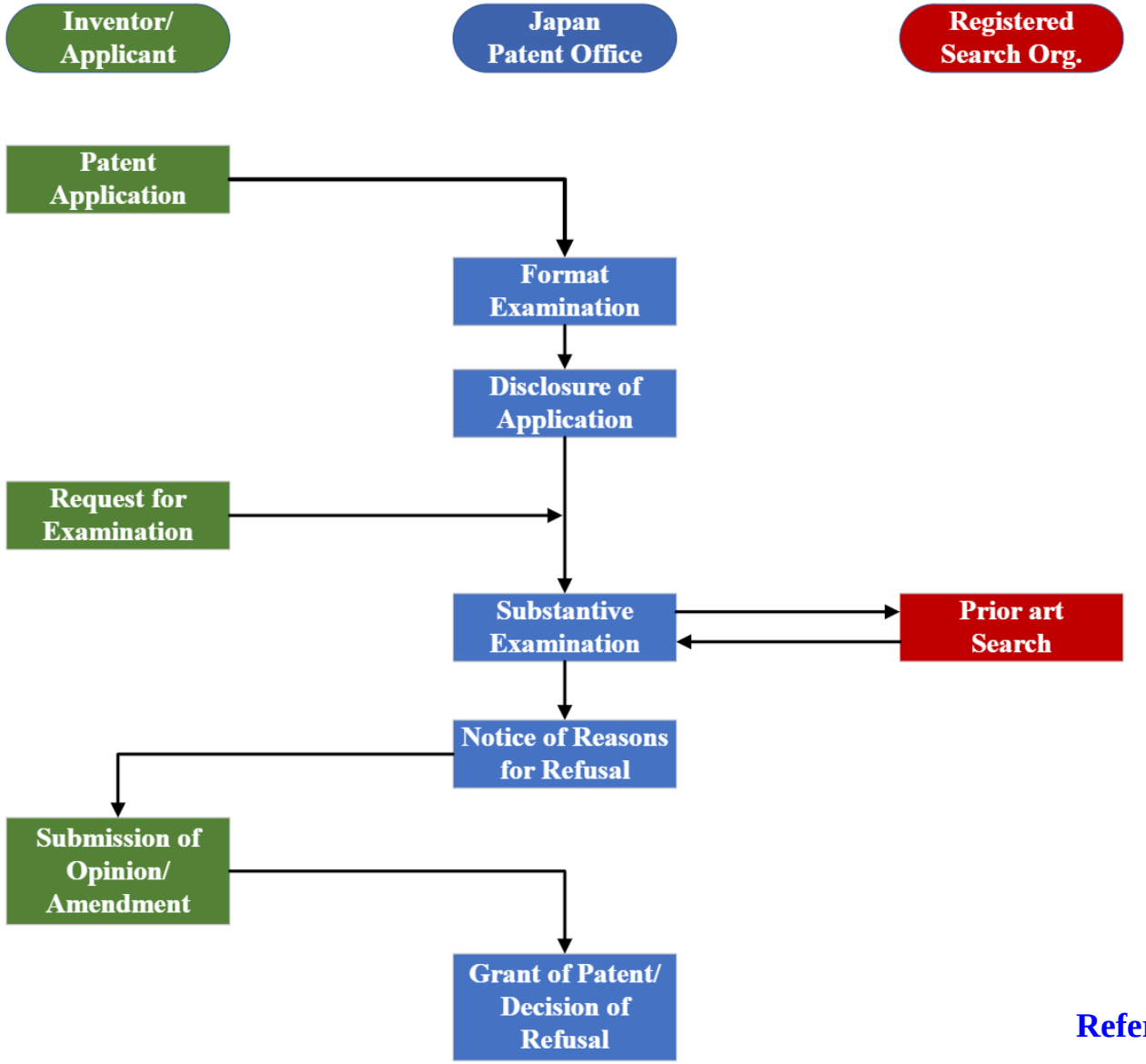
  Even if the invention is not known, if it is a minor improvement over prior art or a simple combination of known technologies that could be easily conceived by a person with ordinary knowledge in the field, it cannot be patented.

- **Subject matter:**

  The invention must fall within the "patentable subject matter" as defined by law. Abstract ideas, natural phenomena, and mathematical formulas, for example, cannot be patented.

Reference) https://www.jpaa-tokai.jp/media/detail_471.html#:~:text=特許要件とは、発明,という要件のことです。

Patent examination process



In order to expedite the substantive examination phase, an indispensable part of the patent examination process, the Japan Patent Office (JPO) outsources the task of searching for prior art literature.

Reference) https://www.jpaa.or.jp/intellectual-property/patent/

Search for prior art literature

- Although the search for prior art literature is an indispensable part of the patent examination process, it is administratively less important when compared to judging patentability based on the searched documents. The time of the patent examiners, who are government officials, should be better allocated to the latter task, which is a type of exercise of public power. In contrast, the former, which is a time-consuming task due to the vast amount of relevant literature, can be executed by private sectors, specifically registered search organizations, to reduce the examiners' duties and accelerate the patent examination process. **Reference) D. Megro, Gijutsukon 293 (2019) 50.**

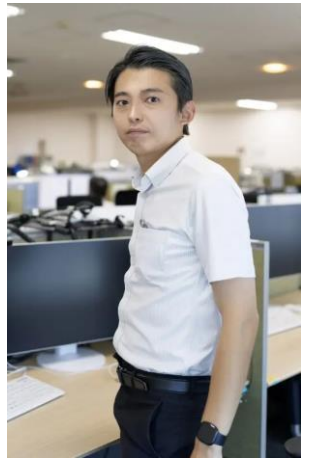
- Searchers in registered search organizations search for candidates for three types of literature:
  - **"X" document**: A document that **can deny the novelty** or **inventive step** of the patent application **without referring to other documents.**
  - **"Y" document:** A document that **can deny the inventive step** of the patent application **by referring to another Y document(s)**.
  - **"A" document:** A document that cannot deny the novelty or inventive step of the patent application but is closely related to them.

Reference) https://www.inpit.go.jp/content/100881807.pdf

Search Business

Searchers

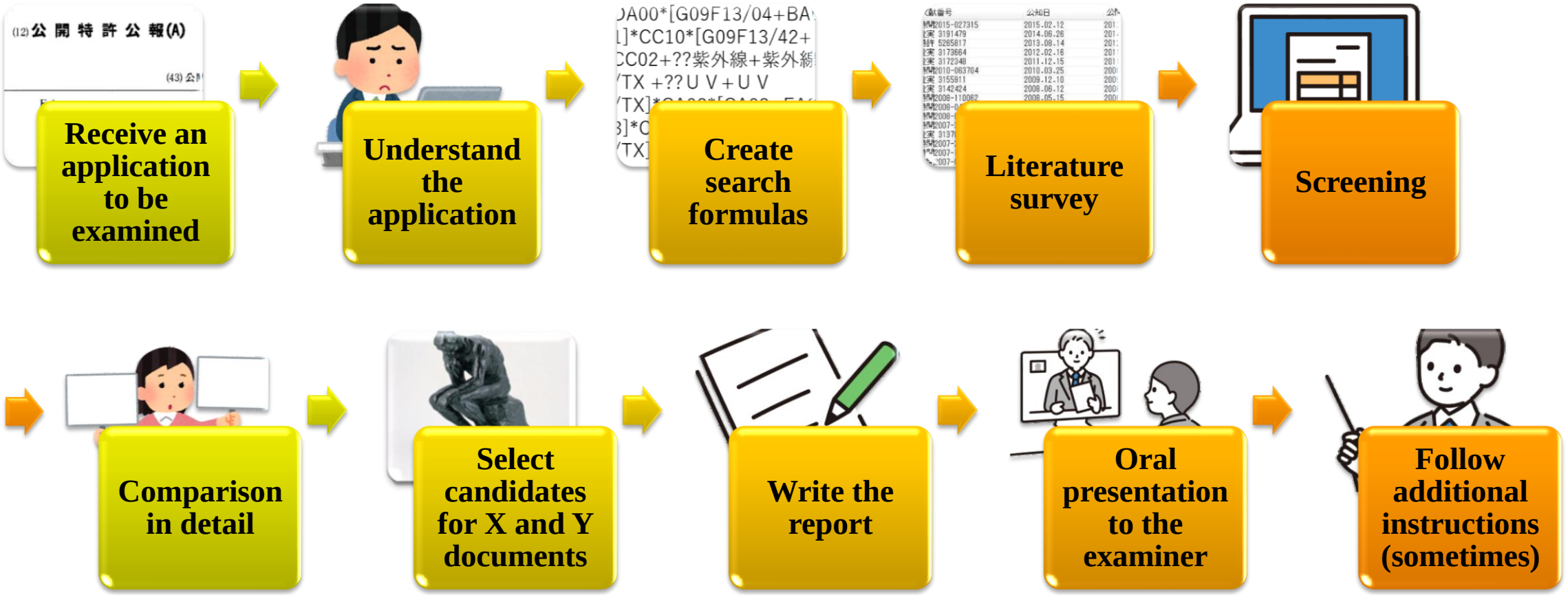



- Workers engaging in the search for prior art literature are referred to as "**searchers**."
- **Searchers have to obtain a national certificate** of searcher's qualification issued by The National Center for Industrial Property Information and Training (INPIT), by taking a special course and passing all related examinations administered by INPIT. This course is defined by "Act on Special Provisions for Procedures related to Industrial Property Right".
- Only engineers and researchers with 4 years work experience are permitted to take that course.
- AIRI's searchers are fully trained engineers and researchers with extensive experience of working at major companies, universities, or national institutes.

Reference) https://www.inpit.go.jp/jinzai/kensyu/searcher/about_searcher.html

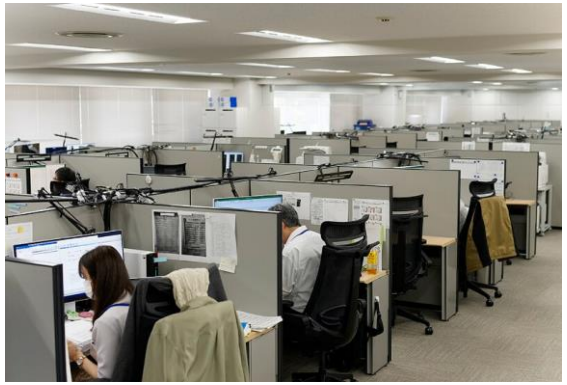
Search flow

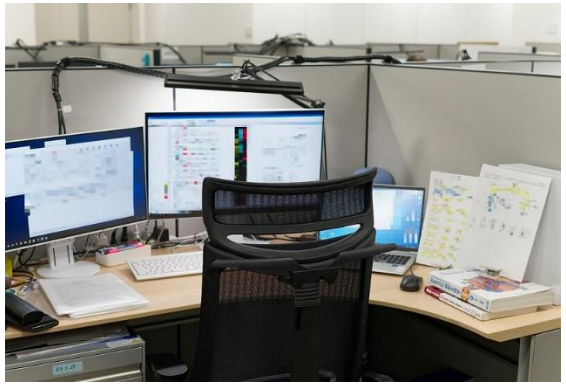


- Searchers execute 6 to 10 cycles of the above flow in a month.

Environment for search execution

- The searchers in registered search organizations utilize a **special patent search system** that is directly connected to the JPO database via a dedicated line. As a result, they can efficiently and **securely** conduct their search activities.
- Their offices are **completely separated from other spaces**, and their usage is strictly limited to JPO-related activities. While standard PCs are also provided to the searchers, their usage is similarly restricted to JPO-related tasks. When searchers conduct searches for private companies or governmental institutes other than JPO, they must use different PCs and offices specifically designated for that purpose. These restrictions are implemented by JPO **to ensure information security**.





Registration of search organizations

- JPO categorizes patent applications into 39 distinct fields, referred to as “kubun,” based on their core technologies. The INPIT certification for searchers is specific to a chosen “kubun,” which candidates select prior to commencing their training.
  Reference) https://www.inpit.go.jp/jinzai/kensyu/searcher/about_searcher.html
- Registration of search organizations by JPO is also organized by “kubun.” To be eligible for outsourced search tasks within a specific “kubun,” a search organization must employ at least ten certified searchers for that category. Additionally, they must have established a positive track record through preliminary outsourced projects.
  Reference) https://www.jpo.go.jp/system/patent/gaiyo/sesaku/toroku/document/touroku_chousa/01.pdf
- JPO recognizes registered search organizations as “professional groups of the search for prior art literature.”
  Reference) https://www.jpo.go.jp/system/patent/gaiyo/sesaku/toroku/touroku_chousa.html

Registered search organizations

Organization	First registration Date*	Registered “kubun”*
Industrial Property Cooperation Center (IPCC)	(est. in 1985)	1-39, 40 (classification)
Techno Search, Inc.	March 11, 2005	10-20, 23, 25, 29, 39
Japan Association for International Chemical Information	March 11, 2005	30
Technology Transfer Service Corp.	June 5, 2006	1, 3, 6-8, 10, 14, 15, 17, 18, 19, 23-25, 27, 29, 31-36, 39
AIRI Co., Ltd.	March 22, 2007	1-39
Pasona Group Inc.	February 14, 2008	1-3, 6-10, 14, 15, 17, 19, 20-29, 31-39
Kogasoken Co., Ltd.	March 28, 2008	20-23, 25, 26
MIRAI Intellectual Property And Technology Research Center Co., Ltd.	November 9, 2010	8, 10, 14, 15, 17, 18, 23, 31-39
Jet Patent Search Co., Ltd.	May 26, 2014	8

***https://www.jpo.go.jp/system/patent/gaiyo/sesaku/toroku/document/touroku_chousa/07.pdf**

Conclusion

Conclusion (1)

Through the collaboration between JPO and registered search organizations, the governmental objectives established in 2013, namely FA10 and STP14, were achieved in the fiscal year 2023. Moreover, it is anticipated that FA10 and STP14 will continue to be met in the future.

- Unlike patent policy formulation and patentability assessment, which are functions grounded in national authority and ought to be conducted by government officials, the search for prior art is a task whose outcomes are minimally affected by the searchers' individual traits and does not necessarily require execution by government personnel.
- Given that the search for prior art literature is a labor-intensive endeavor, outsourcing this task to the private sector, particularly to registered search organizations, can lead to more streamlined operations. This outsourcing enables patent examiners to reallocate their time to duties of greater administrative significance.

Conclusion (2)

- Some features of the private sector may have contributed to this outcome. For instance, private entities have the flexibility to hire experienced engineers and researchers, including retirees, as searchers without being constrained by national personnel regulations, which often favor hiring younger individuals through rigorous general knowledge examinations. It is important to recognize that developing fully-qualified patent examiners, who possess both in-depth technological expertise and a keen administrative acumen, is a time-intensive process.
- On another note, the caliber of registered search organizations and the searchers they employ is paramount. To ensure high standards, JPO has instituted stringent measures: searchers must obtain certification from INPIT; search organizations are expected to maintain quality of reports and oral explanations subjected by their searchers; and they have to sustain adequate staffing levels in each technological domain “kubun” they specialize in. Furthermore, these organizations are mandated to establish and maintain robust information security systems.

Thank you