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- News about Sonoda & Kobayashi -

1. Yoko Nagatomo's Appointment as NIPTA Director, & AI in IP Translation Survey

We are proud to announce that our Head of Translation, Yoko Nagatomo, has recently been appointed as a director of the Nippon Intellectual Property Translation Association (NIPTA). This significant role further strengthens our commitment to advancing the field of IP translation.

As a result, we are collaborating with NIPTA to gather insights that will benefit both our organization and the broader IP translation community. We would like to request your valuable input on a survey regarding the role of AI in IP translation.

The survey takes less than 2 minutes to complete, and all responses will remain anonymous. **We would greatly appreciate it if you could share your thoughts by completing <u>this survey</u>. The results will be compiled, analyzed, and published on our website in April 2025.**

- JPO and CNIPA News -

1. JPO updates its report on recent trends in Al-related inventions

Every year the JPO keeps track of the recent trends when it comes to Al-related inventions. Recently, it has published an updated document that reports on the most recent data.

The report mentions that the number of Al-related invention applications has grown strongly since 2014. The latest data showed that there were approximately 10,300 Al-related applications in 2022. Among these, about 3,000 patent applications were assigned the FI classification G06N (Al core technology) in 2022. Although the growth rate has slowed somewhat, it remains on an upward trend.

Apart from G06N, the most common classifications for Al-related inventions are G06T and G06V (for image processing and image recognition). Additionally, the number of main classifications grouped under "others" is increasing, indicating the expanding application of Al technology.

The report also shows that the number of G06N applications is increasing in Japan, Europe, China and Korea for the most recent year. However, the growth of the number of

applications in China stands out, making it a major filing destination among the five offices.

For the moment, only the Japanese version of the report is available. The English version is expected later.

Further information can be found <u>here</u>. (Japanese)

2. As generative AI spreads, JPO to re-examine scope of design law and patent law

According to an article by Nikkei, the JPO is re-examining the scope of Japan's design law and patent law in light of the rapid expansion of the use of generative AI. The goal is to create a mechanism to protect legitimate inventors from a large number of published proposals that have been generated using AI by businesses or individuals who otherwise have no intention to develop products.

Presently, there are no rules about creating a large amount of designs and inventions using generative AI. It is thought that generative AI, having been trained on existing products without permission, could create, for example, a huge number of new car designs or chemical formulas. Once these are made public, it could lead to loss of novelty. The concern is then that for items that have been published in this way, IP protection can no longer be obtained.

The Nikkei then reports that the JPO would revise the design law and patent law in 2026 to make it easier to protect original inventions under certain conditions. Expert panel meetings to discuss the above started this November for patent law, and will take place in early December for the design law. Additionally, the changing of the design law to prevent unauthorized reproduction and sale of branded goods in the metaverse will also be discussed.

Further information can be found <u>here</u>. (Japanese)

3. More than 114,000 5G SEP in the world: Huawei ranks first, ZTE ranks fifth

The China Academy of Information and Communications Technology (CAICT) recently released the "Global 5G Standard Essential Patents and Standard Proposals Research Report (2024)", which disclosed that, as of March 31, 2024, there were more than 114,000 declared 5G SEPs worldwide, of which nearly 103,000 patents were retrieved in the Derwent global patent search database, and more than 72,800 valid global patent families expanded by the INPADOC family.

Among the global effective patent families for 5G, the top 10 are Huawei, Qualcomm, LG, Samsung, ZTE, Ericsson, Nokia, Xiaomi, OPPO and Datang. Huawei ranked first with 12.42%, and ZTE ranked fifth with 6.97%, as follows:

Ranks	Patentee	Percentage
1	HUAWEI	12.42%
2	QUALCOMM	9.43%
3	LG	8.25%

4	SAMSUNG	8.17%
5	ZTE	6.97%
6	ERICSSON	6.86%
7	NOKIA	6.69%
8	XIAOMI	4.62%
9	OPP0	4.36%
10	DATANG	3.78%

Granted patent families account for 70% of the global patent families in force. The top 10 rankings are as follows:

Ranks	Patentee	Percentage
1	HUAWEI	15.52%
2	QUALCOMM	9.52%
3	LG	8.30%
4	SAMSUNG	8.13%
5	ZTE	7.05%
6	ERICSSON	7.01%
7	NOKIA	6.40%
8	XIAOMI	3.00%
9	OPP0	5.21%
10	DATANG	4.48%

It can be seen that Chinese companies have advantages in the SEP, both in terms of number and grant rate.

Further information can be found <u>here</u>. (Chinese)

- Latest IP News in Japan -

1. Examining the Drop in Japan's International Patent Applications

Nikkei Tech Foresight, October 9, 2024

On October 9, 2024, the Nikkei Tech Foresight reported on a recent decline in patent applications from Japan to overseas, which could indicate a potential drop in the country's inventiveness. The decrease in patent applications since 2020 has raised concerns, and expert Yuji Okuma, who has extensive experience with international patent applications, identified three main reasons for this trend.

First, Japanese companies have become more strategic in their patent filings, choosing only the most valuable inventions to patent, rather than submitting large volumes of patents. This shift aims to mitigate the risks of patent disclosure, which could offer competitors clues about a company's innovations.

The second reason for the decline is the impact of the weakening Japanese yen. As the yen has depreciated in recent years, the cost of filing patents abroad has risen. This increased cost, especially at the end of the year when most filings occur, likely resulted in

fewer patent applications, as companies were forced to scale back their filing plans due to budget constraints.

Lastly, Okuma suggests that Japan's innovative capacity may be declining. Historically, the cycle of creating, protecting, and monetizing inventions has driven business growth. However, the substantial costs involved in developing new technologies, particularly in fields like AI, semiconductors, and biotechnology, have made it harder for individual inventors or smaller companies to contribute significant innovations. This shift from individual creativity to large-scale, capital-intensive R&D has impacted the overall number of patents being generated.

To restore Japan's inventive strength, Okuma believes that companies should focus on supporting startups, especially those working in emerging fields. Startups often bring fresh ideas and technologies that could potentially lead to valuable patents. Large companies can help by providing financial support for patent filings and leveraging their intellectual property departments to assist these smaller entities. With the right guidance and resources, Japan's intellectual property ecosystem could be rejuvenated and regain its global competitive edge.

Further information can be found here. (Japanese)

2. Will Inventions Made by AI be Patentable? Appeal court concludes, ruling set for January next year

Nikkei, November 11, 2024

On November 11, the Japan Intellectual Property High Court concluded an appeal hearing regarding whether "inventions" made by Al could be patented. In an initial decision, the High Court determined that those listed as inventors on a patent must be human, disallowing any patents "invented" by Al. A final verdict is scheduled for January 30, 2025.

Background

The lawsuit comes from a February 2020 filing by a plaintiff living in the United States. In his patent application, he listed one of the inventors as "Dabus," an AI software, and further stated that it "autonomously" invented the invention. Although the Japan Patent Office requested an amendment striking out the listing of the AI "inventor," the plaintiff filed the application once again without amendment, and the application was rejected.

The subsequent appeal brings into question an interesting point of debate within Japanese patent law. While the Patent Act does not explicitly state that an invention is limited to the works of people, the Basic Act on Intellectual Property stipulates that protection extends to inventions "produced by the creative activities of humans". The plaintiff in this case is using this gray area to assert that non-humans can also be inventors.

Plaintiff's Argument

Considering these laws, the plaintiff argued that AI must be included in the definition of who – or what, for that matter – could be considered an inventor, as AI still requires some human involvement to function. In the plaintiff's argument, it was asserted that their filing still complies with the Basic Act on Intellectual Property: AI functions as an extension of human creative activity and would, therefore, qualify as an inventor under the current provisions.

Future Reforms

In May, the Tokyo District Court ruled that both the Intellectual Property Basic Act and the Patent Act assume that the inventor must be a human, and confirmed the JPO's earlier ruling, leading to the plaintiff's appeal to the High Court.

Despite this dismissal, the suit highlights an important need for reform in current patent laws. As AI technology advances and evolves, it is vital to strike a distinction between the "autonomous creative ability" of AI and that of humans. IP Law Professor Ichiro Nakayama of Hokkaido University elaborated on this point, reiterating that the global consensus is that patent rights belong to humans, and that even "autonomous" inventions by AI must have involved some input by humans, therefore making them not autonomous, but human made. As it stands, advancements in AI have led to a need for IP laws both in Japan and abroad to reflect this changing landscape.

Further information can be found here. (Japanese)

- Latest IP News in China -

1. Legal Battle Escalates: CALB Faces Lawsuit from CATL and Files Counterclaims Sina Finance, October 22, 2024

In August 2022, CALB was served with a civil complaint from the Fujian Provincial High People's Court, which was filed by CATL against CALB, AVIC Lithium (Luoyang) Co., Ltd., and Fuzhou Dynamic Automobile Sales and Service Co., Ltd. The lawsuit alleges intellectual property infringement concerning the patent for a "Power Battery Packaging Component."

CATL claims that CALB and AVIC Lithium Luoyang must immediately cease infringing on its patent rights. This includes halting the manufacture, sale, and offer for sale of any products that violate the patent. CATL demands that CALB and AVIC Luoyang jointly and severally compensate for economic damages amounting to 130 million yuan, in addition to covering reasonable expenses of 500,000 yuan incurred to stop the infringement.

On October 16, CALB received a first-instance civil judgment, which ordered the company and AVIC Lithium Luoyang to immediately stop infringing on CATL's utility model patent. This includes halting the sale or offer for sale of infringing products as of July 18, 2022. The court also ruled that CALB and AVIC Luoyang must jointly compensate CATL 58 million yuan in economic damages and 500,000 yuan in reasonable expenses related to the infringement within 15 days of the judgment's effective date. However, the court dismissed CATL's other claims.

On the same day the outcome of this lawsuit was disclosed, CALB announced that it had initiated its own legal actions against CATL. In response to alleged patent infringements by CATL and other companies, CALB filed four lawsuits with the Hubei Provincial High People's Court and the Jiangsu Provincial High People's Court, seeking a total of 1.007 billion yuan in damages. As of the disclosure date, these lawsuits have not yet been adjudicated.

2. Lenovo filed a lawsuit against ZTE for patent infringement in the High Court of United Kingdom

Tencent News, October 28, 2024

On October 21, 2024, Lenovo filed a lawsuit against ZTE for patent infringement in the High Court of the United Kingdom, case number HP-2024-000038. The plaintiffs include Lenovo Group, Lenovo (United States), Lenovo Technologies (United Kingdom) Limited, Motorola Mobility LLC, Motorola Mobility United Kingdom Limited, Lenovo Innovation Limited (Hong Kong) (collectively, "Lenovo"), and defendants include ZTE, ZTE (United Kingdom) Limited, Nubia Technology Co., Ltd., and three United Kingdom distributors (collectively, "ZTE").

More information about the case, as well as the patents involved, has not yet been published.

This time, Lenovo took the initiative to sue ZTE, presumably in response to a patent license offer or lawsuit initiated by ZTE.

ZTE, and the third-party entity that spun off its patents from ZTE, have successively filed lawsuits and disputes with mobile phone manufacturers such as Samsung, OPPO, vivo, Xiaomi, and Tinno in China, Germany, and United States.

At present, the mobile phone manufacturers that have reached a patent license with ZTE include Apple, Samsung, OPPO and Tinno, etc., and the sales of these mobile phone companies account for nearly half of the global mobile phone sales, and it is difficult to determine whether it can reach the five-year target of 45-6 billion yuan in license fees set by ZTE. Therefore, ZTE must promote the licensing program of other mobile phone manufacturers as much as possible.

As the eighth largest mobile phone manufacturer in the world, Lenovo has a global market share of about 5%, and the major markets are showing a steady growth trend, especially in North America, where Lenovo-Motorola has the third-largest market share.

In the lawsuit with InterDigital, the United Kingdom court's final license rate was closer to Lenovo's offer, which made Lenovo more inclined to let the United Kingdom court decide the global license rate it should pay, making Lenovo the overall winner. The biggest motivation of Lenovo to sue ZTE this time may also be the hope that the United Kingdom court can make a rate ruling on its case with ZTE. And suing ZTE with a patent is undoubtedly hoping to increase Lenovo's bargaining chips on this basis.

Further information can be found <u>here</u>. (Chinese)

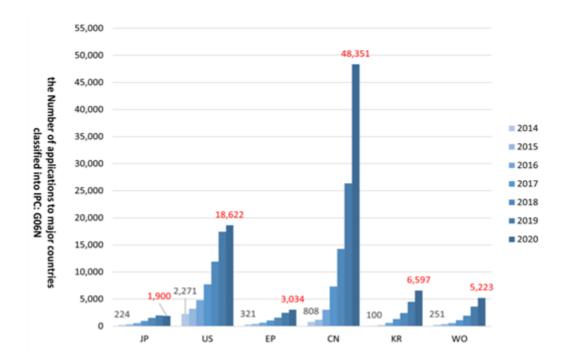
- IP Law Updates in Japan: Insights from Sonoda & Kobayashi -

1. Al-Related Patents and Examination Practices in China: A Comparative Study *Xudong Ma, Chinese Patent Attorney*

Recent advancements in Artificial Intelligence (AI) technologies have spurred significant growth in patent applications related to AI. As AI continues to shape industries worldwide, it is essential to understand how different patent offices examine AI-related inventions. This article focuses on the examination practices at the China National Intellectual Property Administration (CNIPA), in comparison with those of other leading patent offices, through a collaborative study between the Japan Patent Office (JPO) and the CNIPA.

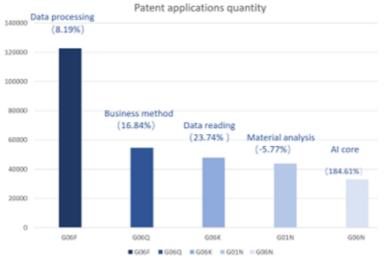
Al Core Technologies and Patent Trends

Al technologies primarily fall under the International Patent Classification (IPC) code G06N, which covers core Al technologies such as machine learning methods, including neural networks, deep learning, support vector machines, and reinforcement learning. Recent data shows a sharp increase in patent applications classified under G06N, highlighting the growing importance of Al



This graph represents applications at the five major intellectual property offices, and the World Intellectual Property Organization (WIPO), classified under G06N, illustrates this trend. Notably, China has seen a particularly high volume of Al-related patent filings. This surge is driven not only by private companies but also by academic institutions. The top applicants in the G06N category in China include Baidu (2% of the total applications), followed by Tencent and Ping An.

Key AI Subfields and Growth Trends



():average growth rate over 5 years from 2016~2020

In our study, we identified five primary subfields of Al-related inventions. The average growth rate of patent filings from 2016 to 2020 reveals some interesting patterns. The top three subfields with the highest number of applications in China are:

- 1. G06F (data processing)
- 2. G06Q (business methods)
- 3. G06K (data reading)

Among these, the growth rates from 2016 to 2020 are striking:

- G06K (data reading): 2.2 times
- G06Q (business methods): 1.8 times
- G06F (data processing): 1.4 times

These categories reflect China's rapid development in AI, particularly in the fields of data processing and business methods. Leading companies like Tencent, Baidu, and Huawei are at the forefront of these innovations. The AI core technology, classified under G06N, also demonstrates a high growth rate of 23%, followed by data reading, data processing, business methods, and material analysis.

Interestingly, the number of patent filings in **G01N** (measurement) has decreased by 30% compared to five years ago, primarily due to a slowdown in China's manufacturing sector.

China's AI Development and Government Support

China's rapid advancements in AI are not just driven by private industry but are also supported by government initiatives, including subsidies and research encouragement. This government support has fostered a thriving AI innovation ecosystem, although some sectors, like manufacturing, have seen slower growth.

Examination Practices at the CNIPA

Technical Features and Patent Eligibility

For an Al-related invention to be patentable in China, it must possess "technical features"— elements that contribute to the technical nature of the invention. If an invention lacks a clear technical problem, technical means, or a technical effect, it will not meet patent eligibility criteria.

At the CNIPA, AI inventions can be claimed as either process or product inventions. Claims may describe apparatuses for executing a process or focus on a computer-readable medium. The CNIPA has recently expanded its scope to recognize "computer program products" as patentable subject matter. However, claims that merely describe data—such as "training data" without technical application—are not patentable. To strengthen such claims, it is crucial to emphasize how the data is applied technically, such as improving AI model performance or enhancing a specific technical process.

Inventive Step Requirements

The CNIPA evaluates the inventive step of Al-related inventions by assessing prior art relevance, similarity, and the motivation to combine different technical features. In particular, inventions that involve:

- Novel training data or Al technologies not found in prior art
- Use of new AI techniques to solve a technical problem

are more likely to meet the inventive step requirement. Conversely, inventions that involve:

- Simple modifications of known methods (e.g., estimating output data from input data)
- · Routine additions of training data to machine learning systems

may be considered obvious and fail to meet the inventive step criteria. Additionally, the CNIPA has clarified that user experience is also a factor in determining inventive step.

Enablement and Sufficiency of Disclosure

The CNIPA requires clear and sufficient disclosure in patent applications to demonstrate how the invention works. The description should provide enough detail to allow a skilled person in the field to replicate the invention.

To satisfy enablement requirements, the description must include:

- A correlation between different types of training data, where common technical knowledge at the time of filing can imply the relationship
- Explanations or statistics supporting the correlation between training data types
- Performance evaluations confirming the relationship between training data and model performance

It is important to note that Al-related inventions lacking experimental evidence at the time of filing may not meet the sufficiency of disclosure requirements. Post-filing experimental results will not compensate for insufficient disclosure.

Practical Tips for Drafting AI Patents in China

To meet the CNIPA's examination requirements, patent applicants should:

- Highlight Technical Application of Data: Clearly demonstrate how data improves Al model performance or optimizes a technical process.
- 2. **Disclose Invention Details**: Provide a comprehensive description of the technical problem, the solution, and the AI technologies used.
- 3. **Include Experimental Evidence**: Support claims with tests, model accuracy verification, and performance evaluations.
- 4. Emphasize Technical Features: Ensure that the invention involves technical means, and avoids vague or non-technical terms like "module," "library," or "model" without context.

By adhering to these guidelines, applicants can increase the likelihood of successful patent prosecution in China.

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SONODA & KOBAYASHI is a law firm offering dependable legal services for intellectual property. Our multinational team of about 120 experts in technology, law, languages and international communication has served companies worldwide and gained a reputation for thoroughness and reliability.

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