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3.8 Million USD in Copyright Infringement Damages for “Fast Movies”

The Tokyo District Court has handed down a judgment against three individuals (defendants), who had illegally uploaded edited movies onto the Internet, and ordered the defendants to pay 3.8 million USD in compensation as demanded by 13 plaintiffs including major movie companies. A “fast movie” is an unauthorized edited version of a movie, typically 10 minutes in length. It is a cut-and-paste version of the original movie that reveals its storyline with narration and spoilers. This court case has already found the defendants guilty of violating Copyright Law. In addition, compensation was claimed for damages as the fast movies illegally revealed the original movie’s storyline, causing a decrease in the number of viewers of the original movies through proper channels. This is the first time that a judicial decision on the amount of damages caused by fast movies has been made.

The number of views of “fast movies” on the Internet reached 10 million and the value for a single view is assumed to be 1.5 USD as calculated by the Court. Therefore, the estimated amount of damages reaches more than 15 million USD. The Court ordered 3.8 million USD in total compensation, which is significantly more than the advertising income (54,000 USD) earned by the defendants.

In Japan, the notion of time effectiveness is here to stay,

especially among the younger generation. Viewers would prefer to watch a movie “efficiently” and to grasp the outline first, instead of spending two hours watching the original. Such a trend is leading to an increasing number of viewers of fast movies. Uploading fast movies has rapidly become popular since the spring of 2020, when the stay-at-home demand was growing due to COVID-19. Similar concerns have also been raised for books, as 'illustrated/synopsis introduction' videos have also been posted online. Illegally-edited videos like “fast movies” seem to be less common in the U.S. and Europe, where the idea of time efficiency has not yet taken root among young people in society.

Supreme Court Decision: Does Patent Enforcement Cast Off the Stigma of Abuse of Right?

On March 29, 2022, the Supreme Court of Japan made a final and binding decision in a patent infringement lawsuit* over recycled toner cartridges in which an electronic component had been replaced. The Supreme Court dismissed an appeal filed by DS Japan (Defendant), a manufacturer of recycled toner, against Ricoh (Plaintiff), the patentee.

The first instance of this case at the Tokyo District Court did not allow Ricoh to enforce their patents against recycled toner cartridges whose electronic components had been replaced with components made by DS Japan because the enforcement was deemed to be an abuse of

the right and a violation of the Anti-Monopoly Act. The decision attracted a great deal of attention, as there are so few court decisions in Japan restricting patent enforcement for the sake of defending the Anti-Monopoly Act.

To give an outline of the case, when the original toner cartridge manufactured by Ricoh is loaded into a Ricoh printer, information such as the amount of toner remaining or the time for replacement is displayed. On the other hand, when a toner cartridge had been replaced with a recycled toner cartridge in which toner is refilled, the information display would be different from the original. The Ricoh cartridges are equipped with an electronic component that prevents the cartridge memory from being rewritten. DS Japan had manufactured and sold recycled toner cartridges by refilling Ricoh's used cartridges with toner after replacing its electronic component with another electronic component made by DS Japan in order to make the display work properly. Since Ricoh had obtained patents for the electronic component that DS Japan used for replacement, Ricoh had claimed injunction of sales and requested disposal of the products as well as the electronic components, alleging that such acts of DS Japan infringe their patents under Japanese Patent Law, Article 100, Paragraphs 1 and 2. Ricoh also claimed damages for patent infringement.

In the second instance, the Intellectual Property High Court (IPHC) revoked the Tokyo District Court decision which dismissed Ricoh's claim by rejecting the abuse of right, and the IPHC accepted part of Ricoh's claims. The IPHC stated that considering the price gap with the original products, it could be assumed that a certain number of consumers might select the recycled products even without an accurate display of the remaining amount. The Court also pointed out that it is possible to produce recycled cartridges which display information regarding the remaining amount without infringing the patent. In addition, the Court found that Ricoh's action to limit the function of rewriting to the electronic component to be rational and not entirely aimed at removing recycled products from the market. Given the above circumstances, the Court concluded that patent enforcement based on the right to demand an injunction and the right to seek damages does not constitute blockage of trade which is prohibited under the Anti-Monopoly Act. Thus, patent enforcement neither blocks industrial progress nor strays from the purpose of the patent system, and also does not correspond to an abuse of right.

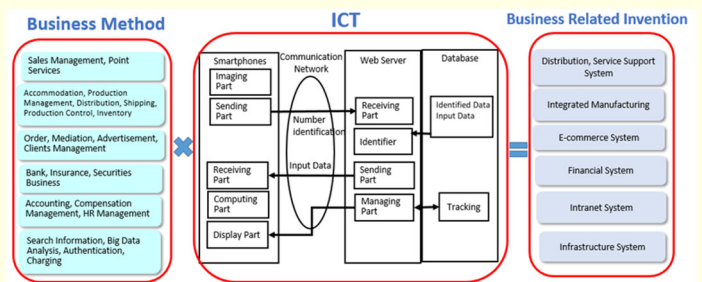
*Case Number: 2022(Ne) No. 10057

Recent Trends in Business-Related Inventions

The Japanese Patent Office (JPO) published survey results on recent trends in business-related inventions in

November 2022. In this report, the term "business-related invention" is defined as an invention in which a business method is realized by using Information and Communication Technology (ICT), and a patent application which is categorized into G06Q as International Patent Classification (IPC) or File Index (FI). Even if someone creates an epoch-making idea, the idea itself, such as sales management or production management, is not subject to patent protection since a patent is to protect technology.

However, if such an idea is realized by using ICT, it may be subject to patent protection as a "business-related invention". Under Japanese patent examination practice, such an idea is treated as being included among computer software-related inventions.



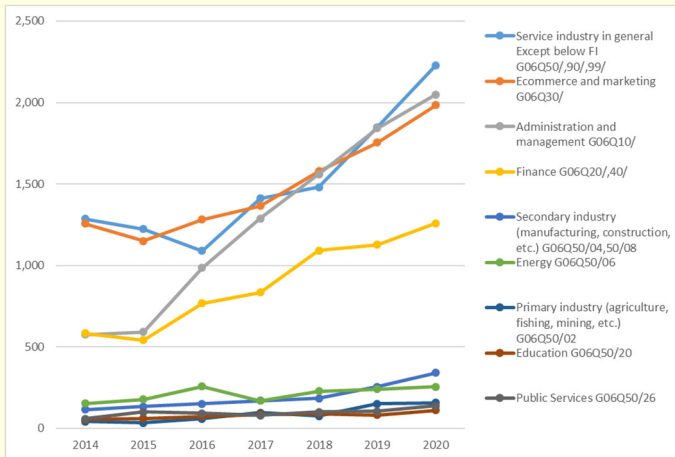
According to the survey results, the number of patent applications for business-related inventions in Japan began to increase since around 2012, with 11,747 applications filed in 2020. The increase in the number of applications can be attributed to emerging fields where new ICT-based services are being created due to the spread of smartphones and SNS, as well as the advancement of AI and IoT technologies.

Breaking down the number of applications for business-related inventions by technical field, the following are the top three fields with around 2,000 applications filed.

- (1) Service industry in general: The expansion of smartphone and online services in various industries has sparked an increase in patent filing. In particular, the expansion of ride hailing services, private accommodation and real estate technology has boosted the increase.
- (2) E-commerce and marketing: The increase is brought about by popularity of e-commerce, such as flea market apps and online auctions along with the marketing and advertising business booming.
- (3) Administration and management: There are many inventions using AI to optimize internal operations and inventory management.

Following those top three fields, finance (including fintech) is one where the number of applications has increased in recent years. This is due to the recent growth in financial services that users can easily access through their own devices, such as mobile phone payments and apps for household accounting books.

Although the number of applications related to primary and secondary industries itself is fewer, the fact that the number has tripled between 2014 and 2020 proves that ICT is being used to solve problems in a wide range of fields.



Reference: Recent Trends in Business-Related Inventions

https://www.jpo.go.jp/system/patent/gaiyo/sesaku/biz_pat.html#anchor1-1 (in Japanese)

https://www.jpo.go.jp/e/system/patent/gaiyo/recent_trends_biz_inv.html (in English)

Deep Learning Accounts for Approximately Half of AI-Related Inventions Filed at the JPO

The Japanese Patent Office (JPO) published a report on filing trends of AI-related inventions in October 2022, containing search results of patent filings conducted between 2014 and 2020. Since 2014, the number of cases filed has spiked amidst a third boom of patent filings of AI-related inventions. That number has increased year by year and, in the last six years, increased from 1,084 cases in 2014 to 5,745 cases in 2020. The report also shows that AI-related inventions are applied mainly to the fields of image processing, information searches/recommendations, business-related technologies, medical diagnosis, etc.

The search results show that the core technology of AI-related inventions is machine learning, indicating a sudden increase in deep learning, in particular. Deep learning is a subset of machine learning, which automatically enables the learning and extraction of features from large amounts of data as well as inducing laws and co-relationship of the data. Among AI-related inventions, half of the filing documents (abstract, claims, and specifications) mention the term “deep learning”. In 2020, patent applications mentioning “deep learning” accounted for 44% of AI-related inventions.

Fig. 1: Filing Trends in AI-Related Inventions and Deep Learning

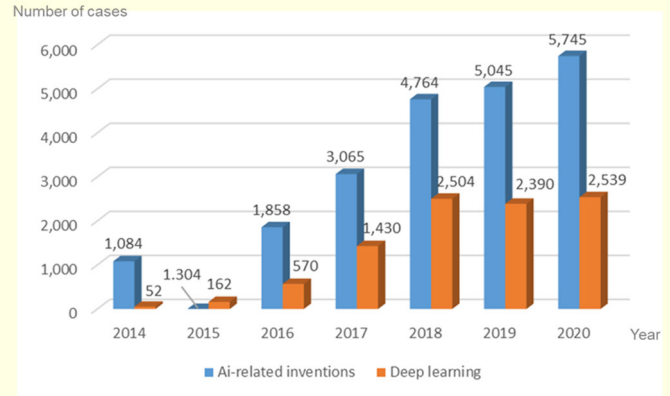
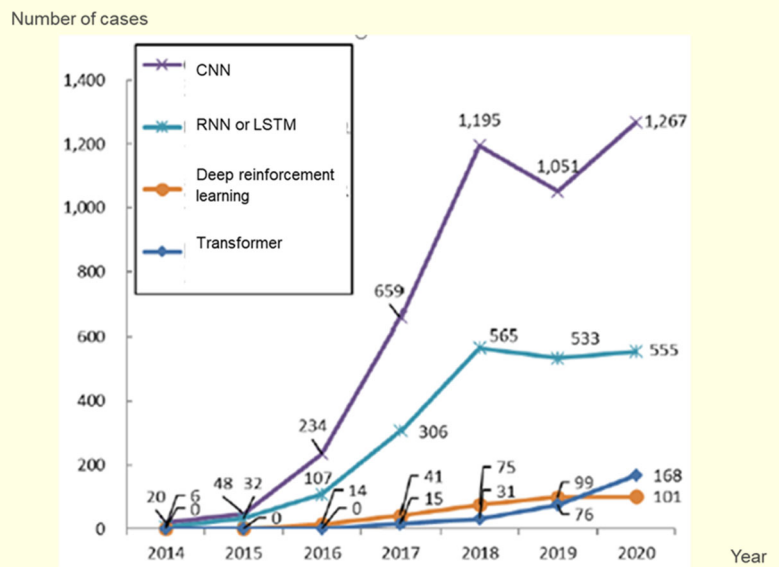


Fig. 2 below analyzes the filing trends in AI-related inventions featuring deep learning technology. As can be seen, applications relating to convolutional neural networks (CNNs) have drastically increased since 2016. CNNs are known as being highly compatible with recognition processing of images and videos.

Fig. 2: Filing Trends in AI-Related Inventions Using Deep Learning Technology



As supplemental information, Table 1 explains the categorization of deep learning technologies and their uses.

Table 1: Deep Learning Technologies Categorized by IPCs and Their Uses

Technology	IPC	For use in
Convolutional Neural Network (CNN)	G06T H04N	image processing video processing
Recurrent Neural Network (RNN) or Long Short Term Memory (LSTM)	G01L G06F/40	audio processing natural language processing
Deep Reinforcement Learning	G05B B25J	control, adjustment in general manipulators
Transformer	G06F40 G06F15	language processing information searches and recommendations

Cases relating to transformer technology have been filed since 2017, and the number of filings surpassed that of deep reinforcement learning in 2020. Transformer technology is known as being technology highly compatible with natural language processing.

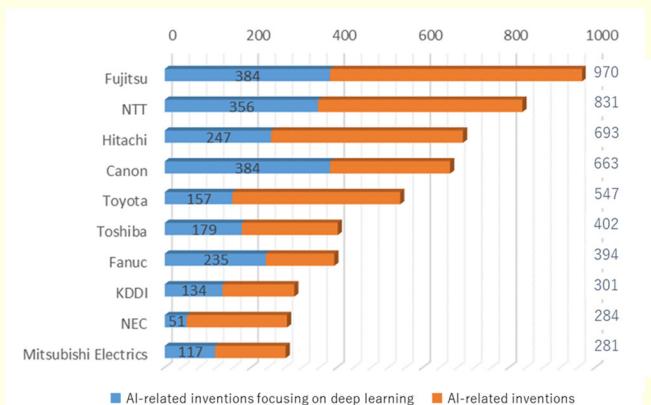
For more detailed information, please visit the following JPO websites:

https://www.jpo.go.jp/system/patent/gaiyo/sesaku/ai/ai_shutsugan_chosa.html (in Japanese)

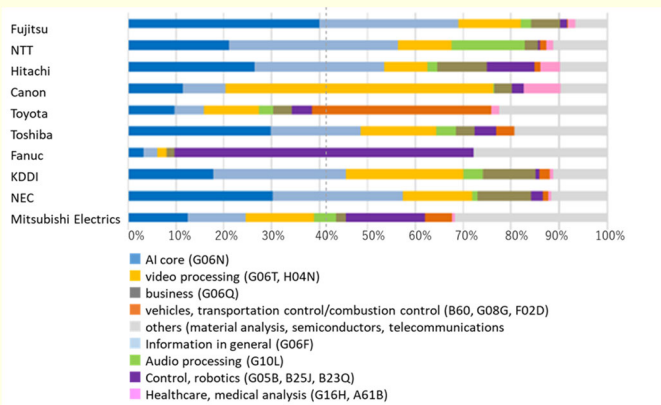
https://www.jpo.go.jp/e/system/patent/gaiyo/ai/ai_shutsugan_chosa.html (in English)

The next graph shows the top 10 applicants who filed the most patent applications for AI-related inventions at the JPO. Fujitsu was at the top with 970 cases, followed by NTT with 831, Hitachi with 693, and Canon with 663 cases. 58% of the cases filed by Canon relate to deep learning.

Graph 1: Top 10 Applicants Filing AI-Related Inventions at the JPO Between January 2014 and June 2022 (Based on the Number of Patent Publications)



Graph 2: Ratio of Core Technologies in AI-Related Inventions Among Top 10 Applicants



Japan has fewer patent applications for AI-related inventions than in the U.S. and China. That said, Japan is expected to develop innovative technologies utilizing AI. Under Japanese patent practice, AI-related inventions are easy to enforce and the grant rate is higher when compared with other countries. It would be advisable to applicants to consider filing patent applications in Japan, in addition to the U.S. and China.