

# Improving the IP System





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#### KIPO expanded the utilization of AI

In order to meet user demand without affecting quality and accuracy, KIPO expanded the utilization of AI, a core technology of digital transformation, in its examination and trial services.

# Expansion of AI in Examination and Trial Services

## Information Management Division

The number of intellectual property (IP) applications continues to rise as society becomes increasingly aware of the importance of IP rights (patent rights, trademark rights, design rights, etc.). In order to meet user demands without affecting quality and accuracy, KIPO expanded the utilization of artificial intelligence (AI), a core technology of digital transformation, in its examination and trial services.

As a part of the ROK government's proactive administration initiative, KIPO jointly developed with Kakao Corporation an AI-based Patent Search System for patent examinations and trials. By 2021, development was completed using approximately 5 million domestic patent documents as training data and beta tested with a sample of examiners. The AI-based system was officially launched for utilization in March 2022.

The assistance of AI technology will help shorten the time spent searching through prior art documents and enhance the

quality of examination services. Rather than requiring examiners to individually search for keywords, the AI-based Patent Search System automatically identifies words and sentences from documents to search similar prior art and make recommendations. Accuracy of search results is also enhanced by using information specific to the patent document, such as key sentences and Cooperative Patent Classification (CPC) codes. After its launch in 2022, the search system was further improved through examiner feedback and user statistics analysis to ensure the best performance.

Previously, KIPO has applied AI in other areas including an AI-based search system for trademark and design examination in 2021 and translation of overseas patent documents and recognition of patent drawing in 2020. Such AI-based services help facilitate the application of AI technology across all IP fields to enhance efficiency of the IP system to provide high-quality IP and ultimately spur transition into a digital government.



# Adoption of Examination Guidelines on Virtual Goods

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## **Trademark Examination Policy Division**

Recent trends show an exponential increase in the number of trademark applications related to virtual goods especially with the growing transaction of virtual goods in the “metaverse” and other extended reality. There were only 6 applications related to virtual goods in 2020 and 17 applications in 2021 which grew to 869 applications by the end of 2022. Therefore, KIPO newly established the “Examination Guidelines for Virtual Goods” to help provide clarity to applicants and improve examination consistency.

Under the new guidelines, more options are allowed for product names of virtual goods. For example, applicants were previously required to describe virtual clothing as “downloadable image files (virtual clothing)” or “computer program recorded with virtual clothing (virtual products).” Now, acceptable descriptions are “virtual + [goods name],” such as “virtual clothing” and “virtual shoes” which allow for a wider range of descriptions of goods.

Additionally, virtual goods have been separated into a distinct class rather than

being considered “similar” to image files and computer programs. Sub-categories of virtual goods have been created to reflect the characteristics of their physical product counterparts. These measures will help prevent trademark disputes in virtual spaces and provide a more variety of trademark selection.

Lastly, distinction will be recognized between virtual products and physical products in examination. While virtual products may have similarity to their corresponding physical products as they share the same names and key features in appearance, it has been deemed that there is little possibility of consumer confusion due to the different purpose of use and channel of sale.

Overall, the newly established guidelines will help provide a wider range of trademark selection and prevent trademark disputes in virtual spaces. The establishment of such examination standards reflects the practices of actual transactions and prepares for trademark applications of emerging products in the age of accelerating digital transformation.



# Accelerated Examination for Semiconductor Patent Applications

## Patent Legal Administration Division

In a global market with the intensifying technological competition, accelerated examination is a decisive mechanism to achieve international competitiveness. To secure this competitiveness in the semiconductor field, patent applications for semiconductors, for which research and development (R&D) and production have been carried out domestically, have been included in the list of cases eligible for accelerated examination for a one-year duration starting from November 1, 2022.

Specifically, the accelerated procedure is available to applications which are directly related to semiconductor technology and have assigned their main classification with the Cooperative Patent Classification (CPC) code for semiconductor technology. The application must also meet at least one of the following conditions: 1) be an application filed by an enterprise that is domestically producing or preparing to produce semiconductor-related products, devices, etc., 2) be an application regarding the

outcome of a national R&D project of semiconductor technology, or 3) be an application filed by a university or graduate school specializing in semiconductors under the *Act on Special Measures for Reinforcement and Protection of National High-tech Strategic Industry Competitiveness*. When enterprises, R&D institutions, academic institutions, etc. rely on the accelerated examinations under the new action, a semiconductor application can be processed in about 2.5 months on average which is 10 months earlier than general examination's pendency of 12.7 months (as of 2021).

The action was initiated through amendment of the Enforcement Decrees of both the *Patent Act* and the *Utility Model Act* to substantially make available accelerated examinations for advanced technologies that are critical to economic development and national competitiveness. According to the amendment, the Commissioner of KIPO can designate and announce additional technology fields to be eligible for accelerated examination and the petition period as well.

In accordance with the ROK's cross-governmental efforts to strengthen support for the semiconductor field, KIPO's accelerated examination for semiconductor patent applications will help speed up the revitalization of the economy by enabling rapid acquisition of patent rights.



# New Division for Accelerated Examination of Service Marks

## Trademark Examination Policy Division

The continual increase in the number of trademark applications has led to extended examination pendency period and, in turn, an increase in requests to receive accelerated examination for faster results. To better meet user needs, KIPO decided in December 2022 to newly organize a “Prioritized Service Mark Examination Division” dedicated to accelerated examinations related to wholesale/retail and restaurant services, which have the highest number of applications in the services area.

Out of all trademark filings, the percentage of accelerated examination applications has increased from 6.4% in 2020 to 8.5% in 2021 and 11.7% in 2022. Among them, the rate of increase of applications related to the area of services, which are considered Class 35 to 45 of the “International (NICE) Classification of Goods and Services,” have grown from 43% in 2020 to 44.9% in 2021 and 48.9% in 2022. In particular, accelerated examination applications have risen for

the wholesale/retail services (Class 35) and restaurant services (Class 43) with an average annual increase rate of 56.6% in the past five years.

A high percentage of small business owners (including individual business owners) applied for accelerated examinations of Wholesale/retail and restaurant services. In 2022 alone, small business owners accounted for 78.9% of accelerated examination cases filed for Class 35 and 43. Therefore, establishing a new division dedicated to these specific fields will help address the need for quick examination results.

The Prioritized Service Mark Examination Division will officially begin carrying out their duties in January 2023. Once operation begins, this effort dedicated to accelerated examinations for the wholesale/retail and restaurant industries will help reduce the delayed pendency for regular examination of service marks and better support applicants.

No. of Accelerated Examination Applications for Wholesale/Retail and Restaurant Services

Unit: Cases

Category	2018	2019	2020	2021	2022	Average Annual Rate of Increase
Wholesale/Retail Services (Class 35)	817	1,243	2,383	4,774	6,070	68.3%
Restaurant Services (Class 43)	614	693	1,293	2,129	2,942	42.1%
Wholesale/Retail and Restaurant Services in Total	1,431	1,936	3,676	6,903	9,012	56.6%

# Improvements for Customer-centered IP Application Services

## Application Division

### Booklet of Standard IP Application Forms

As one of KIPO's proactive administration activities, a booklet containing best example cases of standard documents related to filing patents, trademarks, designs, etc. was published in December 2022 to mitigate inconveniences suffered by applicants.

IP applications require many different types of documents with technical terminology which make preparation of such documents difficult without help from specialists, such as patent attorneys. For the past three years, about 19% of total applications each year have been submitted directly by applicants without third party assistance. In other

words, one out of five applicants handle the challenging application process by themselves.

The booklet includes detailed information about 35 forms and standardized examples to fill out the application documents. Therefore, the publication becomes a useful resource for SMEs and individual applicants lacking the relevant experience to accurately prepare documents and successfully register their IP.

As such, the provision of detailed and accurate instructions on document filing is a foundational task to help acquire IP rights. The booklet has been distributed to 25 regional IP centers as well as made available to the public on KIPO's official website ([www.kipo.go.kr](http://www.kipo.go.kr)).



## Information System Division

### Development of E-application Software

“KIPO-Editor,” a new electronic application software, began operation in September 28, 2022 which helps file 77 types of application forms, including patent specifications. It is an improved e-application software system that reduces time and effort in preparing documents and allows applicants to obtain a quicker application date.

The newly developed software features significantly enhanced functions compared to the previous software. In particular, users were dissatisfied with the limited number of characters types and the inconvenient editing functions. Previously, it was only possible to input 2,350 Korean characters and was difficult to express

complicated words and symbols. Now, KIPO-Editor permits all 11,172 characters in the standard character code system (Unicode) to draft more comprehensive and elaborate descriptions of technologies in the patent specifications.

The new software includes additional functions which locate errors made by the user and indicate mistakes for more convenient editing. Also, a tracking function easily tracks changes made to the document. Furthermore, to provide more stable e-application service and convenience of applicants, KIPO has made it possible for applicants to submit their applications by email during a possible system malfunction instead of having to visit the office in person.

The screenshot displays the '특허출원서' (Patent Application Form) within the KIPO-Editor software. The form is organized into several sections with orange headers:

- 특허출원서** (Patent Application Form): The main title of the form.
- 특허출원인** (Applicant): Fields for the applicant's name and address.
- 특허출원인 정보** (Applicant Information): Fields for the applicant's name, address, and phone number.
- 발명의 국문명칭** (Invention Title in Korean): Field for the title of the invention in Korean.
- 발명의 영문명칭** (Invention Title in English): Field for the title of the invention in English.
- 발명자** (Inventor): Fields for the inventor's name and address.
- 발명자 정보** (Inventor Information): Fields for the inventor's name, address, and phone number.
- 기술사상** (Technical Concept): Fields for the technical concept, including a brief description, a detailed description, and a summary of the invention.
- 수술부** (Claims): A table for the claims, with columns for the claim number, the claim text, and a checkbox for '독립항목' (Independent Item).

The interface includes a sidebar on the left with navigation options and a top menu bar with various functions. The bottom of the screen shows a status bar with the text 'KIPO-Editor' and '2022-09-28'.

<서식일련>