

Improving the IP System



AI-based User Services

AI technology is utilized to enhance IP administration and improve user convenience.

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Enhancement of Patent Examination Capabilities in the Semiconductor Field

Creative Administration Division

Amidst the global competition for technological supremacy, the Korean Intellectual Property Office (KIPO) has implemented a new approach to secure this competitive edge. Focusing on the field of semiconductors, KIPO began employing retired semiconductor experts and professionals from the private sector to conduct patent examinations. Doing so leverages their accumulated knowledge and field experience to conduct proficient patent examinations and prevents core technologies from being leaked due to overseas employment opportunities. Furthermore, a Semiconductor Examination Bureau was newly organized within KIPO to help enhance examination capabilities and create synergy with the addition of new personnel.

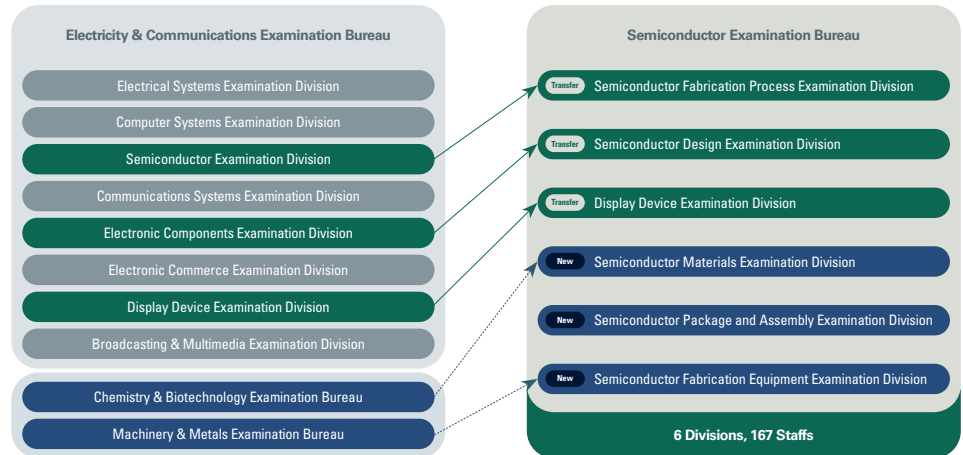
In total, KIPO recruited 69 semiconductor experts from the private sector as patent examiners to perform fast and accurate examinations. Final candidates were chosen with consideration to the current volume of patent applications, the characteristics of semiconductor technologies, and industry trends across various fields (i.e. semiconductor design, manufacturing processes, post-

processing, substrate transport and processing equipment, display materials, OLED processes and devices, and specialized display technologies).

The first phase of recruitment began in March 2023 and resulted in the hire of 30 experts. After a successful first phase of recruitment, the second phase resulted in 39 additional experts being chosen out of 191 applicants. This unique approach of patent examiner recruitment has been highly praised as a novel attempt by the government to protect advanced technologies and utilize the expertise of private-sector veteran professional in public service.

Furthermore, KIPO newly established the Semiconductor Examination Bureau in April 2023 to help improve both efficiency and quality of semiconductor technology examination. The Bureau is comprised of six divisions with 167 members and addresses the previous issue of semiconductor examiners dispersed across multiple divisions. Three divisions were transferred from the Electricity & Communications Examination Bureau, three new divisions were created, and

Establishment of the Semiconductor Examination Bureau



several examiners were transferred from other chemical (materials) and mechanical (equipment) examination bureaus.

This setup allows for balanced distribution of existing and new examiners across divisions and helps facilitates communication for better examination processes (i.e. three-person consultative examinations, etc.).

Through efforts such as optimizing the

rich experience of retired professionals in patent examination and newly establishing a specialized Semiconductor Examination Bureau, KIPO expects to enable more timely examinations across all semiconductor sectors, including manufacturing and assembly processes, materials, and equipments. This will ultimately lead to faster and accurate examinations and allow companies to secure their developed technologies and gain a competitive edge in the market.

Amendments to Improve Design Application Convenience

Design Examination Policy Division

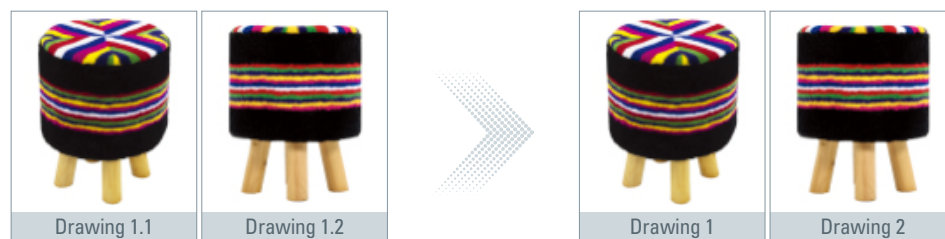
To obtain registration of designs, an application must be submitted to KIPO in accordance with the enforcement rules of the Design Protection Act and undergo the examination process. However, applicants have voiced concerns regarding the complexity and difficulty of representing designs in the application documents and the description methods of drawings.

Therefore, to improve applicant convenience, KIPO implemented amendments to the Design Protection Act

in December 2023. These amendments revise the requirements for the design application, especially by simplifying the drawing identification system, revising permissible file formats, and unifying the field for image design usage.

Firstly, the identification number system for design drawings attached to the application has been simplified from an identification system with decimals to an identification system with just whole numbers to prevent unnecessary errors by applicants.

Simplification of Drawing Identification Number System



Also, the format for 3D computer modeling files, which can be submitted instead of drawings, has also been significantly revised. With this amendment, IGES file format will be maintained due to its high

popularity among applicants, however, the other formats (i.e. 3DS, DWG, DWF and 3DM) will be replaced with STP, STL, and OBJ for their higher stability and compatibility.

Revision of 3D Computer Modeling File Formats



Lastly, the mandatory field for “the purpose of image design” has been integrated with the existing “description of the design” field to eliminate unnecessary

redundancy. This simplifies the application process and encourages the filing of image design applications.

Introduction of Trademark Consent Agreement

Trademark Examination Policy Division

Under KIPO's system, applications for trademarks that are identical or similar to another party's previously registered or filed trademark (referred to as the "senior mark") is considered grounds for rejection. Statistical data in 2022 indicated this to be the reason for the rejection of over 40% of all trademark applications, with about 82% of these filed by small and medium-sized enterprises (SMEs) and small business owners. A trademark would be rejected even when the owner of the conflicting senior mark gave consent for co-existence. Therefore, there had been a call to expand the scope of allowable trademark registrations to reflect actual trade practices such as this.

KIPO has initiated the process to introduce "Trademark Consent Agreement" which allows registration and use of trademarks that are identical or similar to co-exist with senior marks, provided that there is consent from the prior registrant or applicant. However, to protect consumers, applications will be refused for cases where the trademarks are entirely identical for the same goods and

registration can be canceled if any of the co-existing trademarks are later used with unfair competition practices that lead to consumer confusion or deception.

By obtaining prior consent from the owner of the senior marks, small businesses and SMEs will be able to successfully register and securely use their intended trademarks and prevent potential trademark disputes for using similar trademarks. This system goes into effect in May 2024. It will also retroactively apply to applications filed before the implementation date as long as their registration status is finalized after the time of enactment.

In addition, several other changes have been made to KIPO's trademark system, such as the refund of renewal fees if the trademark right expires before the start of the new duration, automatic recognition of the right of priority for amended applications, and the recognition of the division of international trademarks. These are expected to contribute to protecting applicants' rights and improving convenience.

Improvement of Examiner-Applicant Communication for IP Examination

KIPO places great value on enhancing the convenience of its services for IP users. Therefore, in response to the increasing demand for user-friendly services, IT technologies are being utilized to upgrade KIPO customer services, particularly to improve ease of contact and communication between

examiners and applicants regarding the examination process. In this regard, KIPO has introduced an "Online Examination Response Reservation System" and improved "Chatbot" consultation features which will allow high quality correspondence with focus on the convenience of its users.

Patent Legal Administration Division

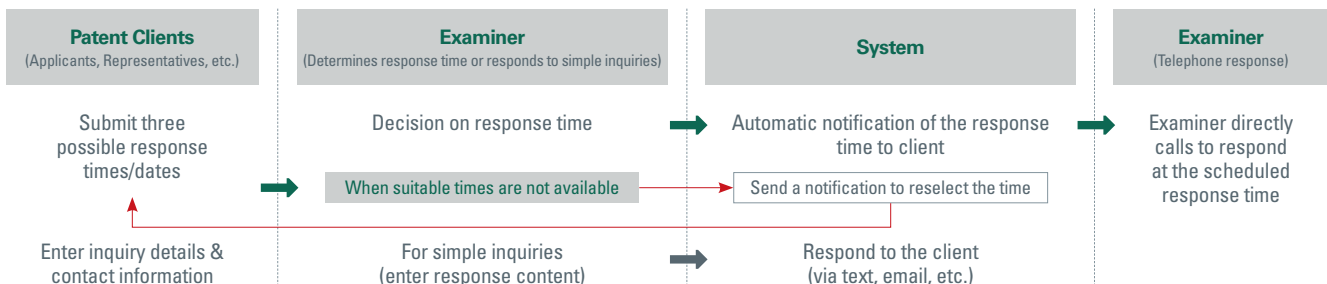
Introduction of the "Online Examination Response Reservation System"

As part of the ROK's initiative for active administration in the field of patent examination, KIPO officially launched an "Online Examination Response Reservation System" starting in July 2023. This system intends for an examiner to respond to an applicant's inquiry by contacting them via phone call on a designated date. When submitting an inquiry, the applicant will indicate the content of the notification of their inquiry, a contact number, and preferred times when they can be reached. The service is available through KIPO's electronic application platform "Patent-ro" (www.patent.go.kr).

Not only does this system provide more convenience for its users, but it also allows for an examiner to provide more precise and high-quality answers by sufficiently reviewing the inquiry before responding to the applicant. For simpler inquiries, the response can also be sent via text message and email, making communication with examiners more convenient.

There are also future plans to increase accessibility through the introduction of a QR code on application documents. By diversifying and improving examination-related communication tools from the standpoint of customers, KIPO will strive to maintain in-time communication between examiners and applicants so that they are able to obtain strong IPRs in a timely manner.

Online Examination Response Reservation System



Industrial Property Registration Division

Improvement of Chatbot Consultation

In order to meet the increasing demand for consultation services, KIPO has been operating an automated chatbot service since 2022 that can provide services 24 hours/365 days. This service was launched in collaboration with the Ministry of the Interior and Safety in the effort to enhance the efficiency of IP consulting services for the public. With more people relying on chatbots over other methods of consultations, KIPO decided to further improve its services for enhanced user accessibility and convenience.

Main improvements include:

1) Improving accessibility by expanding the number of chatbot access points from two to five websites (i.e. Patent Customer Consultation Center, Virtual Assistant Service for the Public, KIPO, Patent-ro,

KIPRIS).

2) Enhancing convenience by providing shared access automated chatbot consultations and representative chat consultations.

3) Assuring the timeliness of information by updating the Q&A database to reflect recent legal and regulation amendments in real time. Also, an expert is designated to continuously monitor and check for errors and misinformation as well as supplement the chatbot's training materials to further improve the quality of the consultation service.

With the improvement to the chatbot system, there has been a significant overall increase in user engagement which is evident by number of consultation requests by increasing 128% and processed cases increasing by 145% in 2023 compared to 2022.

Enhancement of the Patent Trial System with AI and IT Technology

Industrial Property Information System Division

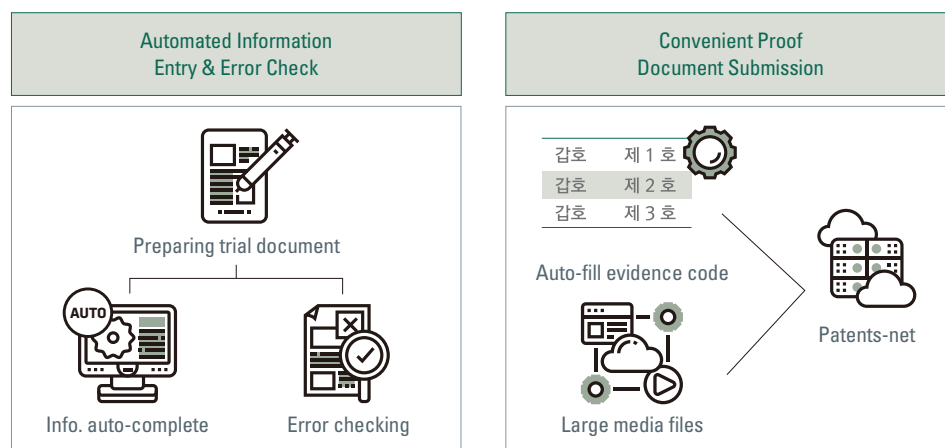
To equip itself with a trial system suitable for the digital era, KIPO implemented a three-year plan (2023 to 2025) for building a highly advanced and efficient IT system that employs artificial intelligence (AI), automation, and other new digital technologies for the formality examination and trial sectors. In 2023, focus was put on improving public services and trial procedures. KIPO's Intellectual Property Trial and Appeal Board (IPTAB) launched a "Digital Patent Trial System" by incorporating AI and IT technologies to simplify the process of filing patent trials online and introducing AI into patent trial administration. New features have been made available on the respective electronic systems for filing and submitting online forms for trials or appeals. Both petitioners and IPTAB's formality examiners will be able to complete their tasks more quickly and efficiently.

1) Improvement of Patent Trial e-Filing Service

Beginning in December 2023, KIPO's patent trial e-filing service has been improved to provide new features that will make filing or submission more concise and error-proof. The new autofill and auto-complete functions have been added so that users can fill in the fields of trial-related electronic forms more easily and correctly. First, the applicant goes through the process of verifying their identity as the rightful right holder or party to the trial case. Then, by linking with KIPO's database system, essential information will be automatically filled in such as the assigned number of the patent applicant the trial case.

Additionally, the improved services enhance user convenience by

Improvement of Patent Trial e-Filing Services



automatically filling in evidence codes when submitting proof documents which were previously required to be manually entered every time. When it comes to evidentiary documents, KIPO also made it possible for trial parties to upload multimedia files and large file sizes up to 200MB at a time. These new features help minimize non-compliance with formality requirements and reduce the chance of the parties having to make corrections or amendments later on.

2) Automation of Trial Procedures using AI

IPTAB has also adopted AI to increase work efficiency and productivity of formality examination, enhancing the overall trial procedures. Before acceptance of a case, a formality examination is carried out for all the documents submitted by the trial parties. An examiner reviews whether the documents have met the given requirements and if the provided information is presented in a proper format or in a correct manner. However, there can be up to 171 different types of documents to check, some of which include an image

file that requires manual screening.

Previously, the attached documents, which can be submitted as images, relied on manual inspection by examiners due to the inability of computers to recognize the image. KIPO has automated this process by introducing AI-powered Optical Character Recognition (OCR) technology to recognize and extract information that is necessary for examination. The use of this technology is highly anticipated to alleviate the workload of formality examiners by automatically extracting relevant information even from the images attached in the submitted documents and carrying out a preliminary review.

Upon successful operation of the AI system within the field of trial and appeal, KIPO will consider wider usage in other administrative duties, such as the handling of IP applications and registrations. KIPO will work to upgrade its IT systems across the board by making the most of cutting-edge technologies so as to provide high-quality and easy-to-use services to our users.

Automation of Trial Procedures using AI

