

NEWSLETTER

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Revised Patent Trial System in the IPTAB

Several systems were introduced to render more prompt and accurate resolution in patent trial cases. The Intellectual Property Trial and Appeal Board (IPTAB) has expanded the type of cases that are eligible for accelerated trials to shorten the examination process period for new technologies and introduced a trial expert group system, inviting outside experts to participate in trial procedures to improve the quality of patent trials. Also, the IPTAB has introduced a mediation system to conclude a trial at the patent trial stage by agreement of the parties and the system of timely presentation to induce intensive submission of evidence in the initial phase of the trial proceedings.

I. Cases Eligible for Accelerated Trials Expanded

The IPTAB amended the regulations to allow an administrative judge to handle preferentially i) an appeal against a decision to reject applications related to new technology which have been collectively examined, and ii) an invalidation trial and scope confirmation trial for applications related to the 4th industrial revolution (March 31, 2021).

If an application for which collective examination has been filed is rejected, it is possible to have the patentability of the application reviewed by the trial at an early stage. Collective examination is a system to collectively examine, on an applicant's desired date, multiple applications of patent, utility model, design, and trademark, relating to one product group including service.

Further, an invalidation trial and scope confirmation trial for the 4th industrial revolution-related patents and utility model applications (applications within the scope of the new patent category Z), as defined by the Korean Intellectual Property Office (KIPO), are eligible for an accelerated trial, upon request from the party. The new patent category (Z) includes Artificial Intelligence (AI), Big Data, Cloud Computing, Next-Generation Communication, Internet of Things, Intelligent Robots, Self-Driving Vehicles, Drones, Virtual & Augmented Reality, Smart City, Customized Healthcare, Innovative New Drugs, Intelligent Semiconductors, Advanced Materials, Renewable Energy, and 3D Printing.

II. Use of a Trial Expert Group in Patent Trials becomes Possible

An amendment to the Patent Act introducing the system of a trial expert group in patent trials in the IPTAB was promulgated on April 20, 2021, and will come into effect on October 20, 2021.

The system of a trial expert group allows outside experts with expertise in a field that is undergoing rapid technological change or a field requiring field-related knowledge to participate in patent trials to complement expertise in trials. The presiding

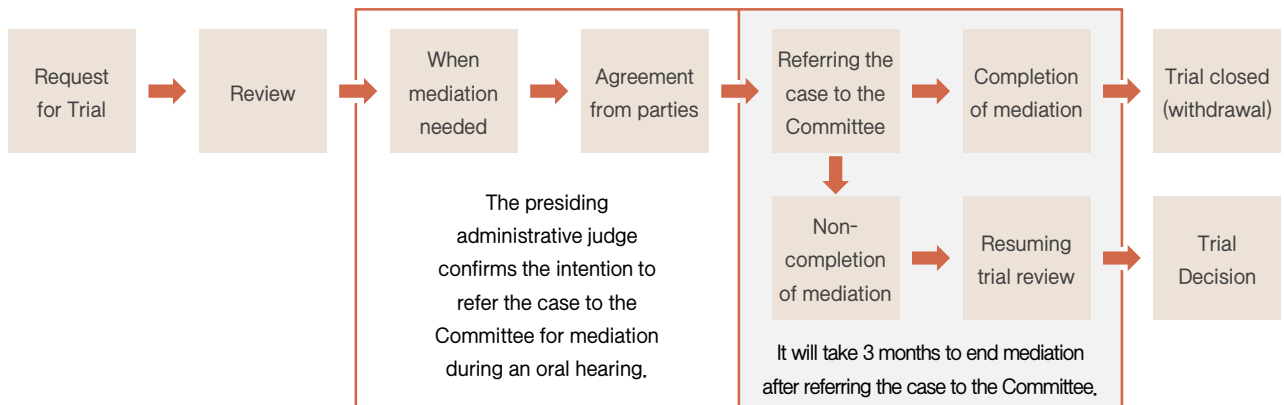
administrative judge may designate trial experts by decision *ex officio* but only after hearing the parties' opinions.

When the system of a trial expert group participation is implemented, it is expected that outside experts will participate in high-tech cases such as big data utilization, 5G communication, secondary batteries, etc., contributing to the administrative judge's accurate judgment, thereby improving the quality of patent trials.

III. A Mediation System Introduced in Patent Trial

According to the amendment to the Patent Act, at the patent trial stage, if it is deemed necessary for the resolution of a trial case, the presiding administrative judge may, with the consent of the parties, suspend the proceedings of the trial case and refer the case to the mediation committee (amended on July 23, 2021, will come into effect on October 23, 2021).

Resolving patent disputes mainly through litigation is costly and time-consuming, which greatly burdens the parties. Further, the mediation procedure of the Industrial Property Rights Dispute Resolution Committee (hereinafter, **the Committee**) has been carried out only upon the request of the parties, which resulted in reducing effectiveness. With this amendment to the Patent Act, the patent trial system and the mediation system will be linked, and the patent administrative judges may participate in the Committee, thereby providing a foundation for early settlement of patent disputes. A trial case referred to the Committee can be quickly closed upon the parties' agreement within three months after the date of referral.



IV. The System of Timely Presentation Introduced, Encouraging Parties to Intensively Assert the Issue and Submit Evidence at an Early Stage of Patent Trials

The amendment to the Patent Act introduced the system of timely presentation, requiring submission of evidence in a timely manner during patent trial proceedings (amended on July 23, 2021, will come into effect on October 23, 2021). According to the amendment, the presiding administrative judge shall hear the opinions of the parties and set a period for submitting arguments on specific matters or requesting evidence. When this period has lapsed, the parties may no longer submit arguments or request evidence.

With the introduction of the system of timely presentation, parties to a patent trial must submit their arguments or evidence in a timely manner. Further, the parties will be subject to disadvantages such that their arguments or evidence submitted after the due date required by the presiding administrative judge due to intentional or gross negligence would not be taken into consideration in the review. It is expected that this amendment to the Patent Act will allow early conclusion of patent trials.

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KIPO's New Developments and Case Precedents on Trademarks and Designs



I. Important Trademark Precedents

- The Supreme Court overturned precedents, holding that the use of a registered trademark may constitute an infringement against a prior-registered trademark

Before the Supreme Court's *en banc* decision (2018Da25344) dated March 18, 2021, repeated court decisions affirmed the perspective that the use of a registered trademark that is identical or similar to another party's prior registered mark did not constitute a trademark infringement until the mark is invalidated by an invalidation action. This view was based on the premise that "a trademark right means an appropriative right to use a registered trademark." Such perspective often conflicted with the legal principle that the use of a posterior patent may constitute an infringement of a prior patent if the posterior patent is an improvement of the prior patent (the same principle applies to utility models and designs).

In the above decision, the Supreme Court held that the use of a registered trademark that is identical or similar to another party's prior registered mark does constitute an infringement. The Supreme Court affirmed the 'priority principle' as a universal principle applicable to all intellectual properties including patents, utility models, designs, and trademarks, and emphasized the monopolistic and exclusive nature of trademark rights. The previous court decisions that took different approaches under similar circumstances were therefore overturned.

In this case, the Plaintiff was the owner of a registered trademark made up of 'DATA FACTORY + device', and the Defendant was a party who used 'DATA FACTORY' in combination with another device. During the trademark infringement suit, the Defendant filed an application for a trademark made up of '데이터팩토리 (Korean transliteration of Data Factory) + device' with the KIPO and received registration therefor without any particular issue. The KIPO examiner had determined that 'DATA FACTORY' is not distinctive, so the Defendant's trademark as a whole is dissimilar to the Plaintiff's trademark. While arguing dissimilarity in terms of the marks as well as the goods/services during the infringement suit, the Defendant also argued that the use of its trademark did not constitute a trademark infringement at least after the trademark was registered. However, both the first and second instance courts found those two trademarks and their goods/services to be similar to each other, and further acknowledged that the infringement continued even after the registration of the Defendant's trademark, which was also affirmed by the Supreme Court's ruling.

	 <p>(DATA FACTORY in Korean characters and Device)</p>
Plaintiff's prior-registered mark	Defendant's later registered mark

Accordingly, it was clarified that the holder of a prior-registered trademark may seek prompt relief from the trademark infringement by the owner of the later registered trademark even before the later registered trademark is invalidated. Owners of a registered trademark must be cautious as trademark registration can neither guarantee the safe use of the trademark nor act as a defensive measure against trademark infringement claim by the owner of a prior registered mark any longer.

II. Amendment to the Design Protection Act

■ “The definition of ‘design’ amended to protect projected, holographic, and VR/AR designs”

The key part of the current amendment to the Design Protection Act is that ‘Graphic Image (GI)’ has been added to the definition of design, where ‘GI’ is defined as ‘a figure or symbol expressed through digital technology or an electronic method that is used in, or whose function is displayed through, the operation of a device’. According to the modified definition, designs for ‘projections, holographs, and virtual reality (VR)/augmented reality (AR)’ such as those shown in the example below, which previously could not be registered as a design, are now eligible for registration. The amended Design Protection Act shall come into effect on October 21, 2021. Please click [here](#) for more details.




			
Virtual keyboard (Brookstone.com)	Smart bracelets (https://cicret.com)	Projected piano keyboard (sony.com)	Smart car headlights (daimler.com)

III. Changes in the KIPO's Practice

■ Introduction of AI into trademark and design examination

In the first half of 2021, the KIPO introduced artificial intelligence (AI) into the examination of trademarks and designs. The new, AI-based image search system was launched following two years of research, development, and test operation, utilizing more than 2 million trademarks and design images as learning data. The AI system spares examiners from having to put their time and effort in comparing thousands of images with the naked eye, and also enhances the accuracy and quality of examination. Currently, the accuracy when searching for device marks using the AI system is evaluated to be 78.1%.

The most important function of this system is that it can find prior images that are similar to the search target and list those images in order of similarity, as shown below.

Search Target	Example of main search results (searched on TrademarkDB)				
					

Search Target	Example of main search results (searched on DesignDB)				
					

Also, the system can even recognize part of the image and find prior images to compare with the search target.

(Automatic recognition of the logo/characters on the bag)

Search Target	Example of main search results (searched on TrademarkDB)				
					

Moreover, the KIPO is expanding the use of AI to other areas as well, such as the digitalization of documents, translation of foreign literature, and customer service chatbots.

■ Improvement of the Secret Design System

In accordance with the Design Protection Act, designs are to be published upon registration. However, since designs tend to be copied easily, applicants often wish to keep their designs undisclosed until their designs are commercialized. The Secret Design System allows a design to be kept undisclosed for a certain period of time at the applicant's request in order to buy time to secure business profits from the registered design.

To increase the efficiency of the Secret Design System, the KIPO amended the Enforcement Decree to allow applicants to keep more information undisclosed as follows.

Information disclosed in the gazette of a secret design	Undisclosed Information
<p>Name and address of the design owner</p> <p>Title and classification of the article (deleted)</p> <p>Whether it is subject to partial examination or full examination</p> <p>Name and address of the creator</p> <p>Filing No. and date</p> <p>Registration No. and date</p>	<p>Drawings and photos</p> <p>Purport of the creation</p> <p>Description of the design</p> <p>Title and classification of the article (added)</p>

Currently, the number of secret designs is rapidly increasing. Among the design applications filed in 2020, 3.8% were secret designs.

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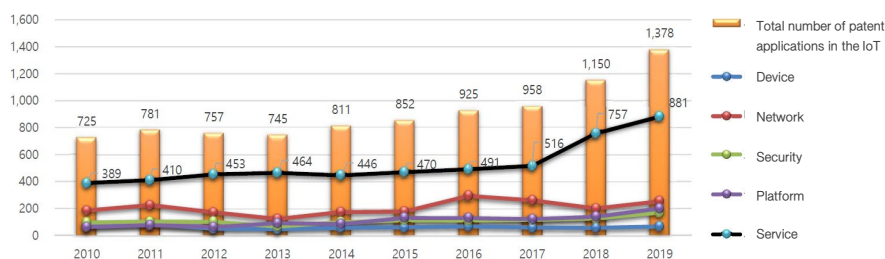
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Patent Filing Trends and Examination Practices in the Internet of Things (IoT)

In Korea, the IoT technology, among various types of technology related to the Fourth Industrial Revolution, is evaluated to have relatively high international competitiveness compared to other types of technology. In this article, Korea's patent filing trends and examination practices in the field of IoT will be introduced.

I. Patent Filing Trends in the Field of IoT

The total number of applications in the IoT field has been continuously increasing with an average annual growth rate of 7.4% over the past 10 years in Korea, as shown in the graph below. The IoT technology can be broadly divided into 'device,' 'network,' 'security,' 'platform' and 'service' fields. Among them, the 'service' accounts for more than half of all patent applications related to the IoT. If ultra-high speed, low-latency, and hyper-connected service environments are created through the establishment of 5G networks, the increase of patent applications related to service is expected to accelerate. The IoT service field can be divided into 12 sub-fields¹⁾, and the most common patent applications are made in the field of information and communication field (36.1%), transportation field (21.5%), finance field (19.8%), and health care/welfare field (12.8%).



[Trend of Patent Filing in the IoT Technology in Korea (Source: Statistics for Patents in the 4th Industrial Revolution Technology, Korean Intellectual Property Office, Sept. 2020)]

II. Patent Examination Practices in the IoT Technology Field

■ Issues in Assessing Inventiveness of a Patent Application in the IoT Field

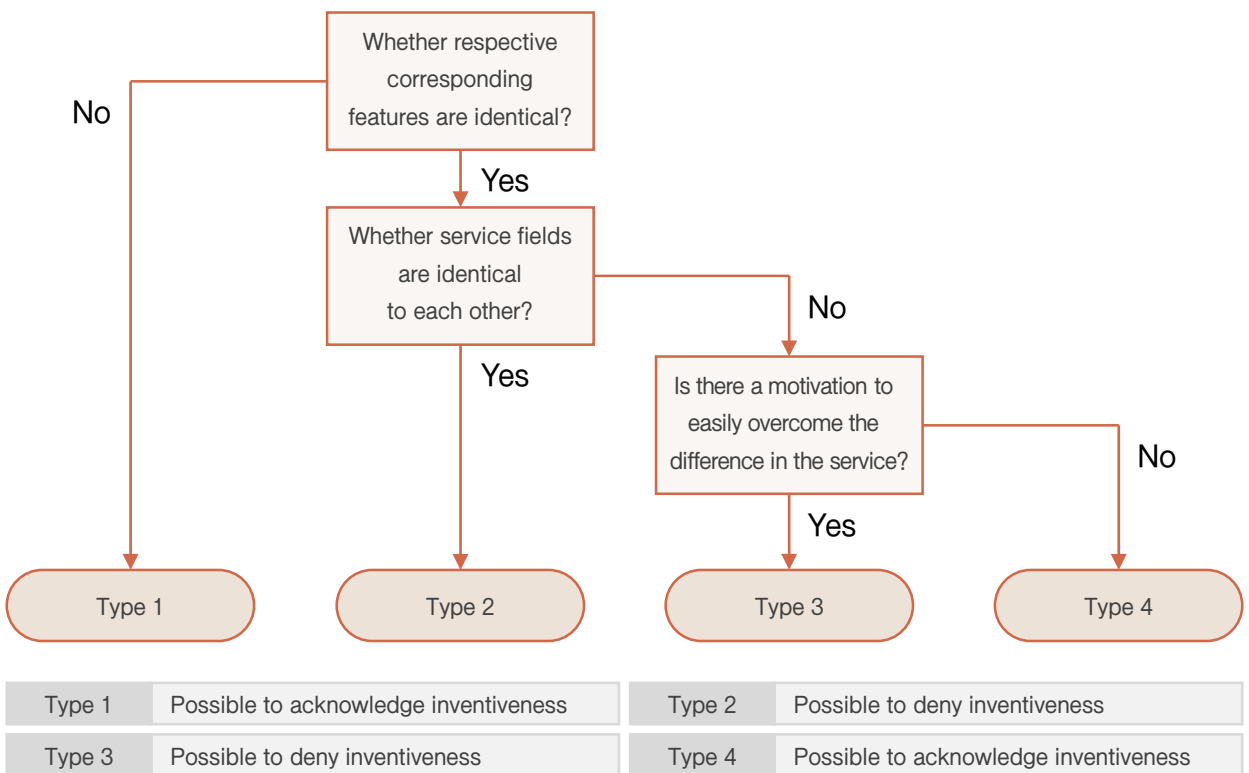
When assessing inventiveness of a patent application in the IoT field, the following matters should be taken into account.

1) The 12 service fields of the IoT are agriculture/fishery/mining, manufacturing, energy resource, infrastructure, transportation, logistics/distribution, finance, education, health care/welfare, information communication, smart home, and entertainment fields.

First, IoT technology consists of elements for realizing sensing, data collection and analysis, and delivery of information through communication networks, and mostly, it is achieved by a combination of publicly available elements (for example, sensors, servers and networks). Therefore, the inventiveness of a patent in the IoT field should be comprehensively assessed in consideration of the uniqueness of the purpose and the remarkability of the effect from the combination of the elements, while focusing on the difficulty of the technical constitution. In particular, in IoT service-related inventions, different service fields present different constitutional details and working effects, and thus when assessing inventiveness, the service field to which the relevant technical elements are applied must be considered.

Second, the standards for recognition of inventiveness may become excessively strict when a cited reference is selected without consideration of the industry and specific service field to which the IoT technology is applied. Accordingly, a cited reference should be selected within the same technical field as the patent application, or a technical field related to a technical tasks, effects or use of the patent application. If an examiner wishes to select a cited reference in a different technical field from that of the patent application, he/she must thoroughly review the sameness thereof as the patent application in terms of technical field, solution to a problem and function.

Third, when assessing inventiveness of a combination invention, the ease of combining cited references should be determined in consideration of a service field to which the IoT invention is applied. In other words, it must be reviewed whether the service fields of the cited inventions are the same, and if service fields of the cited inventions are different, it should be determined whether there is a motivation to easily overcome the difference in the service fields. In the IoT section of the Patent Examination Practice Guidelines issued by the Korean Intellectual Property Office, there are four types for assessing inventiveness of a combination invention in consideration of the service fields, as shown in the chart below.



[Types for Assessing Inventiveness of an IoT Invention in Consideration of Service fields]

The below describes cases of assessing inventiveness in Types 3 and 4 (where a patent application and a cited reference have no differences in technical feature, but are applied to different service fields) among the above four types introduced in the Patent Examination Practice Guidelines.

■ Cases of Assessing Inventiveness of an IoT Invention

- Where a constitutional difference is not recognized and different service fields can be easily combined (Type 3) - Inventiveness Denied

	Patent Application	Cited Reference 1	Cited Reference 2
Title of Invention	LED light controlling system in a building based on an IoT network	Automatic light controlling system for apartment	Automatic attendance checking system using face recognition
Technical Feature	After authenticating a user's face with a camera installed on a door, the shortest path to a residence is extracted and LED lightings on the path are automatically controlled	After recognizing a user's ID card information to predict a movement path for each user, the predicted path is compared with an actual movement path, and lighting is controlled	A photo of a student is taken with a camera installed in a classroom and it is sent to a server to check attendance
Service Field	Infrastructure	Infrastructure	Education

The patent application at issue relates to 'authenticating an image of a user's face with use of a camera,' while Cited Reference 1 relates to authenticating a user by 'recognizing user's ID card information.' The two inventions have difference in the authentication methods. The user authentication method, which is the difference, is hardly pertinent to the 'infrastructure field,' which is the service field of the patent application, and when it is applied to other service fields, it cannot be deemed to bring about a special effect. Therefore, it is a matter whether a Person of Ordinary Skill In The Art (POSITA) can selectively adopt and change from various user authentication method in different service fields.

Therefore, it is deemed that a POSITA can easily derive the patent application by applying 'the method for authenticating a user with a camera' disclosed in Cited Reference 2 into Cited Reference 1.

- Where there is no constitutional difference, and there is no motivation to easily overcome the difference in service fields (Type 4) - Inventiveness Acknowledged

	Patent Application	Cited Reference 1	Cited Reference 2
Title of Invention	Safety incident control system using an IoT-based airbag	Safety monitoring system for a field worker	A wearable airbag apparatus for a vehicle
Technical Feature	An airbag in a safety device worn by a field worker is inflated, by detecting the surrounding situation of the worker and emitting gas when an emergency signal occurs	When a field worker's biometric information measurement is determined as in a dangerous state, an alarm is generated and notified to a control center	An airbag worn by an occupant is inflated, by detecting an impact in an event of a vehicle collision
Service Field	Construction and manufacturing industry	Construction and manufacturing industry	Transportation

The patent application at issue and Cited Reference 1 fall within the identical service field, but there is a difference in that Cited Reference 1 does not disclose the feature of the patent application, an airbag configured to be inflated by gas pursuant to an emergency signal of a field worker. On the other hand, Cited Reference 2 relates to the wearable airbag apparatus that detects collision of a vehicle and performs an operation, yet falls within the different service field, 'the transportation field.'

The difference is a key feature that can be directly linked to a significant difference in effects in the service field of a patent application in consideration of the problem to be solved and the characteristics of the service field of the patent application. However, Cited Reference 1 does not recognize the problem regarding the difference in airbag feature, nor describe a motivation or suggestion for combining Cited Reference 2 in the different service field with Cited Reference 1 to solve the problem.

■ Description Requirements for Specification

According to the IoT section in the Patent Examination Practice Guidelines issued by the Korean Intellectual Property Office, in relation to enablement requirements for an IoT service-related invention, the description of the invention and the claims must clearly and distinctively describe the combination relations, information processing procedure and function of each elements.

For example, the specification of the patent application entitled 'A personalized information conveyance system comprising an information delivery server wherein a user's physical constitution can be identified from biometric information, lifestyle and diet information transmitted from a user device unit, and recommendations for goods and services are made to match the constitution' must describe the information processing procedure regarding how the constitution is identified. For another example, for the invention entitled 'Internet of Things-based smart warning light comprising an interlock unit that cuts off power through a control unit to stop an operation equipment, and a control unit for controlling the interlock unit so as to cut off power to stop the operation equipment or an operation unit,' it seems unclear which unit stops the operation among the control unit and the interlock unit.

Regarding the claim clarity requirement, in a case of a system (e.g., a body information smart chart system) in which a device element (e.g., a chart communication unit, a data storage unit or a chart control unit) and a non-device element (e.g., body anatomy character) are combined, the category of the invention might be determined as ambiguous. In this case, it is necessary to clearly describe claims under one of the categories, either an apparatus invention or a method invention.

As for another example, regarding a claim reciting 'an apparatus for providing communication service between vehicles using IoT technology, comprising a processor that transmits information to vehicles' terminals within a specific range in an IoT manner,' has the claim failed to recite a specific characteristic on 'the IoT manner,' it would be deemed ambiguous how the IoT technology is actually used for the vehicle-to-vehicle communication.

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Korean Supreme Court Presents New Standard for Inventiveness of Selection Inventions

The Supreme Court has held that the inventiveness of a substance invention the genus of which was already known in the prior art ('selection invention') can be recognized if the constitutional difficulty of the invention is acknowledged under the general inventiveness standard, and thereby upholding inventiveness of the selection invention (Supreme Court Decision Case No. 2019Hu10609 rendered April 8, 2021).

I. Background

A selection invention refers to an invention where all or part of the constitutional elements are species of the genus elements of a prior art. According to the precedents established by the Korean Supreme Court, for selection invention's inventiveness to be acknowledged, all the species concepts included in a selection invention must have qualitatively different effects from those of the prior art or, in the absence of qualitative difference, a quantitatively significant difference. In this regard, the specification of the selection invention must clearly describe the aforementioned effect. However, it is not necessary to include a comparative testing data that can specifically confirm the significance of such effect. If the effect is suspicious, the applicant can argue and prove the relevant effect, for example, by submitting specific comparative testing data after the filing date of the patent application. However, in this case, proving the qualitative difference or significance of the effect is required for the selection invention as a whole. As such, it was difficult to have the inventiveness of selection inventions recognized.

II. Lower Courts Rulings

In the present case, multiple generics filed invalidation actions with the Intellectual Property Trial and Appeal Board (IPTAB) against *Patent A*, and the patentee filed a preliminary injunction action with the Seoul Central District Court against the generics based on their infringement of *Patent A*.

On February 28, 2018, the IPTAB denied the inventiveness of the *Patent A* based on that the effect of *Patent A* cannot be deemed qualitatively different from, or quantitatively significant over the prior art, without determination of the constitutional difficulty of *Patent A*. In other words, the IPTAB denied the inventiveness of *Patent A* pursuant to the inventiveness standard for selection inventions based on the existing Supreme Court precedents.

However, despite the IPTAB decision above, on June 27, 2018, the Seoul Central District Court recognized the inventiveness in a preliminary injunction action, holding that *Patent A* indeed has the constitutional difficulty along with the significant effect

(Decision No. 2018Kahap20119 rendered on June 27, 2018). In this decision, the court questioned the inventiveness standard for selection inventions under the existing Supreme Court precedents, finding that uniform application of the stricter standard of requiring a significant effect even to a selection invention that is admittedly difficult to adopt from the prior art is not reasonable. The above ruling is the first decision presenting the supplementary legal standard that the inventiveness standard for selection inventions is too strict and needs to be relaxed.

Meanwhile, after the above Seoul Central District Court decision, the Patent Court has held as follows in an appeal against the aforementioned IPTAB decision: the strict standard for selection inventions can be relaxed (i) if there is negative disclosure or suggestion teaching away from the patented invention in a prior art, or (ii) in light of the technical level at the time of filing a patent application, if details that can be generalized to the genus concept of a prior art and expanded to the species concept of the patented invention are not disclosed in the prior art that can identify the prior art of a genus concept (Decision No. 2018Heo2717 rendered on March 29, 2019). The Patent Court decision can be deemed as having the same purpose as that of the Seoul Central District Court as the Patent Court explained the need to relax the strict patentability standard for selection inventions. Unlike the Seoul Central District Court's decision, however, the Patent Court denied the inventiveness based on the ground that the relaxed patentability standard for selection inventions should not be applied to *Patent A* since *Patent A* does not have any qualitatively different and significant effect.

III. The Supreme Court Decision

However, at the appellate trial for the Patent Court decision, the Supreme Court held as follows: (i) the general inventiveness criteria should also be applied when determining the inventiveness of a selection invention; if the constitutional difficulty of a selection invention is recognized, the inventiveness will not be denied even in the absence of a qualitatively different effect or significant effect, and (ii) the strict standard presented in the existing Supreme Court precedents (Decision Case No. 2008Hu736 rendered on October 15, 2009, etc.), in particular, the one regarding effect is intended to show that the inventiveness will not be denied if there is a significant effect for the case where it is difficult to have the constitutional difficulty recognized. The Supreme Court further held that inventiveness of a selection invention should not be determined based merely on an effect without examining the constitutional difficulty only because the genus of the patented invention was known in the prior art.

The Supreme Court acknowledged the constitutional difficulty based on the following grounds: "The prior art and the invention of *Patent A* are different in terms of the compound of interest and the structure thereof, and it is hardly deemed that there are any reasons, motivation or suggestion to preferentially or readily select the structure of the invention of *Patent A*. Thus, a person of ordinary skill in the art would go through repetitive trials and errors of combining numerous alternatives in order to derive the invention of *Patent A* by finding an optimal combination with technical significance from the prior art." The Supreme Court also acknowledged the significant effect of the invention of *Patent A* as there is an improved effect according to the patent specification and experimental data submitted after the filing date. Then, the Supreme Court held that it is hard to deem the inventiveness of *Patent A* to be denied by the prior art, and reversed and remanded the Patent Court decision.

IV. Implications for the Supreme Court Decision

This Supreme Court decision accepted the awareness of the problem regarding the inventiveness standard for selective inventions under the existing Supreme Court precedents, which was first raised in the Seoul Central District Court decision and followed by the Patent Court decision. Yet, the Supreme Court decision was not issued by an *en banc* court, and the

Supreme Court has not stated to the effect that the precedents contrary to this decision should be abolished.

The standard of recognizing inventiveness of selection inventions is very strict compared to other regular (i.e., non-selection) inventions. For that reason, for a party challenging the validity of a selection invention, the most effective strategy may be to argue the lack of inventiveness of the patented invention, as it will be very difficult for the applicant or the patentee to defend. Under such circumstances, this Supreme Court decision has significance in that it has virtually changed the legal principle for selection inventions through the explicit statement that the inventiveness of the selection inventions should be determined under the same standard as other regular inventions. The recently revised KIPO's examination guidelines have also presented more relaxed patentability standard for selection inventions, and thus the selection inventions are expected to be better protected.

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Korean Supreme Court Details Standard for Establishing Doctrine of Equivalents Infringement

In Korea, as in the United States and Japan, the recognition of patent infringement claims under the Doctrine of Equivalents (DoE) has been established by several key precedents. Recently, the Korean Supreme Court provided key guidance through detailed ruling standards for two of the three factors to establish DoE infringement, namely (1) the “Substantially Identical Solution Principle” and (2) the “Substantially Identical Effect Principle.”¹⁾

Summary of the Key Issues and Holdings of Korean Supreme Court Ruling (2019Da237302). Patentee A brought an infringement suit against B, alleging that one of B’s products was infringing A’s patent for a “detachable handle for cooking vessels.”

The Korean Patent Court ruled that, even though some parts of B’s product had been changed from A’s patented product, their solution principles and effects were substantially identical, and a person of ordinary skill in the art (POSITA) would readily be able to come up with such changes. After the Patent Court ruled in favor of the patentee by finding DoE infringement, the case was subsequently appealed to the Korean Supreme Court. The main issue in dispute on appeal was the meaning and standards for the “**substantially identical solution principle**” and the “**substantially identical effect principle**” for establishing DoE infringement.

With regard to the first DoE factor, namely the “substantially identical solution principle,” the Korean Supreme Court ruled that:

“when determining whether the solution principle of an infringing product is substantially identical to that of a patented invention, courts must practically explore and determine the core technical idea forming the basis for the unique solution means of the patented invention compared to prior art, in view of the **description of the invention in the specification and publicly known technology at the time of the invention’s filing**, rather than formalistically extracting parts of claims.”

1) In Korea, an accused product that includes a modified element as compared with a patented invention may still be infringing under the DoE when the accused product has:

- (1) **a substantially identical solution principle with the patented invention;**
- (2) accomplished **substantially identical effect to the patented invention despite some elements being different;** and
- (3) modifications that would have been obvious to a POSITA (“person of ordinary skill in the art”).

However, DoE infringement may not be established if (4) an accused product comprises technology already publicly disclosed before the filing of the patented invention, or a POSITA can easily conceive from the publicly known technology, or (5) the prosecution history of the patented invention indicates that the modified element of the invention for review was consciously excluded from the claims of the patented invention.

As for the second DoE factor, namely the substantially identical effect principle, the Korean Supreme Court held that:

“Determination of whether the effects [of the infringing product and patented invention] are substantially identical shall be based primarily on whether the infringing product solves the same technical issue solved by the patented invention which had not been solved by prior art. Therefore, in principle, if **the core technical idea forming the basis for the unique solution of the patented invention** (in light of the description of the invention found in the specification and publicly known technology at the time of the invention’s filing) **is also found in the infringing product**, then their effects shall be deemed to be substantially identical as well.

If such core technical idea had been actually or effectively publicly disclosed before the filing of the patented invention, however, then the core technical idea was neither unique to the patented invention, nor did it solve the technical issue which had not been solved by prior art. In such case, the determination for the DoE factor (ii) should not be based on whether the core technical idea was found in the infringing product; **instead, the determination should be made by comparing the individual functions or roles of the elements which the DoE issues hinge upon.**”

Significance and Implications of the Korean Supreme Court’s Ruling. In Korean patent infringement litigation, it is quite rare to find an allegedly infringing product or method that fits neatly within the scope of a patented invention. In practice, many patent infringement and scope confirmation actions in Korea involve DoE infringement issues, and the Korean tribunal’s findings regarding the first and second DoE factors are often dispositive of the final case outcome.

The ruling of the Korean Supreme Court clarifying DoE infringement are significant because the Court provided detailed guidance and additional clarity for both patent owners and accused infringers. Specifically, the Court has ruled that when Korean courts analyze the solution principle of the patented invention (as described in its specification), the “substantially identical solution principle” mandates a careful examination of the individual element’s function and role within the context of the technology at the time of the invention.

In light of the recent line of Korean Supreme Court DoE decisions (2017Hu424 decided on Jan. 31, 2019 and 2018Da267252 decided on Jan. 31, 2019), the outcome of cases involving DoE infringement claims will likely turn on the interpretation of the solution principle (core technical idea) of a patented invention and whether such solution principle has already been publicly disclosed. Sophisticated litigants in Korea will tailor their trial themes to address the core technical ideas through the prism of the prior art and the publicly known technology at the time of the invention.

From a patent prosecution perspective, patentees will need to craft the patent specification to define the essence of the invention at the drafting stage and respond strategically to KIPO office actions while keeping in mind a potential infringer’s future characterizations of public disclosure assertions during litigation. Like many contentious patent proceedings at the court and administrative levels, the more broadly recognized the scope of the core technical idea, the more likely infringement will be established down the line. For defendants in Korean infringement suits, resonant trial themes must be established early to define the scope of the alleged core technical idea within the context of known public disclosures, including a focused presentation of dispositive prior art references to narrow the scope of any DoE infringement.