

e-Government of Korea
Online Patent System
(KIPOnet)



MINISTRY OF
PUBLIC ADMINISTRATION
AND SECURITY



KOREAN INTELLECTUAL
PROPERTY OFFICE

The Korean Intellectual Property Office (KIPO)'s leading brand that has become the first in the world to realize online electronic patent filing.

“Online Patent System (KIPOnet)”

Online Patent System (KIPOnet)

is an integrated information system established to computerize existing administration processes regarding intellectual property rights, which used to depend on manual labor, from application filing to examination, registration, trial and gazette publication.

Online Patent System (KIPOnet)

provides speedy and accurate public service, including efficient web-based information search and online electronic civil service, through 24-hour electronic patent information system

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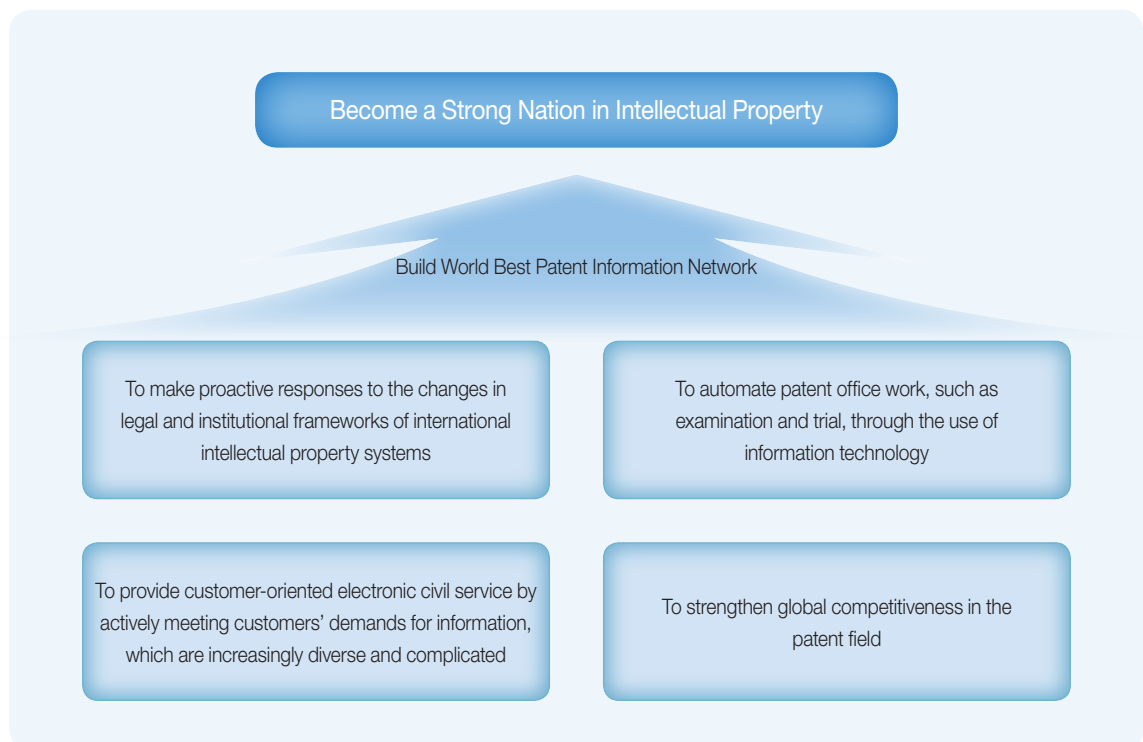
IV. Future Plan

1 Objective

Background

- With a sharp increase in the applications for and disputes over intellectual property rights due to industrial and technological development and the expansion of international economic exchanges, there was a clear limitation for previous manual handling to support the growth in needs.
 - The manual handling took long time to handle examinations and trials.
 - The surge in the volume of application documents and related materials increased the costs of data storage and management.
 - The absence of a system to provide patent-related information caused a waste of time as well as human and material resources, including overlapping research, development, and investment.
- ➡ A need for digitizing and automating overall patent processes to enhance efficiency and addressing the examination backlog

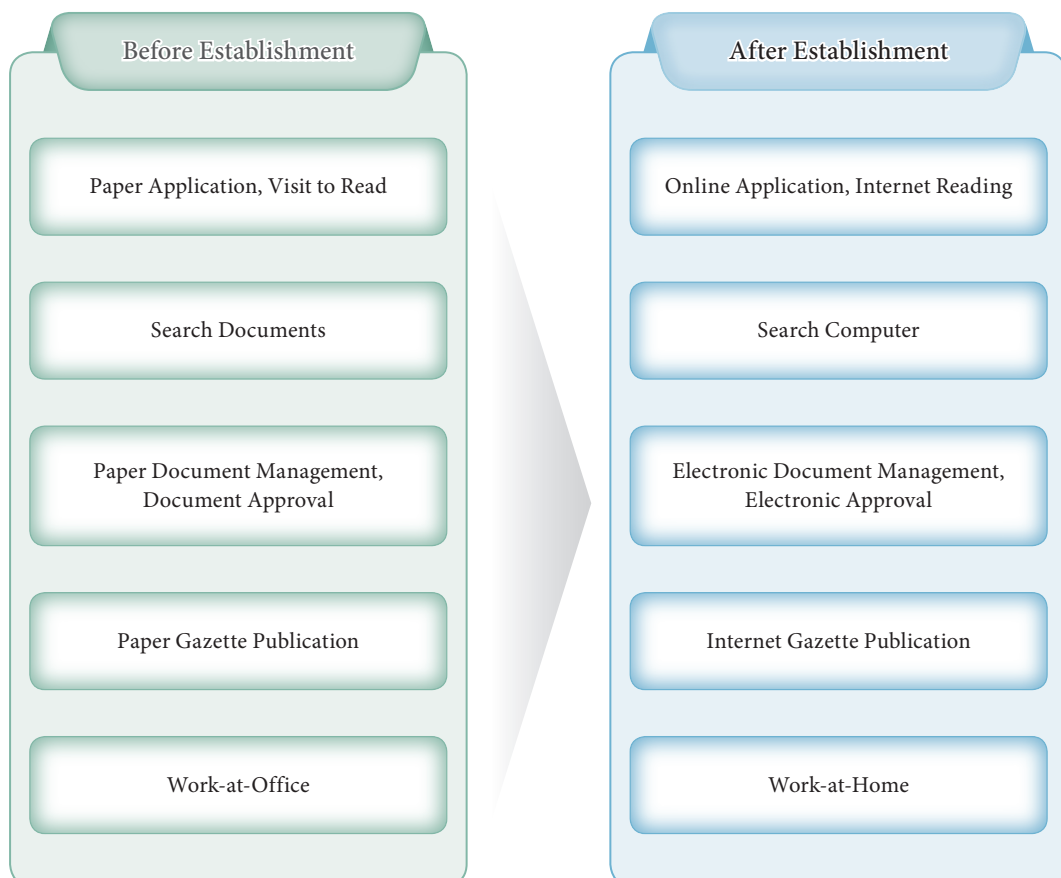
Objectives



Details

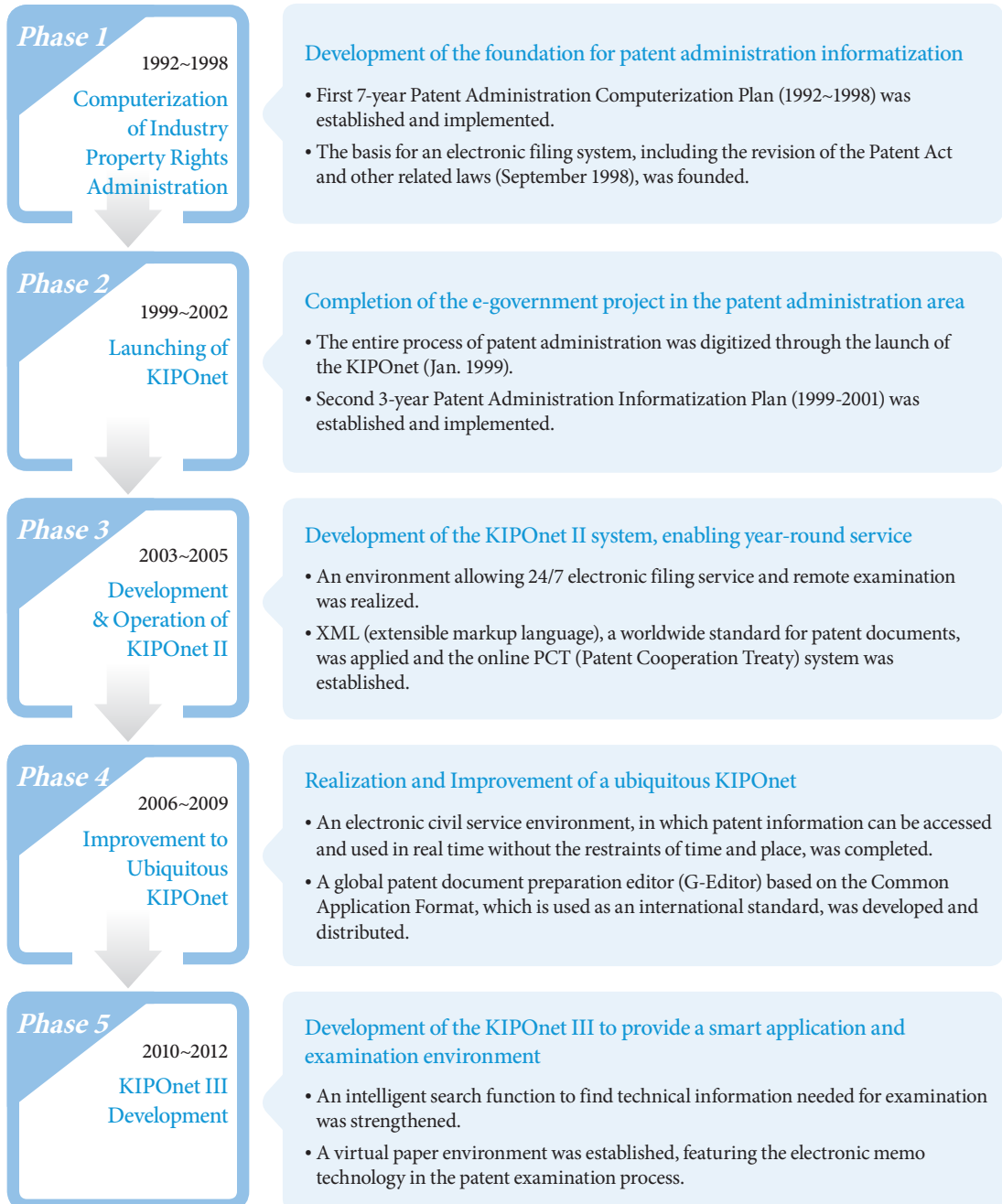
- Patent administration with no visit required : Online application and information available on the Internet, etc.
- Non-stop service : Establishment of a 24/7, year-round online application system
- Digitization of documents : Electronic documentation, Internet official gazette, etc.
- Office automation : Automation of the entire process of patent administration, including such office work as application receipt, examination, registration and trial as well as scheduling

Benefits



2 History

System Development Process



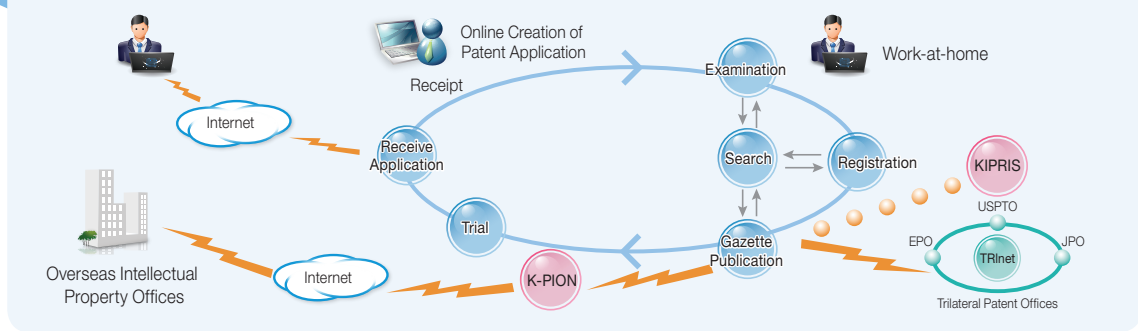
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Definition of KIPOnet

Definition

- An integrated information system established to computerize existing administration processes regarding intellectual property rights, which used to depend on manual labor, from application filing to examination, registration, trial and gazette publication
 - Offering customized online service that is easy to access for individual applicants and other patent customers
 - All patent works, including intelligent search, notice preparation, and electronic approval, can be operated online.

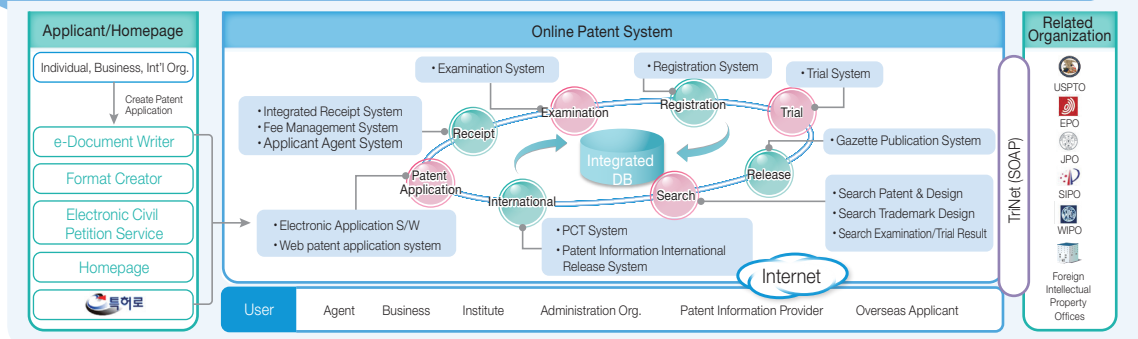
Concept Map of Patent Administration Digitization



Functions

- In order to support the operation of specific areas of patent administration, such as patent filing, examination, objection filing, registration, trial, notice, PCT and common business, a total of 44 sub-systems under the two main systems, KIPOnet and general administration support, have been established and implemented.

KIPOnet System Structure



4 Major Features

24/7/365 non-stop Internet-based electronic filing system

- Electronic patent filing by flexible disk (FD) application and online application as well as filing in writing are available.

Automation of the entire process of patent administration business

- Automated the entire administration processes of formality examination, examination, trial, and scheduling

Employment of an XML-based documentation technique designated by the World Intellectual Property Organization (WIPO)

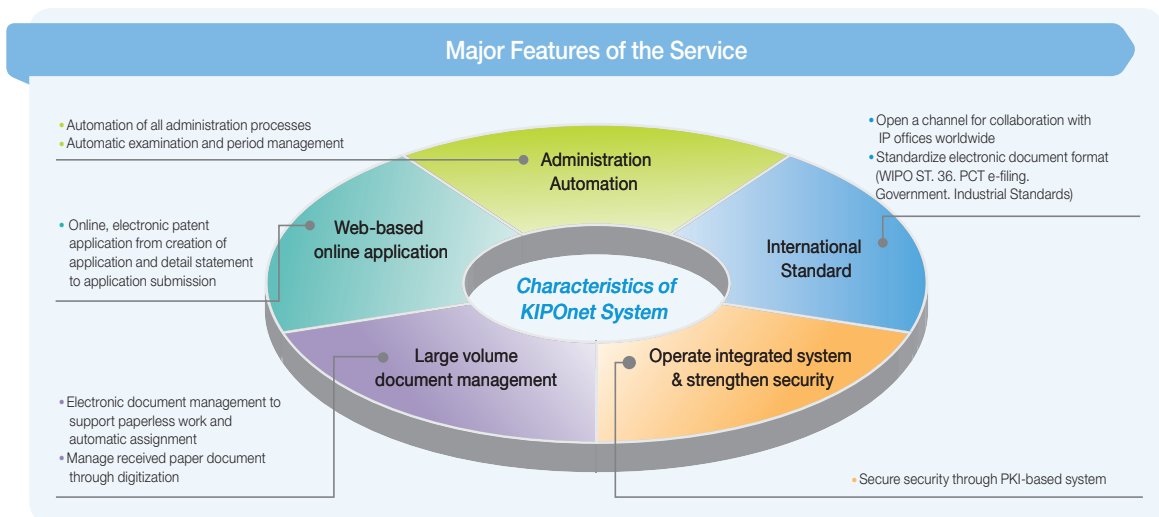
- Established a new channel to cooperate with foreign patent offices, and standardized different electronic document formats

Operation and hardening of an integrated system

- Strengthened security by adopting electronic signature based on the PKI (Public Key Infrastructure) technology, SSL (Secure Socket Layer)-based transmission technology, and DRM (Digital Rights Management)

Management of bulky documents

- Supports a paperless office system, including document management through digitization of application forms and other related documents



1 e-Filing System

Overview

- A system that supports the electronic filing of not just domestic applications but also PCT international applications and Madrid international trademark applications

Details

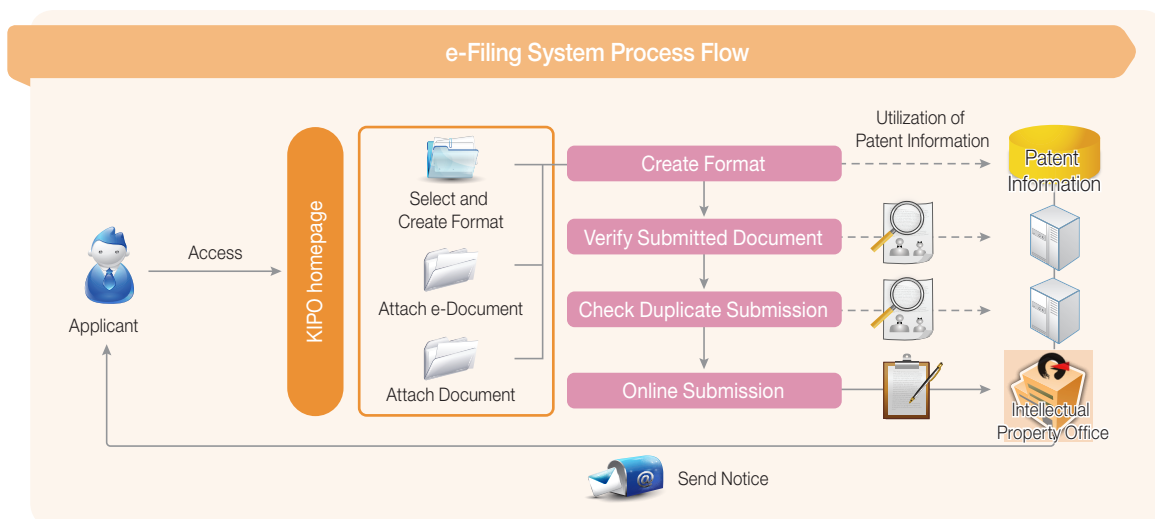
- 24-hour electronic filing service is available whenever and wherever needed.
 - Allowing civil petitioners to prepare and submit to the Intellectual Property Office various documents, such as new application forms and interim documents, on an electronic basis
 - Allowing applicants to browse the Office's notices and certified documents sent to them

Functions

- The electronic filing process comprises four steps : “pre-registration → document preparation → submission → fees payment and application status inquiry”
- (Pre-registration) The step in which an applicant uses the electronic filing system to file a patent application online
- (Document preparation) The step in which electronic documents are prepared using an electronic filing software or a web-based electronic filing system
- (Submission and inquiry) The step in which an application is submitted, fees are paid, and the status of submitted documents is inquired

Features

- Provides one-click electronic civil application service and patent information web service, enabling users to handle electronic applications via online



2 Administration System

Overview

- A system that supports all the tasks related to patent administration, including the application, examination, trial, registration regarding intellectual property rights of patents, utility models, trademarks and designs

Details

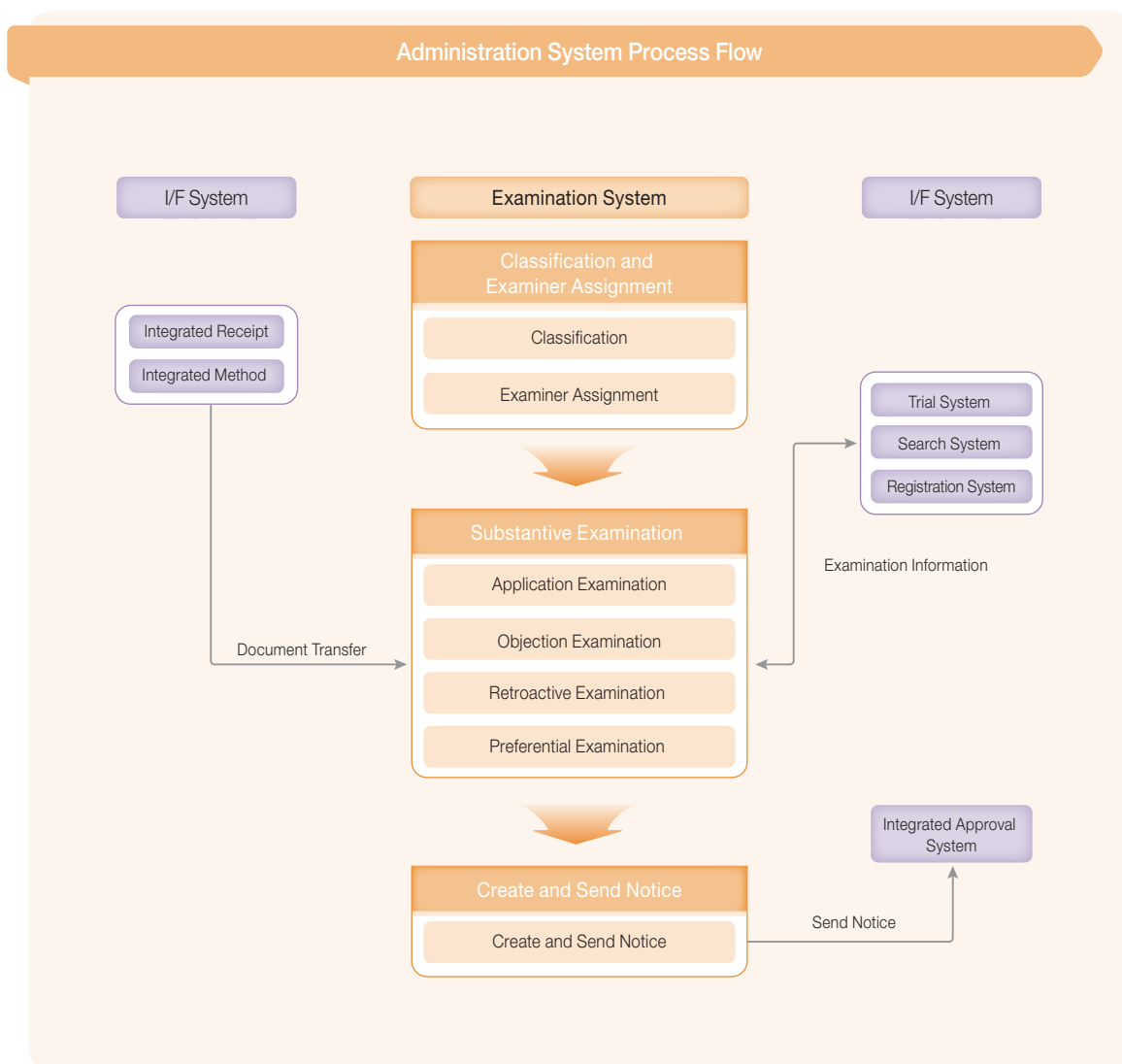
- Informatization and automation of the overall patent administration
 - The system enables officers in charge to promptly handle on an electronic basis the examination of submitted applications, notice forwarding and the approval of applications.
 - The system enables evaluators to work at home and deliver examination results in real time to applicants via online or mobile phone.

Functions

- Comprised of subsystems that support handling of administrative tasks, including application receipt, examination, registration, and trial
- (Integrated application system) Receives applications, computerizes received documents, and issues filing receipts and the notice of application number.
- (Integrated formality system) Examines the formality of patent applications and interim documents, assigns persons in charge, prepares notices and transfers to the examination system
- (Examination system) Supports the examination process for computerized documents of patents, utility models, trademarks and designs, which includes management of the period and examination schedule, inquiry of application status, electronic approval, and notice forwarding
- (Registration system) Manages the registration of patent, utility model, design, trademark, and semiconductor topography rights
- (Trial system) Exchanges relevant information in association with the filing, examination and registration systems, prepares written decisions, and handles administrative documents related to trials
- (Patent lawsuit system) Inquires the status of examination and trial, electronically approves internal documents and sends them online, and supports lawsuit-related tasks by, for example, searching written decisions and trials

Features

- The paperless patent administration system has resulted in an improved office environment and work efficiency.
- By automating application assignment, classification, file wrapper management, and simple and repetitive tasks, the system provides efficiency and convenience in the examination process.



3 Search System

Overview

- A system that supports easy and convenient web-based access to patent information from all over the world, including Korea, Japan, the US, and European countries

Details

- The system provides a real-time search function for patent information.
 - It supports Korean and Japanese integrated search as well as English search through the development of a technical synonym dictionary and a multilingual dictionary of Korean, English and Japanese languages.
 - It provides full-text inquiry, text retrieval, similar patent search, genome sequencing search, etc.

Functions

- Comprised of subsystems designed for searching information regarding patents, designs, trademarks and written decisions and trials
- (Patent search system) Supports full-text search, integrated search with a single query language, search by subscription according to examination schedule, and extended search using a thesaurus and synonyms
- (Design search system) Supports web-based search for design information, catalogues, and fonts
- (Trademark search system) Supports search for trademark information, such as trade name, application number, application date, and applicant
- (Written decision and trial search system) Supports search for written decisions and trials and the grouping of search results

Features

- Intelligent search service that automatically generates an optimized search query based on the analyzed intention of the user's query and provides desired results promptly and accurately
- The system allows easy and convenient web-based search for patent information at home and abroad, improving efficiency in examination and trial processes.

Search System Process Flow



※ The search for patent information from Japan, the US, Europe and other foreign countries has been made possible through cooperation and agreement between countries for patent information exchanges.

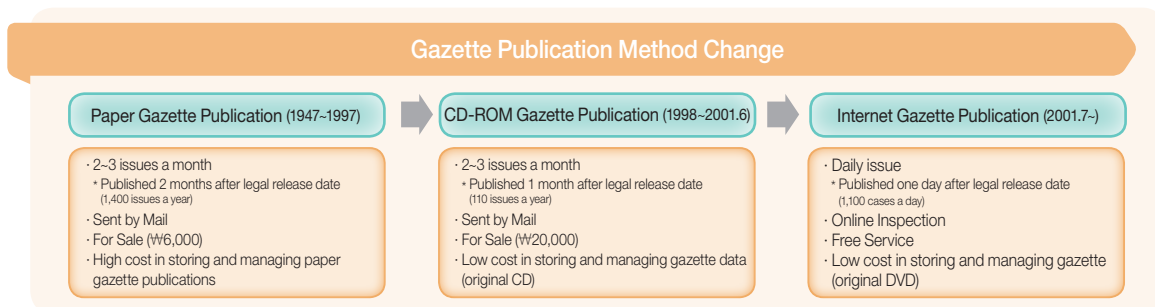
4 Internet Gazette Publication System

Overview

- The official gazette, which used to be published in brochure and CD-ROM formats, has been published through the Internet since July 2001 for the first time in the world.

Details

- By publishing the gazette by the online medium, the accessibility of patent administration service and patent-related information has been enhanced.

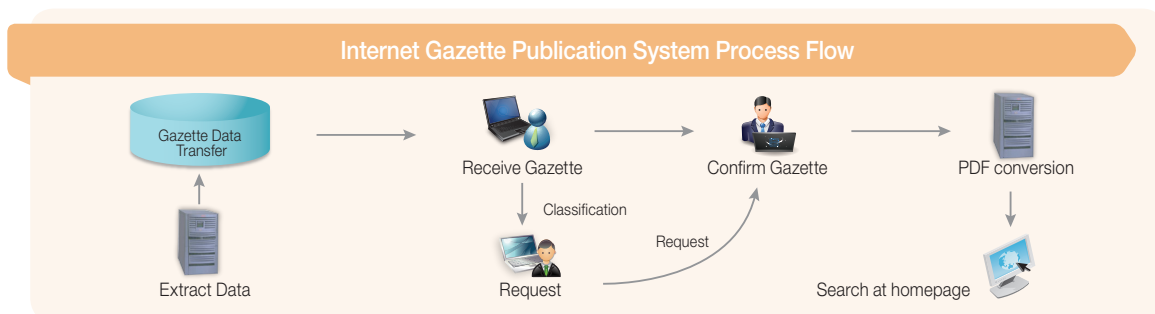


Functions

- Public notice - Includes publicized application's bibliography and details
- Registration gazette - Includes details of a patent that passed examination and was registered
- Correction gazette - When errors were found in the published notice and registration gazettes, they are corrected and republished.
- Conveyance by public notice - Published when the addressee's home address or place of business is unclear so that application results cannot be conveyed

Features

- Through Push-Mail service, publication information in patent information users' areas of interest is also provided.
- Gazette documents can be converted only through the gazette viewer, and are provided in the final PDF format.

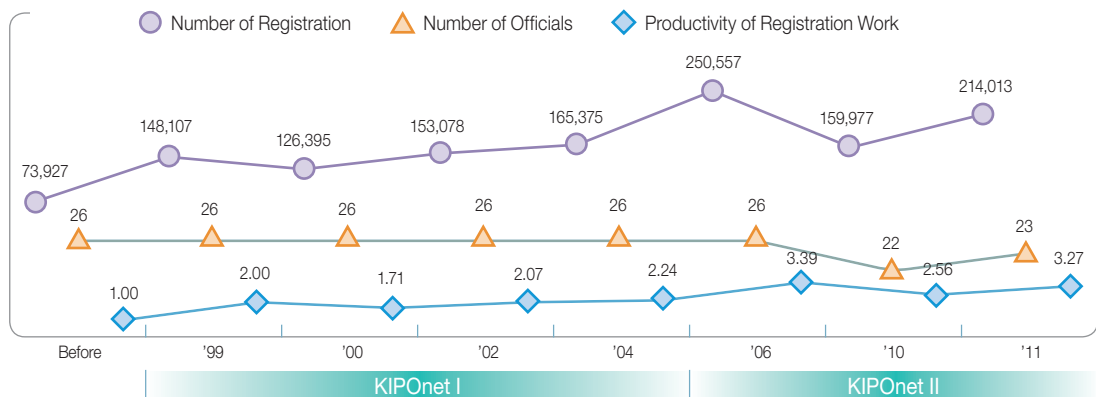


1 Major Achievements

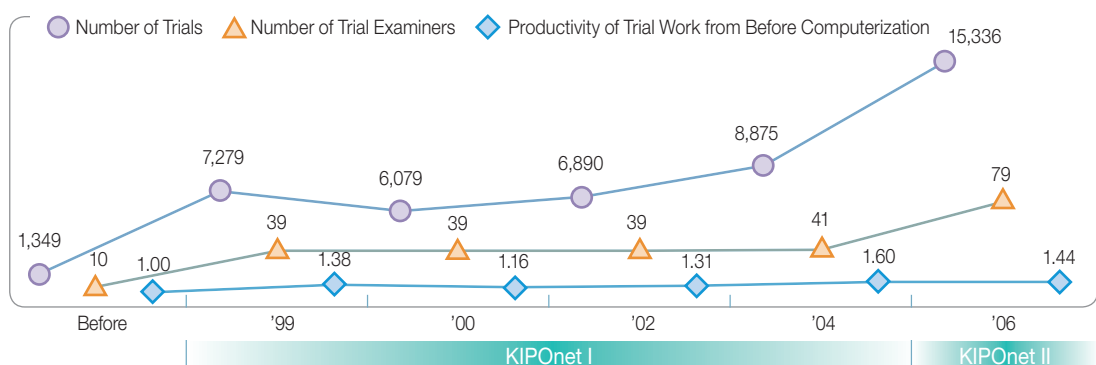
Improved the efficiency of patent administration

- The system improved administration efficiency by processing all patent administration online, including intelligent search, notice creation, and e-approval.
- Working method is improved by enabling officers to work at home.
 - The system established patent information DB of Korea and all major countries, which helps officers with examination and trial.
 - It provides the same work environment as that of the office to officers working at home.
- Reduced examination lead time : 36.9 months (1996) → 16.8 months (2011)
- Higher productivity of registration and trial : registration 3.27 times, and trial 1.12 times more productive, from before system establishment.

Registration Work Productivity Trend



Trial Work Productivity Trend



A huge saving in patent administration cost

- A total of KRW 1,039.2 billion of civil petition and administration cost were saved from 1999 to 2006, through automated patent administration using KIPOnet.
 - Gazette publication cost : KRW 7,638 million (1997) → KRW 0 (2002~)
 - Document storage cost : About KRW 3.9 billion were saved form system opening to 2006.
 - Mailing cost as notice is sent online : About KRW 5.5 billion from system opening to 2006.
- ※ Source : Intellectual Property Administration Informatization Performance Examination Report (July 2012, National Information Society Agency)

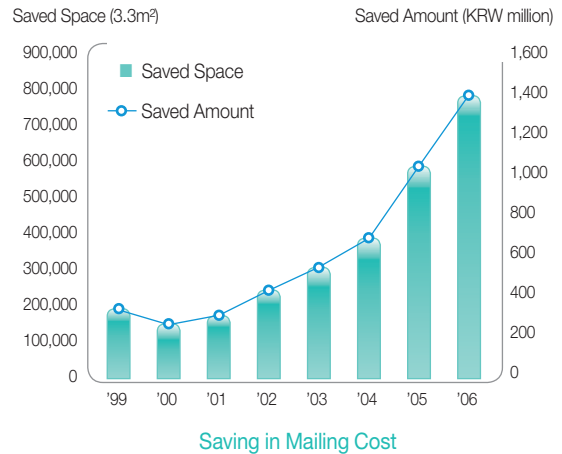
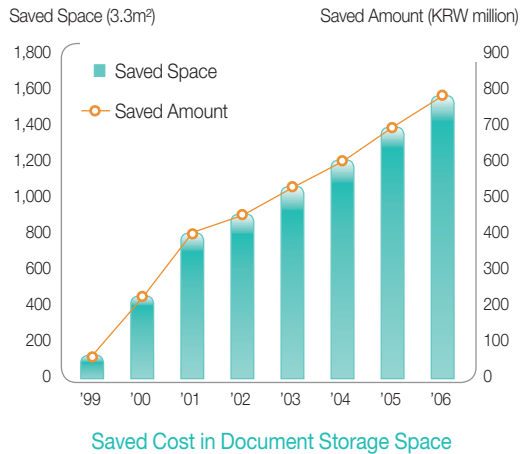
Gazette Publication Method Change & Cost Saving Trend

Classification	Before 1997	1998	2000	Since 2002
Publication Type	Brochure	CD-ROM	CD-ROM	Internet
Original Data	Paper Document	Paper Document	Paper Document (~June), Electronic Data (July~)	Electronic Data
Publication Budget (Million Won)	7,638 ('97)	7,467	2,609	0

Document Storage Space Saving Details

Classification	Storage of new applications	Examination reference & evidence	Home/abroad patent gazettes	Storage of trial document
Content of documenta	<ul style="list-style-type: none"> • Interim, examination, and registration documents such as application, amendment and argument • Need to be stored permanently as rights documents 	<ul style="list-style-type: none"> • Major prior technology materials cited frequently by IPC classification • Book of trademark designs and index • Examination and Trial Case 	<ul style="list-style-type: none"> • Domestic/overseas paper gazettes before CD-ROM • Cited as examination and trial reference, and copied for civil petitioners 	<ul style="list-style-type: none"> • Trial Request, duplicate, request reason, reply brief etc. • Need to be stored permanently as right-related documents
Quantity	<ul style="list-style-type: none"> • 0.2~0.3 million cases are added each year 	<ul style="list-style-type: none"> • Each department owns 5 pyung-wide reference box 	<ul style="list-style-type: none"> • Store 1.66 million gazettes in reference room 	<ul style="list-style-type: none"> • 6,000 cases are added each year
Required Space	<ul style="list-style-type: none"> • Space of 150 pyung is needed each year 	<ul style="list-style-type: none"> • A total of 155 pyung (31 departments × 5 pyung) 	<ul style="list-style-type: none"> • 150 pyung of patent reference room 	<ul style="list-style-type: none"> • Space of 10 pyung needs to be added each year
Reason for No Need	<ul style="list-style-type: none"> • Examine, register and store e-documents 	<ul style="list-style-type: none"> • Utilize search DB 	<ul style="list-style-type: none"> • Add domestic/overseas patent information search in DB 	<ul style="list-style-type: none"> • Stored as electronic trial documents permanently

Savings in Document Storage & Mailing



About KRW 8.5 trillion of national R&D budget was saved each year from 1999 to 2005, as the system provides free patent information search service.

- R&D period (26.18%) and R&D cost (27.59%) were reduced.
- Improvement in patent productivity (Intellectual property creation effect through patent information) : Korea 19.99%, Overseas 11.33%
- * Source : Intellectual Property Informatization Result Report (June 2006, National Computerization Agency)

Civil Service Improvement

- An easy and customized online service is provided to patent clients that include individual applicants.
 - Users can submit their applications on the Internet, not visiting a intellectual property office.
 - As patent gazette is released early on the Internet, technology information is shared and utilized early.
 - Transparency of civil service administration is improved, as users can view and search civil petition result.

2

Leading Global Patent Administration

The US, Japan and many European countries want to benchmark Korea's intellectual property administration system.

- The APEC selected Korean Intellectual Property Office as the partner of informatization cooperative projects with intellectual property offices of developing countries in the region.
- The World Intellectual Property Organization (WIPO) selected The Korean Intellectual Property Office as the partner of developing and disseminating PCT-ROAD system, an international patent application system.

Korea is the leading nation in paving the informatization ground, such as machine translation, among the five advanced Intellectual Property Offices (IP5 : Korea, the US, Europe, Japan, and China).

- Bi-lateral cooperation with advanced countries and developing countries in the field of informatization : establishing examination information release system, and exchanging electronic patent information and data, and priority right certificates.
- Exchange and utilize examination information and priority right documents with Intellectual Property Offices of the US, Japan, and Europe based on Trilateral Document Access (TDA)

Korea's Intellectual Property Office has gained favorable reputation in the world IP informatization area by implementing various joint informatization projects with the World Intellectual Property Organization (WIPO).

- Developed an international patent receipt system, PCT-Receiving Office Administration (PCT-ROAD)
- Enhanced WIPO information system to recognize Korean language

3 Global Cooperation

Awards

- Obtained ISO20000 certification (2006)
- Obtained information technology standard from the World Intellectual Property Organization (WIPO) (2006)
- Won e-ASIA Awards in public sector e-business by Asia-Pacific e-business board (2009)

Global Cooperation

- Developed and disseminated “IP PANORAMA”¹⁾ in UN languages in collaboration with the World Intellectual Property Organization (WIPO)
- Developed and disseminated “IP Xpedite”²⁾ to member countries of Asia-Pacific Economic Cooperation (APEC)
- Established informatization cooperation ground with African Regional Intellectual Property Organization (ARIPO)
- Developed and disseminated PCT-Receiving Office ADministration (PCT-ROAD) to 28 countries in the world (collaboration with WIPO)

Adoption of KIPOnet by Foreign Countries

- Exported to many countries including the Philippines, Vietnam, India, Indonesia, and Mongolia

Export Status

Year	Country	Export Details
2004	21 countries including Malaysia, the Philippines, and Mexico	<ul style="list-style-type: none"> • Co-developed modular system with WIPO to support e-Filing processes including receiving and processing int'l patent application
2005	Israel, Egypt, Vietnam, India etc.	<ul style="list-style-type: none"> • Provided PCT-ROAD, an e-Filing software
2006	Thailand	<ul style="list-style-type: none"> • Participated in IP Center Establishment Project of Thailand
2008	Indonesia	<ul style="list-style-type: none"> • Indonesia introduced Korea's patent search system for its IP digitization project • Provided English translations for Korea's patent documents
2009	Mongolia	<ul style="list-style-type: none"> • Built IP information system in Mongolia
2011	18 countries in Africa	<ul style="list-style-type: none"> • Developed IP administration systems for APIRP and 18 member countries

1) IP PANORAMA : Introduction to intellectual property utilization strategy to businesses

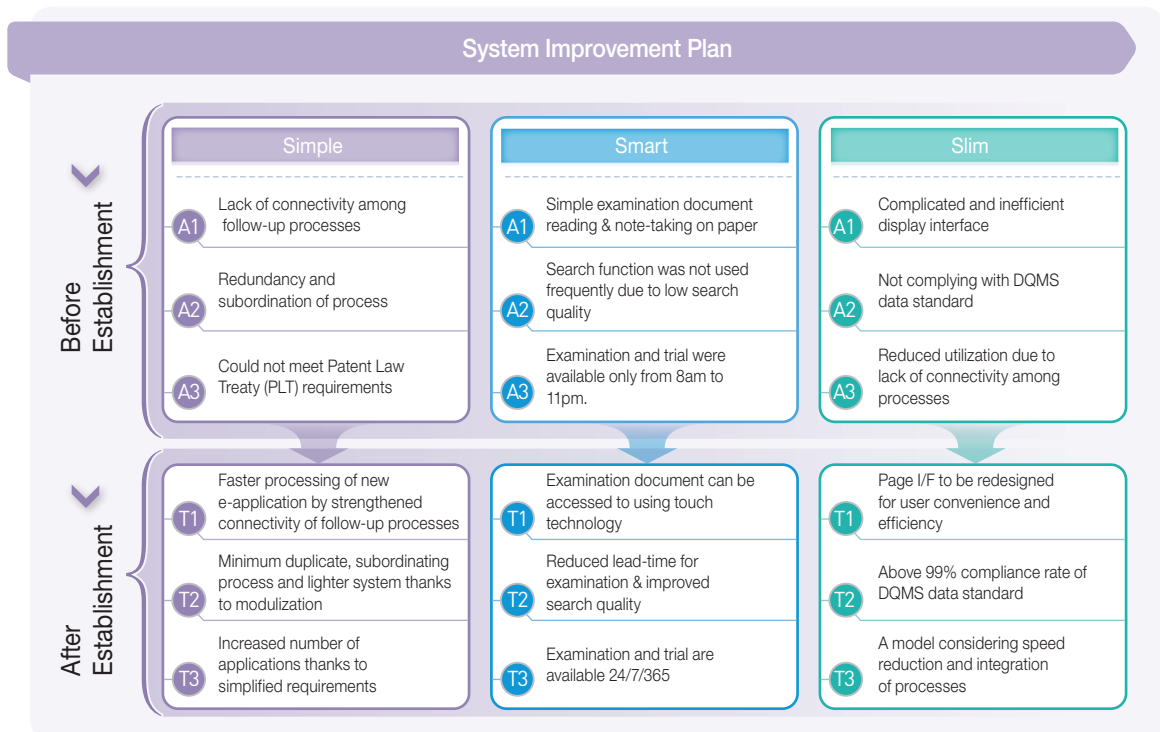
2) IP Xpedite : Introduction to patent information utilization methods such as patent DB search

Improve the convenience of intellectual property information users home/abroad by enhancing the patent administration system continuously

- Improve the performance of patent information search system by improving the quality of Search DB and establishing its management system
- Strengthen security system and optimize patent administration process, to enhance the administration system
- Provide customer-oriented patent administration service by offering a high-quality patent information that helps businesses and institutes with R&D and patent obtaining

Disseminate Korea's patent administration informatization technology through international cooperation and actively participate in international discussion on intellectual property

- Encourage international search and sharing of patent examination result
- Seek more informatization cooperation with overseas intellectual property offices





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