SCIT.ATR.PI.2003.KR

Annual Technical Report 2003 on Patent Information Activities submitted by Republic of Korea (SCIT/ATR/PI/2003/KR)

Where URLs are requested below, it is preferred that either URLs which are likely to remain stable over time (three years or more) are provided, or home (main) page URLs are provided with a short explanation of how to access the corresponding information.

The term "patent" covers utility models and Supplementary Protection Certificates (SPCs). Offices which issue design patents should report their design patent information activities in their Annual Technical Reports on Industrial Design Information Activities.

I. Evolution of patent activities

Changes experienced in terms of application filings and grants with respect to the previous year

In 2003, the number of patent applications was 118,652, an 11.8 percent increase over the 106,136 applications of the previous year, while the number of patent registrations reached 44,165, a slight decrease of 2.5 percent over the previous year's 45,298 registrations.

For utility models, the number of applications reached 40,825; a 4.2 percent increase over the 39,193 applications in 2002, while the number of registrations was 37,272; a 6.7 percent decrease over the 39,957 registrations in 2002.

By industrial field, the electricity and communications field still ranked first, accounting for 62,697 applications or 52.8 percent of all patent applications, while the machinery field ranked first, accounting for 8120 applications or 19.8 percent of all utility model applications.

Among domestic enterprises, Samsung Electronics filed the largest number of applications (11,105) and Hyundai Motors was granted the largest number of registrations (4246). Among foreign businesses, Sony ranked first in applications with 702, while Nippon Denki KK ranked first in registrations with 563.

Trends or areas experiencing rapid changes with respect to the previous year

Business method applications and registrations
After the rapid increase in 2000, the number of business method applications was hesitant due to the decrease of patent applications for frivolous inventions and venture enterprises. In 2003, however, the number of those applications started to increase with the boom of e-commerce; there were 5117 applications, representing a 20.7 percent increase over the previous year. Moreover, the number of registrations increased to 976, a 25.8 percent over the previous year

PCT applications
In 2003, Korea was listed as the world's seventh largest country in the number of international patent applications under the PCT. It recorded 2942 applications, which accounted for 2.7 percent of the global total. The number also represents a 17.2 percent increase over the previous year.

The reason for the increase in Korea's international patent applications is that the filing of applications in the Korean language became possible owing to KIPO's strengthened international activities and to the enhanced awareness of domestic firms with respect to the need to internationally protect their technologies.

The top ten domestic legal entities filed 721 applications, which represent 24.5 percent of the total. This result was due to the 256 applications filed by LG Electronics, which filed 82.9 percent more applications than in the previous year, and to the 220 applications filed by Samsung Electronics, which filed 18.9 percent more applications than in the previous year.

II. Matters concerning the generation, reproduction, distribution and use of primary and secondary sources of patent information

Publishing, printing, copying (main types of publications of the office in the field of patent information, etc.)

Gazette publication
Until April 1998, we published hard copies of official gazettes two or three times a month and disseminated them to the general public by mail for public inspection of applications. The official gazettes included the Registered Patents Gazette, the Registered Utility Models Gazette, the Unexamined Patents Gazette and the Unexamined Utility Models Gazette.

From May 1998 to June 2001, we integrated the official gazettes into two gazettes, namely the Unexamined Patents and Utility Models Gazette and the Registered Patents and Utility Models Gazette. We used the EPO's Mimosa software to publish these gazettes on CD-ROM with a mixed-mode data format and a user-friendly interface. We distributed the CD-ROM gazettes inside and outside the country and issued them in PDF format with SGML data. The CD-ROM gazettes also included a Korean language font for foreign users and supported English installation for users with an English operating system. A Korean language version of the Adobe Acrobat Reader had to be installed for making gazette inquiries.

Beginning July 2001, we began posting daily PDF gazettes on our Web site. This on-line version has replaced the CD-ROM version, though a master CD-ROM of each publication is archived. With this IT breakthrough, we expeditiously and inexpensively provide information to our customers while reducing publication expenses and allowing users easy access to information via the Internet.

Data Conversion Center
In January 2001, we began operating the Data Conversion Center for digitizing paper-based applications for patents, utility models, trademarks and industrial designs, along with intermediate documents such as amendments, written opinions, objections, registrations, trials and paper-based gazettes. We run the center at our Daejeon headquarters and at the Seoul branch office; the Seoul office receives 70 percent of all applications.

By redesigning the conversion process in 2003, we enabled the center to automatically handle processes such as the receipt of paper documents, formality checks and data conversion. We applied state-of-the-art technology such as Multi OCR, dual key-inputs and automated verification of electronic data. As a result, the center can now prevent any delays or errors during the conversion process.

All these processes have been outsourced to the Korea Institute of Patent Information (KIPI). We founded KIPI in 1995 as a specialized intellectual property rights (IPRs) information agency. In 2003, the Data Conversion Center digitized 469 kinds of paper-based documents for a total of 420,104 items. As a result, we shortened the average digitization period from 4.2 days in 2002 to 2.02 days.

Main types of announcements of the Office in the field of patent information

KIPO's Web site
On our Web site, applicants can find information on the following:

· announcements of notifications that were undelivered due to an applicant's change of address
· advance notice of patent expiry due to nonpayment of fees
· other notices such as changes in laws or fees.

Internet gazette search service
We have provided an Internet gazette search service at our Web site for customers since July 2001. After the publication date, applicants can freely refer to PDF documents via the Internet at any time during the opposition request period. Even after the opposition request period, applicants can find information on the KIPI Web site . They are also notified about their interests through a push-mail service and the Short Message Service (SMS).

We also provide applicants with the full text of corrected applications on our Web site, enabling them to easily correct the specifications or drawings of their application.

Word processing and office automation

Since launching KIPOnet, we have continually improved the system by developing subordinate systems. An electronic approval system and an electronic application-receipt system have streamlined our internal administrative processes and enhanced the transparency of our approval process.

We also communicate examination results to applicants via the Internet or mobile telecommunications, publish official gazettes on the Internet, and handle most registration and opposition procedures on-line. Since developing the On-line Trial System in 2002, we have computerized all IPR administrative procedures except for the parts that require human judgment.

On-line Trial System
We launched the On-line Trial System in July 2002. The system transfers trial dossiers through the E-Dossier Management System, which manages various time limits such as the deadline for filing a written correction or reply. The On-line Trial System also shortens the trial period by utilizing trial decisions and a database of cases. It enables electronic preparation and receipt of decisive trial documents and trial documents relevant to the parties. It also enables electronic distribution and on-line routing of relevant documents for the convenience of applicants. As a result, the On-line Trial System improves efficiency in trial administration.

In April 2003, we developed a program for sharing information on trial decisions from the Patent Court and the Supreme Court. If the Intellectual Property Tribunal informs the Patent Court or the Supreme Court of the withdrawal of a trial request, the courts stop the particular trial.

Electronic Approval and Routing System
Our Electronic Approval and Routing System has enabled electronic approval for IPR administration and general administration. The system comprises two major parts: an approval system for IPR examinations, which was introduced with the KIPOnet system in 1999; and an approval system for general administration, which was launched in June 2000. In 2002, the ratio of electronic approval was 99.1 percent. The system has been used for the following:

· Electronic approval: preparation, approval, dispatch and receipt of electronic documents: management of document boxes; and the circulation of documents
· Electronic mail: preparation, transmission, receipt, and management of e-mail
· Electronic board: posting and reading notices on an electronic board
· Management of records: preservation of records.

Fee Deferment System
In May 2003, we developed a system that notifies applicants of any deficit in the registration fee or yearly fee. The system gives a sort of extension for payment of patent fees shortly before the due date. Even after the due time, applicants who pay the deficit within the short deferment period can keep their IPRs alive.

III. Matters concerning abstracting, classifying, reclassifying and indexing of technical information contained in patent documents

Abstracting, reviewing, translating

Data Management Center
Since May 2002, we have been managing the Data Management Center. At the center, we compile high-quality data through systematic analysis; we generate and process data; and we fix errors in the data. In 2003, we analyzed the following:

1) Data generation
· Rejections: 27,446 patents from 1986 to 1999; 3573 utility models from 1992 to 1999
· Registrations: 21,110 patents from 1984 to 1999; 952 utility models from 1992 to 1998
· Trials: 7027 patents from 1994 to 2003.

Regarding image files of registrations, we converted the existing PDF or TIFF files on magnetic optical disk into standardized TIFF files for the KIPOnet database. We stored 784 items of data on CD-ROMs.

2) Data consolidation
Data consolidation was needed for accuracy of the search database and the IPR administration database.
· Inspection of the search database: 115,000 patents and utility models from 1979 to 1992
· Comparison of the search database with the IPR administration database: 196,000 patents and utility models from 1993 to April 1998.

3) Data analysis
To understand the causes of data errors and to prevent any delays or errors, we analyzed more than a million items of data on patents and utility models in the KIPOnet database and we fixed 475,000 errors with the aid of the SQL program.

Korean Patent Abstracts
For the international exchange of patent information, we have published CD-ROMs of Korean Patent Abstracts (KPA) in English since 1997 and distributed them domestically and abroad. In 2003, we published 105,722 unexamined patents in English, including 10,974 foreign applications and 6328 registered patents. We now have a database of 487,000 patents.

Classification and reclassification activities; Classification system used, e.g., International Patent Classification (IPC), other classification (please indicate whether or not patent documents are classified by your Office and, if so, which classification is used)

International Patent Classification
We use the International Patent Classification (IPC) as our official classification system. The preclassification has been outsourced to KIPI, and each examiner confirms which subgroup an application should be classified under. In 2003, we classified 150,000 applications for patents and utility models in accordance with the IPC. We don’t reclassify earlier applications.

Bibliographic data and full-text processing for search purposes

Since first publishing gazettes on CD-ROMs in May 1998, we have used the searchable SGML format for our search system. We have has also converted earlier data into SGML format. Currently, our examiners can search the full text of unexamined patents and utility models published as far back as 1983; they can search examined patents and utility models issued since 1947; and they can search gazettes from the JPO, the EPO and the USPTO.

IV. Search file establishment and upkeep

File building

We continue to construct a database of information from the following sources: the Unexamined Patents and Utility Models Gazette, the Registered Patents and Utility Models Gazette, the JPO's Patent Gazettes, Search Master and PAJ, the EPO's FPD and IFD, and the USPTO's Patent Specifications.

In 2003, the amount of data in the KIPOnet search system reached 102 million items of intellectual property (IP) information: 18 million domestic items and 84 million foreign items. The data was extracted from domestic and foreign gazettes and literature on science and technology, including 439,000 items of KPA data. We also converted to SGML format hard copy data that includes 63,000 items from registrations, rejections and trial dossiers.

Storage, including mass storage media

Storage configuration
KIPOnet's storage configuration has two sections: IP administration and the search system. Since electronic applications are original copies and comprise most of the operating data, the storage of electronic applications is essential to the operation of the KIPOnet system. Consequently, we have applied a mirroring of the Raid 1 method to the storage disk.

Search systems apply Raid S or Auto Raid according to the kind of storage disks. The Raid S method takes the parity up to 25 percent, which is the fundamental means for protecting data. Auto Raid, however, has automatic parity that can be adjusted to the volume of data.

Documentation from other offices maintained and/or considered part of the available search file

The foreign data available through our search system consist of the following:

· Bibliographies: Search Master (JP/1975~), FPD (EP/1974~), IFD (EP/1974~)
· Abstracts: Japanese Patents (JP/1975~1996), FPD (EP/1974~)
· Full Texts: Japanese Utility Models (JP/1975~), USAPat (US/1975~), Espace-A (EP/1978~), Espace-B (EP/1990~), Espace-world (EP/1978~).

V. Activities in the field of computerized and other mechanized search systems

In-house systems (online/offline)

KIPO's patent and utility model search system
In January 2000, we launched the New Patent Search System (NPS), a Web-based patent retrieval system. The NPS was designed to retrieve data from domestic and foreign patent databases upon the entering of any keyword or technical classification. To produce an efficient and easy-to-use system, we also applied the high-performance search engine K2 Enterprise, which is produced by Verity Inc., along with a Japanese-Korean translation tool. For searching sequence listings, we produced the biotechnology search system Bio-PASS. Completed in January 2000, Bio-PASS covers all domestic data on nucleic and amino acid sequences. Furthermore, with the aid of specific search algorithms such as BLAST and FASTA, it has a user-friendly interface that enables access to free databases on the Internet. We modified Bio-PASS so that applicants can use it to freely access the Bio-PASS databases through the Internet.

In January 2002, the NPS was renamed the KIPO Patent Search System (KIPASS), which integrates independently developed retrieval systems. To make the search system more user-friendly and to satisfy the needs of patent examiners, we enabled the search system to present integrated user-interfaces with a variety of new functions such as a user dictionary, a single-query search facility, a clustered display, individual databases and a meta-search facility for non-patent literature. KIPASS allows utilization and management of various types of text data related to the following: patents and utility models, the operation and management of databases, the loading of newly published gazette data, and the handling of various customer service requests from internal users. Overall, we have endeavored to raise the efficiency of searches for patents, utility models and prior art.

KIPASS also links search systems through a unified digital certificate, and it activates a single viewer that enables examiners to view various electronic formats such as SGML, TIFF and HTML within a single application. Changing the programming from the Common Gateway Interface to the Java Server Pager has enhanced the high performance, stability and security of the retrieval system.

In 2003, we established an in-house database of Koran Patent Abstracts and rearranged the search server from the HP N Class to the HP V Class.

Intelligent Search System
In 2003, we also introduced the concept of an intelligent search system, which automatically optimizes inquiries and rapidly shows search results. With this system, our customers only need to input natural, everyday speech to search prior art documents. We also implemented an integrated meta-search function that enables examiners to search non-patent literature such as theses, reports and periodicals by technology. In addition, we elaborated an integrated viewer for patents and utility models, as well as a personal database client. The viewer enables our examiners to confirm, whenever necessary, a great number of search results that have been collectively stored on their own computer.

KIPOnet II
Since launching KIPOnet, we have had to incorporate into the system the swift changes in the technical and legal trends of the global IPR environment. We need a more stabilized system to meet customer demands, which are becoming diverse and complicated in the digital era. Furthermore, we need a more efficient and optimized system that can flexibly cope with successive revisions of relevant laws and regulations.

To satisfy such needs, we formed a task force in early 2002 to establish an information strategy plan for KIPOnet II. We are currently considering a variety of cutting-edge information technologies such as integrated middleware and XML.

With KIPOnet II, we expect to achieve three goals: to provide nonstop service by integrating our internal and external networks; to update our business processes by adopting simpler IP procedures and at-home examinations; and to enhance our flexibility and efficiency through system integration and real-time system recovery.

In accordance with the Third Three-Year Information-Oriented IPR Administration Plan for the period 2003 to 2005, the task force analyzed the business process in 2003 and completed the design of application systems. The task force also built the fundamental infrastructure of intelligent search systems for patents, trademarks and industrial designs. Using optical CD-ROMs, the task force also developed administration systems for the PCT e-filing system and the Madrid-related registration trial system.

External databases

Through the Non-Patent Literature Search System, our examiners can efficiently search for databases of STN, Chemical Abstracts and IEEE abstracts. The scope of these databases has been extended every year and an integrated user-interface has been provided.

Administrative management systems (e.g., register, legal status, statistics, administrative support, etc.)

We have computerized all IPR administrative procedures except for the parts that require human judgment. The KIPOnet system, which has approximately 46 subsidiary systems, enables us to manage the data produced in each phase of the procedure, to deal with matters that originate in the transfer of data to the next phase, and to speed up the administration of searches. According to a survey in 2003, approximately 91 percent of our internal users are satisfied with the service provided by KIPOnet.

General Information Management System
The General Information Management System outputs a variety of statistical and policy data related to patents, utility models, trademarks and industrial designs. It does this by using a variety of information that we archive in database form, and the system's tools efficiently manage large-volume data and provide various features for end-users.

Model Office System
Since December 2000, we have been operating the Model Office System, which is a testing interface for piloting newly developed systems. By testing modified or new programs under the Model Office System before deploying them, we have greatly increased the stability and efficiency of the KIPOnet system.

Data Management System
The Data Management System simplifies the procedure for correcting users' input errors and for changing data in the old systems. To ensure that we can promptly meet the requests of applicants and KIPO departments, the system maintains a history of data changes and guarantees that data is changed correctly.

Applied Process Monitoring System
The Applied Process Monitoring System aims to prevent problems caused by delays in processing. It also provides information on the management of problems according to application type and application form. In addition, the system analyzes the cause of problems and establishes measures for handling them.

Quality Management System
In December 2000, we constructed the Quality Management System to help manage output, prepare data maps, analyze the status of errors, computerize data changes and so on. The system enhances productivity by establishing standardized processes; it enables efficient use of resources through systematic process management; and it balances the workload of individuals with the workload of developers by coordinating how the workload is distributed among different departments. Moreover, it helps us to efficiently manage quality and improve the work process by continually inspecting the system and improvements with respect to customer satisfaction. We also introduced the Integrated Management System to monitor and manage malfunctions and the security of the internal administration systems in real time. In November 2001, we were granted an ISO9001 Certificate by the Korean Foundation for Quality for our development, management and servicing of the KIPOnet system.

Knowledge Management System
The demand for organized management of knowledge inspired us to introduce the Knowledge Management System in October 2001. The system facilitates the sharing of information among staff members through integrated management of a variety of information about intellectual property. Dedicated to the efficient management of our archived knowledge and information, the system enables our staff to use various management tools such as a knowledge map, a knowledge warehouse, a personalized portal and a cyber knowledge community. It can also provide this information through personalized portals. With this system, we can more efficiently manage knowledge and improve the productivity of our IP administrative processes through the knowledge-portal system for knowledge-based activities.

Equipment used (hardware, including the types of terminal and network used, and software), carriers used

In designing the architecture of the KIPOnet system, we incorporated a certificate administration server that enables the system to identify the person who files electronic documents. We also incorporated an electronic signature program and certificate encryption program based on the PKI method to guarantee the system's stability against counterfeiting. Furthermore, KIPOnet has a dual network structure that consists of an internal network that handles internal administration and an external network that receives applications and notifies applicants of relevant data. It also has a firewall to prevent illegal intrusion by external users. We used a clustering technique in the main servers to prevent the disruption of services. As a result, since the launch of the KIPOnet system, the on-line operation rate has remained over 99.9 percent.

Hardware
The hardware of the KIPOnet system comprises four parts: servers, storage, peripherals, and networks. The server consists of 30 UNIX servers (Enterprise), one workstation, 27 NT servers and eight small servers. The storage capacity is 35 terabytes, and we use RAID 1, 5, S and Auto RAID according to the method of data protection. The peripherals consist of four backup devices, 17 jukeboxes and 312 items of network equipment. In 2003, we continued to replace and integrate the exiting servers with enhanced servers. For the backup drive in particular, we introduced a new STK L700 and supplemented the 26 LTO drives.

To provide greater access to the KIPOnet system, we constructed a clustering system between the Receiving Server and the Sending Server, between the Document Managing Sever and the Publication Server, and between the Administration Automation Server and the General Information Management Server.

The Receiving Server has a set of programs that enables us to cope with the unexpected problems of the Sending Server. For instance, if there is a system failure in the Sending Server, the Receiving Server temporarily substitutes for the Sending Server. The interoperability of clustering allows time to address the problem. Moreover, because the servers of the clustering structure use the same database when using the Oracle Parallel System, we can maintain the accuracy and suitability of data if any failure occurs in the servers.

Network
To enable servers to share storage space, we use a storage area network. The network enables us to efficiently store data, and it reduces the workload of managing disks. The Internet application network is 10 Mbps and comprises a double-line system with a Gigabit Ethernet switch as the backbone switch of the IP administration network. In addition, the network of the E-Patent Portal System is also based on a new double-line backbone switch. To improve our management of the network, we also introduced a tool for analyzing traffic called Sniffer, along with an IP management tool called IP SCAN.

Software
In 2003, we enhanced the KIPOnet system by upgrading its software as follows:

· Oracle of the KIPOnet system: Applied Oracle 8.1.7.4 Patch
· Oracle of the gazette server: from version 8.0.6 to version 8.1.7
· Software for managing the performance of the database: PreciseSQL 3.2 to Veritas i3 Indepth for Oracle 6.2
· Web application server of the e-filing system (Weblogic): from version 5.1 to version 6.1 SP3
· Webserver: iPlanet Webserver 4.1.8 to SunOne 6.0.

To analyze the performance of the SSL that will be applied to the KIPOnet system for PCT e?filing, we used a tool called Application Vantage. To improve the performance, we transferred the FileNET OD backup system to a Document Management Backup Server.

VI. Administration of the industrial property office library and services available to the public (relating to facilities, e.g., for lodging applications, for assisting clients on searching procedures, for obtaining official publications and registry extracts)

Planning, administration, automation, security, buildings

Operation of the KIPOnet system
Since the launch of the KIPOnet system, we have been providing a 24-hour emergency service aimed at stabilizing the server and network. To this end, we instituted a System Management Team, which regularly monitors the system and immediately recovers it when it fails. To improve the efficiency of the KIPOnet system, and for the convenience of applicants and clients, our on-line filing hours are from 8:00 a.m. to 9:00 p.m..

For full operation of the KIPOnet system, we strengthened measures for preventing accidents, we constructed an around-the-clock monitoring system, and we continue to improve the performance of the system. We have assigned 88 worker-months to an outsourced system integration company for the running of the software and hardware. Aside from operating 46 subsystems related to functions such as e-filing, internal administration and the search system, the company also maintains the main server, the storage media and the network equipment.

Since inaugurating KIPOnet, we have continued to stabilize and publicize the system through the following measures: by running a User Help Desk, by establishing an On-Site Trouble-Shooting Team, by assigning fifty-one model colleges for IP automation nationwide, and by offering lectures at the International IP Training Institute (IIPTI) on how to use the e-filing system and on-line services.

In addition, to efficiently manage customers and promote various on-line services for the general public, we introduced a Call Center and a service for managing customer relations with respect to patents. Both services provide a single gate for guidance or professional counseling on IPR protection. As a result, we can accumulate the feedback of customers for better policies and IT strategies in the future.

Security
Our security system is based on the public key infrastructure for the encryption and decoding of applications. In addition, we have applied a single sign on the system for tighter security in accordance with the standardized Internet protocol called Directory Access Protocol.

On-line Payment System
In December 2000, we introduced the On-line Payment System, which enables applicants to use Internet banking to electronically pay or inquire about the initial fees, registration fees and annual registration fees. With the completion of the On-line Registration Request System in July 2002, other official fees can now be paid on-line; for example, the fees for changing the content in the register and for transferring rights such as exclusive or nonexclusive licenses.

Since December 2003, this method of payment has been possible at all banks nationwide. On our Web site, we also streamlined the process for requesting remittance of over-paid fees.

On-line Opposition Request System
With the On-line Opposition Request System, which was launched in July 2002, anybody can oppose an application after the application has been laid open for public inspection. Furthermore, our examiners can use the system to confirm, and give a final decision on, proceedings that involve oppositions to registrations and petitions to cancel registrations. As a result, the system helps reduce the examination period and it minimizes the risk of losing documents during their transfer.

Relocation of the Seoul Branch Office of KIPO
On March 24, 2003, we relocated the Seoul Branch Office at a new building named the Korean Intellectual Property Service Center. When our headquarters moved to the Government Complex in Daejeon in 1998, the Seoul Branch Office was established for the convenience of customers in the Seoul metropolitan area. The branch office conducts intellectual property affairs related to applications, registrations and trials; it offers information on domestic and international intellectual property matters; and it issues all types of certificates to approximately 700 customers a day.

Collecting, acquisitions, preparation

IP Library
The IP Library archives patent documents such as bibliographic data, abstracts and full texts in a variety of media such as paper, microform and CD-ROM. The documents are obtained through an exchange agreement with 26 countries and four international organizations. The collection of patent documents includes 10,277 CDs, 276,562 films, 103,299 volumes of paper documents and 725 DVDs from the USPTO and WIPO.

The library also possesses non-patent documents donated by or purchased from other sources. This material, which comprises 23,379 volumes and 500 periodicals related to science and technology, along with CD-ROMs of annual reports and statistics, is arranged by class or numerical order. All of this material can be searched by our examiners or by the public. An electronic database is provided at the Internet corner of the IP Library. The library also provides a service for purchasing copies of original electronic material such as electronic journals and e-books.

Interlibrary lending, resource sharing, networks of patent libraries in the country

Agreement on exchange of information resources
Since becoming a member of the Korea Institute of Science and Technology Information in 1978, we have had access to an interlibrary loan service and a document delivery service for a variety of IP-related publications.

On the basis of a 2002 agreement to exchange information with the National Assembly Library, our examiners have conducted on-line searches of more than three million volumes of theses, government publications, seminar materials and old books.

National Digital Science Library
We also joined the National Digital Science Library, which is run by the Korea Advanced Institute of Science and Technology. This library gives us access to academic theses and scientific journals of 200 domestic libraries and information centers.

Information services available to the public (including computerized services and search files contained in libraries remote from your Office and patent information posted by your Office on the World Wide Web)

E-Patent Portal System
We established the E-Patent Portal System to transform our Web site into an on-line service for the cyber community. For on-line registration, applicants can get e-signatures and codes via the Internet.

Through a unified portal, all kinds of intellectual property can be filed on-line with the ease of sending e-mail. Customers can pay their fees through Internet banking; and they are informed of the legal status of their applications through e-mail or mobile phone. At our Web site, they can also get diverse certificates and search IPR information. Moreover, “by one call or by one click” customers can get answers to most questions concerning intellectual property rights. This interactive process has overcome the limitation of the one-way notification system.

On-line Certificate Issuance System
We began to issue digital signatures in real-time in February 2002 and issue certificates at our Web site in real-time in December of the same year. Through the On-line Certificate Issuance System, we provide prompt services such as making referrals, issuing various certificates and photocopying documents related to filing, registration and trials. This service enables applicants to request and receive seven kinds of certificates, and to download from the Internet eight kinds of electronic dossiers such as priority certificates. Applicants can also use our Web site to check the status of their requests. Through this service, relevant organizations can verify the authenticity of documents submitted by clients, and we can promptly notify applicants of the progress of their application by e-mail and SMS.

E-filing system
We improved the functions of the e-filing system so that each applicant can request an applicant’s code and the use of electronic documents. Applicants can also use our Web site to change their personal information.

Korea Industrial Property Rights Information Service
Since KIPI’s independence in December 2001, the Korea Industrial Property Rights Information Service (KIPRIS) has provided a specialized IPR information service. In 2003, KIPRIS provided free on-line access to approximately 27 million items of domestic and foreign IP information, and the number of KIPRIS users increased from 3.8 million to 4.1 million.

KPA search service
Since July 2001, searchable KPA data has been available to the general public at our English Web site and at KIPRIS. With weekly updates, our Web site allows applicants to get up-to-date information on the legal status of their applications.

IP Mart
In April 2000, we launched the Internet Patent Mart, called the IP-Mart, to create opportunities for transferring patented technology on-line and to overcome the limitation of short-lived brick and mortar technology fairs. The IP-Mart’s URL is . The mart also gives a variety of IP information to individual inventors and small and medium-sized enterprises (SMEs) for the purpose of promoting innovation. In 2003, we enlarged the IP-Mart’s database from 50,000 to 55,000, and there were 20,000 users.

Regional or local patent information centers
In 2000, we set up local patent information support centers to publicize the IPR system and disseminate IPR information on a national scale. The centers disseminate IPR information in areas where IT illiteracy is widespread, as well as in industrial complexes and in areas with a high SME concentration.

In 2003, approximately 88,700 people used the centers to acquire IP information, either by visiting the centers in person or making a phone call. Moreover, 11,213 participants received free IPR education through local programs.

Call Center
We established a Call Center to integrate services for counseling and technical advice for IP clients and KIPOnet users in March 2002. In 2003, our 26 staff handled approximately 390,000 requests via the telephone, e-mail and on-line meetings. We also give our customers a call back for requests after working hours. The computerized Call Center incorporates the Customer Relations Management System.

VII. Matters concerning mutual exchange of patent documentation and information

International or regional cooperation in the exchange of machine-readable information, e.g., bibliographic data, abstract and/or full text information

IT cooperation between KIPO and the JPO
In July 2003, we agreed with the JPO on the operational manual for the electronic exchange of priority documents as well as on the exchange of information pertaining mainly to technical matters such as the electronic filing of applications, network and data exchange, retrieval systems and retrieval databases. We also agreed with the JPO to promote diverse cooperation projects, including the joint examination of patent applications with a view to sharing examination results and expanding the electronic exchange of examination information.

At the 15th KIPO-JPO Commissioners Meeting, which was held in Tokyo on December 8, 2003, both offices agreed to enhance examination efficiency by expanding the present system of electronically exchanging information related to examinations. The type of information to be exchanged includes priority right evidentiary documents for patents, utility models, designs and trademarks. The two commissioners also agreed to continually strengthen cooperation by exchanging personnel and improving IPR protection, and they agreed to hold experts meetings in various fields such as the trademark and computer sector.

IT cooperation between KIPO and the EPO
In May 2003, we agreed with the EPO to electronically exchange priority documents and to extend our exchange of information through an experts group in the areas of documentation, automation, and patent information.

IT cooperation between KIPO and SIPO
In August 2003, we also agreed with SIPO to electronically exchange priority documents beginning 2004. At the Ninth KIPO-SIPO Commissioners Meeting, which was held in November 2003, we agreed to promote seminars on IPR protection, to conduct joint prior art searches, to exchange patent examiners, and to electronically exchange priority right evidentiary documents. Through these measures, we hope to enhance mutual confidence in the examination results of the two offices and to significantly improve the convenience of applicants.

Trilateral cooperation between KIPO, the JPO and SIPO
At the First Meeting of Joint Experts Group for Automation among the JPO, KIPO and the SIPO in August 2003, we agreed to establish a technical thesaurus and a trilateral Web site, and to review the technical databases used by the three offices for examinations. We also discussed emerging issues such as electronically exchanging priority documents. At the third trilateral Policy Dialogue Meeting in Beijing, China, the commissioners agreed to promote substantial trilateral projects. For example, to develop a common Web site, to electronically exchange screening information and priority right evidentiary documents, to hold joint IPR seminars, and to develop the technical thesaurus.

Cooperation on PCT automation with WIPO
Since 1999, when the KIPOnet system was inaugurated, we have managed PCT international searching procedures and international preliminary examining procedures through our internal system of administration. However, full automation of PCT administration has been hindered by the fact that PCT documents could not be distributed in electronic form.

Since December 2001, we have tried to elaborate PCT automation by receiving priority documents on DVDs produced under WIPO's IMPACT project. In February 2002, we developed an application program and enabled electronic documents on DVDs to be used in the KIPOnet system.

In July 2003, we agreed with WIPO on the type and format of PCT documents that could be electronically exchanged. WIPO also agreed to utilize KIPO's experience for the success of PCT automation and to jointly develop a Korean version of PCT-SAFE.

Activities related to the WIPO SCIT and the WIPO Standards
In May 2003, members of the SCIT Standards and Documentation Working Group discussed the WIPO Standards. KIPO, in particular, raised issues pertaining to ST.80 (the international registration of industrial designs), ST.10/C (priority documents) and ST.8 (the IPC). We also discussed electronic databases, electronic processing of trademarks, and the EDPES (Electronic Data Processing and Exchange). As a result, the group adopted the Korean publication numbering system as one of the WIPO standards.

Medium used for exchange of priority documents

Exchange of priority documents with the JPO
In June 2001, we developed a system of managing priority documents to electronically exchange them with the JPO and in July of the same year, we began to exchange priority documents on CD-ROM. However, this method of exchange was superseded in August 2002 when we started exchanging documents on-line through TriNet. By the end of 2003, we have exchanged 12,000 priority documents with the JPO.

Electronic receipt of priority documents from WIPO
WIPO started to send PCT priority documents on CDs or DVDs to PCT member states since December 2001. In February 2002, we developed a system that enables us to handle the CD or DVD documents in our internal system.

Besides, in January 2003, we made some documents such as pamphlets and IPERs to be electronically handled within our internal system. In July of the same year, we also electronically simplified the originality check of the General Power of Attorney.

Medium allowed for filing applications

At KIPO, applicants can file applications on-line, on paper or on floppy disk. All paper-based applications are converted into an electronic format. Specifications and drawings submitted to KIPO, as well as bibliographical data on a floppy disk, can be uploaded to the KIPOnet sytem.

After implementing the on-line filing system in January 1999, we cut our operating expenses and began to provide various on-line services. For example, we referred users to various sources of information and they could ask us to issue certificates. Consequently, the e-filing rate for all IPRs climbed from 74 percent in 1999 to an average of 86.5 percent in 2003. Furthermore, in 2003, the on-line filing rate for patent applications reached 93.9 percent. With simpler procedures for e-filing, the KIPOnet system enables applicants to easily apply for IPRs.

Improvement of e-filing software
For e-filing, applicants can easily prepare electronic documents in SGML format by using software called Korean Electronic Application Preparation Software (KEAPS). They can then file their application via the Internet. Launched in 1999, KEAPS has been continually developed.

In December 2001, we finished developing a state-of-the-art, Web-based editor for processing forms. As a result, applicants can make electronic documents with KEAPS and a commercial word processor such as MS Word and Hangul, which is the most popular word processing software in Korea and produced in the 1980s. In February 2002, we introduced a real-time service that issues digital signature, which had formerly been issued off-line. The requirements for e-filing such as the assignment of an application code and the declaration of first e-filing are now available on-line.

In 2003, we enabled applicants to attach to their specifications sequence listings that had been written directly on the specifications. In addition, automatically transferred to the editor for form processing, informaiton on an applicant and specification, which the applicant handwrites, was minimized.

Promotion and support for e-filing
To promote e-filing, we conduct an awareness campaign that combined education, positive reinforcement, face-to-face contact, and public relations via newspapes, e-mail, and posters every year.

We also dispatch e-filing troubleshooters. The troubleshooter helps patent attorneys and applicants, including legal entities and natural persons, to install and use e-filing software.

Implementation of the Statement of Principles Concerning the Changeover to Electronic Data Carriers for the Exchange of Patent Documents (please make a status report on the extent to which your Office has changed over to electronic data carriers for the exchange of patent documents)

For the exchange of IP information, including gazettes and priority documents, we generally prefer on-line exchange rather than CD-ROMs or DVDs.

VIII. Other relevant matters concerning education and training in, and promotion of, the use of patent information, including technical assistance to developing countries

Training courses for national and foreign participants, use of audiovisual means

Cyber International Patent Academy
The Cyber International Patent Academy offers on-line training courses. The academy completed its contents and database by the end of 2001, and opened the on-line service in May 2002. It trains a diverse group of people interested in IPRs and inventions from elementary students to senior citizens. In the courses, experts in industry, law, administration and education present relevant IP information, including basic knowledge of IPRs. In 2003, the academy ran 57 courses and its Web site had more than 34,000 hits.

International Intellectual Property Training Institute
In 1987, the IIPTI was established in Seoul as an affiliated organization of KIPO; it initially offered 11 IPR training courses. It moved to Daedeok Science Valley in Daejeon with the support of WIPO and the UNDP in February 1991. Currently, of the IIPTI's 50 courses, the following four courses are for foreign trainees:

Course on the IPR system of Korea
A course on the IPR system of Korea, which is financed by the Korean International Cooperation Agency, has been held twice a year since 1987. The course explains in detail the Korean IPR system and the development of Korean IPR laws and policies. It targets public officials from developing countries who work in the IPR field.

WIPO Asian Regional Seminar
The WIPO Asian Regional Seminar has been held every year since 1988 in cooperation with WIPO. The seminar aims to help IP experts from the Asia-Pacific region to develop the international IPR system. Participants discuss the recent trends and hot issues of the IPR system and IPR-related treaties. Although the theme varies each year, previous themes have ranged from managing human resources to the computerization of IP administration.

Seminar on IPRs for IPR enforcement staff
A seminar on IPRs for IPR enforcement staff has been held annually in cooperation with the JPO since 2000. The participants include public officials engaged in IPR enforcement, such as customs agents, police, and the staff of intellectual property offices. The goal is to intensity efforts to protect IPRs and to promote international cooperation, especially with respect to laws and treaties related to IPR protection and case studies from the public and private domain on measures to protect IPRs.

Course for IPR instructors
In 2001, the IIPTI cooperated with WIPO in establishing a course for IPR instructors. The course is designed for public officials from the Asia-Pacific region who are engaged IP training. It offers an opportunity for exchanging information and sharing experiences in IP training, as well as developing training expertise.

Assistance to developing countries (sending consultants and experts, receiving trainees from developing countries, etc.)

Technical Cooperation Project for developing countries
Under the Technical Cooperation Project of IP Automation in the APEC Region, which was approved at the APEC Intellectual Property Rights Experts Group in March 2002, we successfully conducted technical consultation on automation for the IP offices of Thailand in June 2003 and Peru in September 2003. We analyzed the IP procedures and IT status of these two offices, and established a plan to give direction to their policies on IP automation. The results of the consultation and our experience, which we acquired while developing KIPOnet, show that a universal automation vision can be applied to all IP offices with the help of efforts to harmonize IPR administration. Most problems that IP offices face when developing their system can be prevented by common strategies because the problems stem from similar causes.

In July 2003, we were allocated a budget of US$150,000 for the project, covering the period of 2004.

Promotional activities (seminars, exhibitions, visits, advertising, etc.)

Presentation of the KIPOnet system at international events
We highlighted the efficiency of the KIPOnet system at the following events:

· EPIDOS users' meeting on Japanese patent information in Vienna, October 2003
· Europe Asia Heads of Intellectual Property Offices Conference in Singapore, November 2003
· EPIDOS Annual Conference 2003 in Luxembourg, November 2003.

Studies to identify trends in new technology, e.g., by the use of patent statistics, preparation of monographs, etc.

Survey and analysis of patent statistics
In 2003, we analyzed the trends of approximately 870,000 patent applications (except for non-disclosed patents) for the 18-year period from 1983 to 2002 and of 360,000 patents registered between 1948 and 2002. We analyzed the trends with respect to domestic or foreign applicants, technology, academic field, region and company.

We plan to institutionalize a survey of relevant patent information in order to formulate and implement a national R&D policy. The aim is to establish a policy for disseminating patent information for the national technological revolution.

In addition, by using a variety of KIPO's information databases, the Statistical Information Management System produces various statistics and policy data related to intellectual property. The system has tools that enable us to efficiently manage large-volume data and to provide various features for end-users.

Improvement of the Patent Information Analysis System
The Patent Information Analysis System (PIAS) enables applicants to analyze technology and IP trends of certain technological fields in which they are interested. The system automatically collects patent information from the Internet, edits databases, and displays the results of analysis in more than 40 types of graphs or tables. It can also expedite data loading and analysis, solve frequent bugs such as deactivation of the reservation button, filter data errors, and prevent the input of unnecessary data.

In 2003, we made our data-collecting module more adaptable to the types of data type from the Web sites of the USPTO, Delphion, Korea Institute of Science and Technology Information and WIPS.

IX. Other relevant matters

1.	Classification is allotting one or more classification symbols (e.g., IPC symbols) to a patent application, either before or during search and examination, which symbols are then published with the patent application.
2.	Preclassification is allotting an initial broad classification symbol (e.g., IPC class or subclass, or administrative unit) to a patent application, using human or automated means for internal administrative purposes (e.g., routing an application to the appropriate examiner). Usually preclassification is applied by the administration of an office.
3.	Reclassification is the reconsideration and usually the replacement of one or more previously allotted classification symbols to a patent document, following a revision and the entry into force of a new version of the Classification system (e.g., the IPC). The new symbols are available on patent databases.