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Annual Technical Report 2003 on Industrial Design Information Activities submitted by Republic of Korea (SCIT/ATR/ID/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 expression "industrial designs" covers industrial designs and models. Offices which issue design patents should report their design patent information activities in this series of Annual Technical Reports.

I. Evolution of registration activities

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

In 2003, the number of industrial design applications rose slightly from 37,587 to 37,607, an annual increase of 0.05 percent. The number of registered trademarks climbed from 27,235 to 28,380, an increase of 4.2 percent.

By industrial enterprises, Samsung Electronics filed the largest number of applications (1062) and was granted the highest number of registrations (774). Of foreign companies, Matsushita Electronic Industrial Co., Ltd ranked first in applications with a total of 95, while Toyota Jidosha KK ranked first in registrations with a total of 113.

II. Matters concerning the generation, reproduction, and distribution of industrial design documents and of secondary sources of industrial design information, i.e., official gazettes

Publishing, including printing, copying techniques and electronic printing

Gazette publication

Until April 1998, hard copies of the Industrial Design Gazettes were published two or three times a month, two or three months after the publication date, and were disseminated to the general public by mail for public inspection of applications.

From May 1998 to June 2001, the Industrial Design Gazettes were published on CD-ROM with a mixed-mode data format and a user-friendly interface using the EPO's Mimosa software, and they were distributed inside and outside the country. The CD-ROM gazette was issued in PDF format with SGML data. It included a Korean language font for foreign users and supported English installation for users with an English operating system. The Korean language version of the Adobe Acrobat Reader had to be installed for making gazette inquiries.

Beginning July 2001, KIPO began posting daily PDF gazettes on its Web site. This on-line version has replaced the CD-ROM version though a master CD-ROM of each publication is archived. This enabled KIPO to expeditiously and inexpensively provide information to its customers while cutting down publication expenses and allowing users easy access to information via the Internet.

Data Conversion Center

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

Since we redesigned the conversion process in 2003, the center has been able to automatically handle numerous processes such as receiving paper documents, conducting formality checks and converting data. With state-of-the-art technology such as Multi OCR, dual key-inputs and automated verification of electronic data, the center can now convert documents without delays and errors.

We have now outsourced these processes to the Korea Institute of Patent Information (KIPI), which is a specialized intellectual property rights (IPRs) information agency founded by KIPO in 1995. In 2003, the center digitized 469 kinds of paper-based documents and a total of 420,104 items, and it reduced the average digitization period from 4.2 days to 2.02 days.

Main types of announcements of the Office in the field of industrial design information

Internet gazette search service

We have provided an Internet gazette search service at our Web site for our 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 SMS (Short Message System).

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.

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.

Databases 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 classifying, reclassifying and indexing of industrial design information according to the classification systems applied

Classification and reclassification activities; Classification system used, e.g., International Classification for Industrial Designs (Locarno Classification), other classification (please indicate whether industrial designs are classified by your Office and, if so, which classification is used)

We use the Korean Industrial Design Classification System, a unique system comprising 73 main classes. Although we have not yet adopted the Locarno Classification, we indicate the Locarno Classification on official gazettes that have a search index containing information such as classification, applicant, application number/date, publication number/date and registration number/date. Moreover, in 2003, we included a screen image such as icons and relevant classifications.

Industrial Design Classification System and classification guidelines

Owing to the Industrial Design Classification System, which we constructed in September 2000, the ratio of automatic classifications has increased because the system enables us to classify goods by keyword.

In 2003, we supplemented the system with the classification of 36 types, 31 pair-designs and screen images, as well as the names of goods for 1500 new items since 2000.

To maintain objectivity, we also published guidelines for classifying industrial designs. The guidelines include a variety of practical cases, such as 15 classes from the E group to the G group and approximately 38 out of 73 classes of goods.

Bibliographic data and processing for search purposes

With regard to prior application and prior registration, we loaded bibliographic data and images dating back to 1999 into the Industrial Design Search System. We also loaded national designs as well as bibliographic data and full images extracted from the CD-ROM gazettes of Japan and WIPO.

IV. Search file establishment and upkeep

File building

Design database

In 2003, we added 350,000 items of data from foreign and domestic gazettes and catalogs. On the basis of the new examination guidelines, which were amended in July 2003, we also established a database of references for screen images such as GUIs and icons. We classified the data by type of goods and loaded the data into the Design Search System. We periodically update the data in a batch format.

Data Management Center

Since May 2002, we have managed the Data Management Center. The center compiles high-quality data through systematic analysis; it also generates and processes data and fixes data errors. In 2003, we analyzed the following:

- Data generation: Rejection (32 cases from 1994 to 1998)
- Data analysis: To understand the cause of data errors and to prevent delays or errors, we analyze the data of industrial designs in the KIPOnet database and fix errors with the aid of the SQL program.

Storage, including mass storage media

By the end of 2003, we had stored the data from 2.24 million domestic and foreign designs in TIFF or SGML format on a Design Search System disk.

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

For easy public access, the official gazettes of the GB, CA, CN, TW, RU and TH are available at our IP Library on microform, roll film or tape cartridge. The searchable data in the Design Search System comprises 890,000 items of data from the Japanese Design Official Gazettes, 600,000 items of data from other countries and 1.09 million catalogs.

V. Activities in the field of computerized search systems for industrial designs

In-house systems (online/offline)

Enhancement of the Industrial Design Search System

With the development of an intelligent system for searching designs, we have completely automated the examination of design applications, thereby significantly shortening the examination period and enhancing the quality of examinations.

In the past, we conducted documentary examinations mainly by comparing design applications or registrations and the drawing files of product catalogues collected in the market after displaying the drawings of design applications in the form of a folding screen.

At the end of 2003, we completed a design and product database encompassing about 2.5 million designs. We also provided each examiner with two 21-inch LCD monitors. Of the two LCD monitors, one shows the designs of new applications, while the other searches for and compares similar designs from among the 2.5 million designs on the design database. The system can search tens of thousands of designs per minute, not only reducing the examination time by one-third but also improving the accuracy of examinations.

The technology for editing drawings also has been incorporated into the new system. Examiners can accurately detect any error in the design drawings and notify the applicants of the error. The editing device can also be used for revision or correction, thus expediting the return of corrected designs.

We developed a search function for screen images and a function that enables examiners to attach a written opinion to a rejection reference drawing, and we expanded the database of gazettes, prior application drawings and catalogs.

To process searches of drawings, database, notifications and electronic approvals in a bundle, we upgraded the memo function.

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 various types of industrial property such as 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), data 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 Server 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 6.2Web 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 industrial design services available to the public (relating to facilities, e.g., for lodging applications, registering designs, assisting clients with search procedures, obtaining official publications and registry extracts)

Planning, administration, automation, security

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 and public key security.

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 their fees. 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 Registration Request System and On-line Opposition Request System

Since the launch of KIPOnet in 1999, on-line payment of the initial fees, registration fees and annual registration fees has been possible through Internet banking. 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.

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.

Collection management, preservation

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.

VII. Matters concerning mutual exchange of industrial design documentation and information

International or regional cooperation in the exchange of industrial design information, e.g., in the form of official gazettes

The JPO has provided us with industrial design gazettes on CD-ROM since 2000 and the German Patent Office has done so since 1989. We disseminate our Official Gazette of Designs and Trademarks on CD-ROM to 23 countries and two international organizations, including the AU, CA, DE, ES, FR, GR, IR, IT, JP, PH, RU, SE, SG, TR, US and the EP. We receive official gazettes in paper form or on CD-ROM from such countries as the JP and the DE.

VIII. Matters concerning education and training including technical assistance to developing countries

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

Briefing sessions for PCT-Madrid international applications

We held free briefing sessions for PCT-Madrid international applications in Seoul, Busan and Gwangju. The aim of these sessions was to widen the use of PCT international patent applications and Madrid international trademark applications and to support individual inventors, SMEs and venture companies seeking to acquire international patent rights and trademark rights promptly and inexpensively.

The Madrid Protocol for international trademark applications came into effect in Korea on April 10, 2003. We expect it to streamline procedures for international applications for trademarks and service marks.

At the briefing sessions, experts answer questions about the PCT, international patent strategies, strategies of foreign companies with respect to PCT international applications, the strategies and main points of Madrid international applications and the how to fill in international application forms.

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.

Training courses for national and foreign participants

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 30,000 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 intensify 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 in IP training. It offers an opportunity for exchanging information and sharing experiences in IP training, as well as developing training expertise.

IX. Other relevant matters