SCIT.ATR.PI.2004.KR

Annual Technical Report 2004 on Patent Information Activities submitted by Republic of Korea (SCIT/ATR/PI/2004/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 2004, the number of patent applications was 140,115, an 18.1% increase over the previous year, while the number of patent registrations reached 49,068, an 11.1% increase over the previous year.

For utility models, the number of applications reached 37,753; a 7.5% decrease over 2003, while the number of registrations was 34,182; an 8.3% decrease over 2003.

By industrial field, the electricity and communications still ranked first, accounting for 77,956 applications or 55.6% of all patent applications, while the machinery ranked first for utility model applications, accounting for 8632 applications or 22.9%.

Among domestic enterprises, Samsung Electronics filed the largest number of patent applications (14,892) and was granted the largest number of registrations (3874). Among foreign businesses, Philips Electronics ranked first in patent applications with 1391, while Matsushita Electric Industrial ranked first in registrations with 476.

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
Beginning July 2001, on its web site, KIPO began posting daily PDF gazettes, which includes granted and laid open applications of patents and utility models. This online version replaced the previous CD-ROM gazettes that were published in PDF format with SGML data until June 2001 for distribution inside and outside the country. The CD-ROM gazettes included a Korean language font for foreign users and supported English installation when using an English operating system. The Korean language compliant version of Adobe Acrobat Reader had to be installed however for making gazette inquiries.

A master CD-ROM of each publication is archived even after the Internet gazette publication. With this innovation, KIPO expeditiously and inexpensively provided easy access to information via the Internet to its customers while cutting publication expenses.

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

By redesigning the conversion methodology in 2003, the Center automatically handles receiving, formality checking and data converting in the same process. By applying state-of-the-art technology such as Multi OCR, dual key-inputs, and automated verification of electronic data, the Center prevents delays or errors during the conversion process.

In January 2004, we introduced color-scanning technology for documents attached to applications. In 2004, the Center digitized a total of 364,202 documents, which used a combination of 469 different kinds of paper-based documents, including 5531 patent applications and 6639 utility model applications.

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

KIPO’s Web site
On KIPO’s Web site, applicants can find the following:
·Announcements of undelivered notifications due to an applicant’s change of address
·Advance notice of patent expiry due to non-payment of fees
·Other notices such as changes in laws or fees

Internet gazette search service
KIPO provided an Internet gazette search service at its web site beginning July 2001. After the publication date, applicants can freely refer to PDF documents via the Internet at any time during the opposition request period. After the opposition request period, they can find information on granted and laid open applications from the Korea Institute of Patent Information (KIPI) website . Since May 2003, they can see the full text of the corrected applications on KIPO’s web site. They are also notified about their interests through a push-mail service and Short Message System (SMS).

Word processing and office automation

Since its launch, the KIPOnet system has been continually improved through development and improvement of subordinate system. Electronic approval and electronic application-receipt systems have streamlined KIPO's internal administrative processes and enhanced the transparency of KIPO's approval process.

KIPO communicates examination results to applicants via the Internet or mobile telecommunication service, publishes official gazettes on the Internet, and handles most registration and opposition procedures online. By starting development of the Online Trial System in 2002, KIPO computerized all IPR administrative procedures except for the parts that require human judgment. In 2004, with the development of KIPOnet II, KIPO made an environment for non-stop service which enables e-filing 24 hours a day, real-time notification, and PCT online filing.

Online Trial System
The On-line Trial System, launched in July 2002, transfers trial dossiers through the E-Dossier Management System, enabling electronic preparation and receiving of the decisive trial documents and the party-concerned trial documents. The system also manages various time limits such as the deadline for filing a written correction or reply, thus shortens the trial period by utilizing trial decisions and a database of cases.

In April 2003, the system included a program for sharing trial decisions with the Patent Court and the Supreme Court. If the Intellectual Property Tribunal informs the Patent Court, or the Supreme Court of a withdrawal of a trial request, those organizations halt the relevant trial.

Online Registration System
The Online Registration System handles all matters from creation to lapse of registration for patents, utility models, industrial designs, and semiconductor layout designs. It maintains semi- permanently all registration-related data, and allows users inside and outside KIPO to have online access to information relating to registration.

Since the launch of KIPOnet in 1999, online payment of initial fees, registration fees, and annual registration fees have been possible through Internet banking and with the completion of the On-line Registration Request System in July 2002, other official fees can be paid on-line, such as fees related to the changes in the register, the transfer of rights, and recordal of exclusive or non-exclusive licenses.

KIPOnet enables anybody to submit an opposition to an application after being laid open for public review. Furthermore, KIPO examiners use the Online Registration System to confirm and give a final decision on proceedings involving oppositions and cancellation petitions. This system helps reduce the examination period and minimizes the risk of misplacing or overlooking physical documents.

In May 2003, KIPO developed a system that notifies an applicant of a deficiency of registration fees or annuities. It gives an applicant an informal time extension for payment, which is about to become due. Even after due date, if applicants pay within a short grace period, they can keep their IPRs alive.

Electronic Approval and Routing System
The Electronic Approval and Routing System enabled electronic approval for IPR and general administration. The electronic approval system covered 98.6 percent of all documents approved in 2004. The system comprises two major parts: an approval system for IPR examinations, introduced with the KIPOnet system in 1999; and an approval system for general administration, launched June 2000. The system is used for the following:

·Electronic approval: preparation, approval, dispatch, and receipt of electronic documents, management of a document box, and circulation of documents.
·Electronic mail: preparation, transmission, receipt, and management.
·Electronic bulletin board: posting and review
·Management and preservation of records.

In 2004, the system added a pop-up window showing messages on approval status of documents and for managing individual schedules.

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

Abstracting, reviewing, translating

Data Management Center
Since May 2002, KIPO managed the Data Management Center. The Center compiles high-quality data through systematic analysis. It generates and processes data, and fixes data errors. In 2004, data analysis was conducted on the following:

1) Data generation
·Rejections: 20,455 patents from 1974 to 1999; 1555 utility models from 1978 to 1998
·Registrations: 9518 patents from 1967 to 1999; 2265 utility models from 1973 to 1999
·Trials: 1388 patents from 1994 to 2004

2) Data verification
Data verification is needed for accurate database searches and proper IPR database administration.
·Inspection of the search database: 72,000 patents from 1990 to 1998 and 62,000 utility models from 1971 to 1995
·Comparison of the search database with the administration database: 113,000 utility models from 1971 to 1997; 53,000 rejected dossiers from 1983 to 1999; 36,000 registered dossiers from 1984 to 1999; 2000 trial dossiers from 1992 to 2003; and 57,000 optical files from 1968 to 1991

3) Data analysis
To understand the causes of data errors and prevent delays or errors, KIPO analyzed more than one million patents and utility model data in KIPOnet and fixed 973,000 errors using SQL.

4) Data Transfer
In order to improve public data availability and accuracy, KIPO provided KIPI with the 1.2 million pieces of data for patents and 766,578 raw pieces of data for utility models in 2004. KIPI serves the general public by packaging raw data as well making such raw data available through a free patent information search service on the Internet called the KIPRIS .

Korean Patent Abstracts
KIPO publishes CD-ROMs of Korean Patent Abstracts (KPA) in English since 1997 and distributes them domestically and abroad.

In 2004, KIPO published 80,503 patent applications; 68,859 applications by domestic applicants, 11,644 applications by foreign applicants. In total 4205 granted patents were published; 3078 patents by domestic applicants, 1127 patents by foreign applicants. This volume made for a total of 526,000 patent records by the end of 2004.

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
KIPO uses the International Patent Classification (IPC) as its official classification system. Preclassification is outsourced to KIPI and each examiner confirms which subgroup an application should be classified under. KIPO does not reclassify previous applications. In 2004, 176,000 applications for patents and utility models were classified in accordance with the IPC.

Bibliographic data and full-text processing for search purposes

Since first publishing gazettes on CD-ROMs in May 1998, KIPO uses the searchable SGML format. It also converted earlier data into SGML format. Currently, KIPO's examiners search the full text of Korean unexamined patents and utility models published as far back as 1983. They can also search gazettes from the JPO, EPO, and USPTO, as well as examined Korean patents and utility models issued since 1947.

IV. Search file establishment and upkeep

File building

KIPO continues 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 2004, the amount of patent technology data in the KIPOnet search system reached 98.561 million patents comprising 7.840 million pieces of domestic patent data and 90.721 million pieces of foreign patent data. Data was extracted from the above and 41,000 digitalized data from registrations, rejections and trial dossiers.

To improve the quality of data, KIPO also established a policy to standardize business processes related to data quality and investigate customers' needs based on the analysis of customer service request (CSR), requests within KIPO, and the performance of the Data Conversion Center and the Data Management Center.

DatabasestatusofKIPO - Database status of KIPO

Storage, including mass storage media

Storage configuration
KIPOnet's storage configuration is divided into two sections, IP administration and the search system. Since electronic applications are original copies and comprise the majority of the operating data, the storage and archiving of electronic applications is essential to the operation of the KIPOnet system. Consequently, KIPO applied a Raid 1 mirror system for disk storage.

Search systems apply Raid S or Auto Raid according to the kind of storage disks. The Raid S is the fundamental means for protecting data. Auto Raid, however, is automatically adjusted to the volume of data.

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

Foreign data available through KIPO's consists of the following:
·Bibliographies: Search Master (JP/1975~), IFD (EP/1974~)
·Abstracts: Japanese Patents (JP/1975~1996), FPD (EP/1974~)
·Full Texts: Japanese Patents and Utility Models (JP/1975~), USAPat (US/1975~), Espace-A (EP/1978~), Espace-B (EP/1990~), Espace-world (EP/1978~Nov. 2002), Impact Rule87 (Dec. 2002~)

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

In-house systems (online/offline)

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

In 2004, we developed additional functions for the Intelligent Search System so that KIPO staff can view all relevant applications for prior art through a matrix for IPC, F-term, USPC, E-CLA, and with a maximum of 30 representative drawings simultaneously. We also designed an automatic comparison system for prior art.

KIPOnet II
To implement KIPOnet II, which will provide nonstop service and a work-at-home examination environment, we collected approximately 740 customers' opinions through Customer Service Request (CSR), suggestions from external users groups, KIPOnet supporters, and other users. According to the results, we analyzed 1800 existing tasks to make detailed measurements in 2003.

In 2004, we completed fundamental infrastructure for online work-at-home examinations, real time PDF notification, 24 hours a day e-filing service, administration systems for PCT e-filing, and online exchange of PCT documents with WIPO.

External databases

Through the Non-Patent Literature Search System, our examiners efficiently search the databases of STN, CA (Chemical Abstract) and IEEE abstracts. Every year, the scope of databases is extended along with provisions for an integrated user-interface. We also provide science literature such as Delphion, LexisNexis, ScienceDirect, and KP-Journal via the Internet.

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

KIPOnet contained approximately 34 subsystems in 2004. This was achieved after integrating the legacy systems from 46 subsystems used in the 2003 version. Such systems play a role in managing the data produced in each phase of the procedure, dealing with matters that originate in the transfer of data to the next phase, and streamlining the administration of searches. According to a survey in 2004, approximately 87 percent of our internal users have been satisfied with the service provided by the KIPOnet system.

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 retained by KIPO's databases. The system' s tools efficiently manage large-volumes of data and provide various features for end-users.

Model Office System
Since December 2000, KIPO operated the Model Office System; a testing interface for newly developed systems. KIPO greatly increased the stability and efficiency of the KIPOnet System by testing modified or newly developed programs under the Model Office System before deployment.

Data Management System
The Data Management System simplifies the procedure for correcting users' input errors and for changing data in the old systems. It maintains a history of data changes, and guarantees correct changes that promptly meet the requests of applicants and KIPO departments.

Applied Process Monitoring System
The Applied Process Monitoring System aims to prevent problems caused by delays in work processing. It also provides information on problem-management according to application type and application form. The system analyzes the cause of problems and establishes measures to handle them.

Quality Management System
In December 2000, KIPO constructed the Quality Management System to facilitate the management of output, data map preparation, error status analysis, computerized data change and so on. The system enhances work productivity by establishing standardized processes; it systematic process management; and balances the coordinates departmental and individual workloads. Moreover, it facilitates efficient quality management and process improvement through continual inspection of the system and improvements in customer satisfaction. Moreover, the Integrated Management System was established to carry out real-time monitoring and manage performance, error recovery, and security of the internal administration systems. In November 2001, KIPO was granted an ISO 9001 Certificate by the Korean Foundation for Quality for its development, management, and servicing of the KIPOnet system.

Knowledge Management System
The demand for organized management of knowledge inspired KIPO to introduce the Knowledge Management System (KMS), in October 2001. It is dedicated to the efficient management of the knowledge through the integrated management of a variety of information and intellectual property retained by KIPO. It facilitates the sharing of information among staff members. It allows KIPO staff to utilize various management tools such as knowledge maps, knowledge warehouses, personalized portals, and cyber knowledge communities. It also provides this information optionally through personalized portals. It helps activate knowledge management by improving the productivity of the 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

Hardware
KIPOnet uses 32 UNIX servers (Enterprise), and 31 NT servers. For greater availability, we constructed a clustering system between the Receiving and the Sending Severs, the Documents Management and the Publication Servers, and the Administration Automation and the General Information Management Servers. The Receiving Server, for example, has a set of programs that enables the administration to cope with the unexpected problems with the Sending Server. In other words, in case of system failure, the partnered server temporarily substitutes for the other. The interoperability of clustering allows time to address the problem. Since servers based on the clustering structure use the same database when applying the Oracle Parallel System, the accuracy and suitability of data is maintained if any failure occurs in the servers.

The storage capacity is 84 terabytes. RAID 1, 5, S and Auto RAID are used according to the method of data protection. The peripherals consist of four backup devices, 17 jukeboxes and 319 items of network equipment. For security, we also keep 32 pieces of equipment such as VPN and IDS.

In 2004, to improve the performance of that hardware, we dualized our homepage system, upgraded the medium-capacity disks, and as well as implemented a real time backup system between the Headquarter and the Seoul Branch.

Network
For performance improvement, we integrated our internal network into the General Government Network in September 2004. Furthermore, we integrated once physically divided networks into an internal network for IPR administration and an external network for public access, in order to access to the two networks simultaneously. The integrated network has a bandwidth of 100 Mbps. We also completed Dense Wavelength Division Multiplexing network between the Headquarter and the Seoul Branch Office.

Software
In 2004, we enhanced the KIPOnet system by upgrading its software as follows:
·Weblog of homepage server: from version 3.0 to 7.0
·Oracle Web server (iAS) of homepage server: from version 9.0.3 to version 9.0.4
·Application Vantage: from version 9.0.1 to version 9.3
·Model Office Server: TestDirector 8.0 sp2
·Web Application Server for the E-filing System (Weblogic): from version 6.1 to version 8.0
·Model Office Server Oracle: from version 8.1.7.4 to version 9.2.0.5
·FileNET engine: from version 3.6 to version 4.0
·Performance Measurement Tool: LoadRunner from version 7.8 to version 8.0

Even though one server may encounter an obstacle such as a system failure, we can offer nonstop service for our customer by the other server due to the Oracle Webserver (iAS) and individual commercial software clustering. We also rearranged our database in electronic dossier organized by year and improved storage methods for more stable operation. For public service, we improved a function for downloading notifications on our website so that our customers can restart a halted downloading just after hindered on the website. They can also easily get a fast response to their queries from our website due to the 25 categorized SQL queries, which correspond to their queries in natural language.

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, KIPO provides 24-hour emergency services aimed at stabilizing the server and network. KIPO instituted a System Management Team, which regularly monitors the system and immediately recovers from system failure. To raise the efficiency of the KIPOnet system, and for the convenience of applicants and clients, KIPO operates online filing from 8:00 a.m. to 9:00 p.m.

For the full operation of the KIPOnet system, KIPO strengthened its accident-prevention activities, constructed an around-the-clock monitoring system, and continued to improve system performance. An outsourced system integration company is assigned to the operation of application software and hardware. In particular, the company is operating 34 sub-systems, including e-filing, internal administration and search system, and maintain the main server, storage media and network equipment.

To publicize and elaborate the KIPOnet system, we continue to stabilize the system with the operation of a User Help Desk and an On-site Trouble-shooting Team. Lectures on how to use e-filing system and online services at the International IP Training Institute (IIPTI) are also given.

In addition, to efficiently manage its clients and promote various online services to the general public, KIPO introduced the patent-CRM (Customer Relationship Management) and began the operation of Call Center. Both provide a single window for guidance or professional counseling on IPR protection. As a result, KIPO can accumulate client feedback for better policies and IT strategies for the future.

Our security system is based on the public key infrastructure for the encryption and decoding of applications. We have also applied a single sign-on system for tighter security in accordance with the standardized Directory Access Protocol.

Quality Improvement of Public Service
In December 2004, we established a disaster recovery system for e-filing and planned to extend this to examination, trial, and registration within 2005 and to the search system within 2006. As measurements for better performance of the KIPOnet system, we upgraded e-filing software so that an applicant can perform formality check of his or her application before filing with KIPO. We simplified relevant procedures for applicants by reducing to 267 kinds of documentary forms from 459. We also offer customized service through homepage reorganization. Finally we created the infrastructure for non-stop e-filing services.

Collecting, acquisitions, preparation

IP Library
The IP Library archives patent documents worldwide 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 21 countries, four international organizations, and one company. The collection of patent documents includes 18,870 CDs, 274,775 films, 28,208 volumes of paper documents and 3259 DVDs from the USPTO and WIPO.

The library also possesses non-patent literature donated by or purchased from other sources. This material, which comprises 26,359 volumes and 503 periodicals related to science and technology, along with CD-ROMs of annual reports and statistics. The collection is arranged by class or numerical order. All of these materials can be searched by KIPO's examiners or by the public. The electronic database is provided at the Internet corner of the IP Library. The library also provides a service for offering copies of original electronic material such as electronic journals and e-books.

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

Cooperation Between Libraries
Since KIPO became a member of the Korea Institute of Science and Technology Information in 1978, it has been provided with an interlibrary loan service and document delivery service for a variety of IP-related publications.

KIPO’s examiners have used on-line searches to search over 3.4 million volumes of theses, government publications, seminar materials, and books based on the agreement with the National Assembly Library to exchange information since 2002.

National Digital Science Library
KIPO also joined the National Digital Science Library. The Korea Advanced Institute of Science and Technology provides access to academic theses and scientific journals of 395 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
KIPO established the e-Patent Portal System to transform KIPO's Web site into an on-line service for the cyber community.

For online registration and e-filing, applicants can make requests for applicant codes each and the use of electronic documents at once in order to get digital signatures and codes via the Internet. At this time, KIPO encourages the widespread use of digital signatures by authorized organizations. With the applicant code and digital signature, they can file all kinds of intellectual property online with the ease of sending e-mail. Also, they can change their own personal information on KIPO’s web site.

They can pay their fees through Internet banking, and they are informed of the legal status of their applications by e-mail and SMS (Short Message Service).

At KIPO’s web site, they can also request and receive seven kinds of certificates, download eight kinds of electronic dossiers such as priority certificates via the Internet, and check how far their requests have been processed. 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.

Korea Industrial Property Rights Information Service
Since KIPI’s independence in December 2001, the Korea Industrial Property Rights Information Service (KIPRIS) provided specialized IPR information services.

In 2004, free online access was provided to approximately 25 million data of domestic and foreign patent and utility model information records. The number of users increased to 4.2 million from 4.1 million in 2003. Also this service has been extended to cover legal status and foreign patents from US, JP, and Europe, as well as Korean application and granted patents.

KPA search service
Since July 2001, searchable KPA data is available to the general public at KIPO’s English Web site,and through KIPI’s KIPRIS since December 2001. With weekly updates, the Web site allows applicants to get up-to-date information on the legal status of their applications.

IP Mart
In April 2000, KIPO 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 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 2004, the IP-Mart’s database was enlarged to 60,000 from 55,000 in 2003, with 21,000 users. By the end of 2004, 98 technology transfers were conducted.

Local Patent Information Center
To publicize the IPR system and disseminate IPR information on a national scale, KIPO designated local patent information centers in 2000. These centers disseminate IPR information in areas where IT inexperience is widespread, industrial complexes, and in SME-concentrated areas.

In 2004, approximately 78,393 people used these centers for acquiring IP information, or receiving consultation via a visit or on the telephone. Also, 17,572 participants received free IPR education through special local programs.

Call Center
To integrate scattered counseling resources and promptly provide technical advice, KIPO established its Call Center in March 2002. Its roles can be divided as follows:

·Counseling: procedural and technical advice for (electronic) filing, examination, registration, and trial, search and use of patent information, and evaluations for disputes such as IPR infringement
·Customer Relationship Management: customized information offerings based on the consultation records of past phone requests and opinions collected through customers’ satisfaction survey for better policies and promotional events
·Other: managing a quick response system on the Internet, dispatching a troubleshooter to help applicants with e-filing, on-line meetings between an examiner and an applicant through the local patent information centers and the Multimedia Center in KIPO.

In 2004, the total 30 staff of the Center fielded 450,000 inquiries

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 Infrastructure for sharing examination results between IP offices
For the ultimate purpose of sharing examination results with other national offices, we have provided foreign users with the legal status of Korean applications and KPA data free of charge through KIPRIS on the Internet since May 2004. Together with this, we developed a Korean- English Translation Engine for the electric and electronic fields and established a technical terminology dictionary in December 2004.

IT Cooperation for mutual exchange of IP information
We held an IT experts meeting with the JPO in September and with the EPO in November 2004 to discuss the use and dissemination of patent information and the electronic exchange of search databases including priority documents. We also agreed with SIPO to mutually cooperate on IT in areas such as electronic exchange of priority documents, implementation of traditional knowledge databases, and IP automation systems in December 2004.

Trilateral cooperation between KIPO, the JPO and SIPO
The JPO, SIPO and KIPO agreed to establish the Technical Thesaurus for the trilateral website during the Joint Experts Group for Automation (JEGA) meeting in October 2004. The three offices also confirmed to promote substantial trilateral cooperation projects at the fourth trilateral Policy Dialogue Meeting in Tokyo, as well as discuss technical reviews for mutual use of examination results and the electronic exchange of priority documents.

Cooperation on PCT automation with WIPO
KIPO also developed its own receiving system for PCT online filing and corresponding adminstration, which has been available to Korean applicants since November 2004.

To enable all countries to take advantage of the benefits of electronic filing under the PCT, KIPO adapted its system in cooperation with WIPO to make it available to all PCT receiving offices. Within the Korea-Fund-in-Trust, KIPO plans to develop PCT-ROAD, which will be responsible for the following matters:

·Processing PCT electronic filings received on physical media or other means
·Checking that the international application conforms to the legal and technical requirements under the PCT
·Assigning a receipt number and issue confirmation upon receiving an international application
·Upload filings from physical media such as a CD-R to a database on a PC Workstation, so that Home Copy and Record Copy requirements can be met
·Managing International Applications (Home Copy)

Activities related to the WIPO SCIT and the WIPO Standards
At the fourth Standards and Documentation Working Group (SDWG) in April 2004, KIPO suggested the XML DTD for 117 kinds of PCT e-filing documents and also participated in the fifth meeting in November 2004 to discuss relevant issues for establishing or amending various standards.

Medium used for exchange of priority documents

Exchange of priority documents with the JPO
Since August 2002, KIPO has exchanged priority documents online through TriNet with the JPO, which had once only been available on CD-ROM from July 2001. In 2004, we exchanged approximately 22,000 priority documents with the JPO.

Electronic receipt of priority documents from WIPO
KIPO developed a system that receives electronic documents related to PCT documents on DVD-ROMs internally in February 2002. WIPO IMPACT CD/DVD receipt system was developed in January 2003. In July of the same year, we started electronic services related to a General Power of Attorney.

As a result, we were the first in the world to begin to electronically exchange documents with WIPO beginning in September 2004.

Medium allowed for filing applications

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

After implementing an online filing system in January 1999, KIPO was able to cut its operating expenses and begin to provide various online services including information referral and requests of certificate issuance. In 2004, the e-filing rate for patent applications climbed to an average of 96 percent from 94.7 percent in 2003 and for utility model applications up to 82.3 percent from 80.9 percent in 2003.

Improvement of e-filing software (KEAPS)
For e-filing, applicants can easily prepare electronic documents in XML format using software called Korean Electronic Application Preparation Software (KEAPS), and file their application via the Internet.

The requirements for e-filing such as the assignment of an application code and the declaration of the first e-filing are available on-line. The e-filing software enables applicants to make electronic documents with a commercial word processor such as MS Word or Hangul . Applicants can directly attach to their specifications sequence listings that had been written on the specifications. In addition, automatically transferred to the editor for form processing, information on an applicant and specification that the applicant handwrites was minimized.

In 2004, we also adopted XML as a document standard for e-filing software an have done the following improvements:

·Formality checking before submitting an application to KIPO
·Receiving a diverse range of formatted documents attached to an application
·Supporting transmission of notifications from KIPO to an applicant

Promotion and support for e-filing
KIPO conducts awareness campaigns that combine education, positive reinforcement, face-to-face contact, and public relations via newspapers, e-mail, and posters to promote e-filing and to encourage use of the local patent information centers. In 2004, we held free training events 45 times a year at the local centers.

KIPO also dispatched a troubleshooter to help applicants with e-filing. The troubleshooter helps to solve problems of patent attorneys, company offices, and individual applicants related to the installation and use of e-filing software. The e-filing troubleshooting and support section at the Daejeon headquarter and the Seoul Branch Office aided in the e-filing of e-filing of 5234 applications in 2004 with three troubleshooters.

Implementation of the Statement of Principles Concerning the Changeover to Electronic Data Carriers for the Exchange of Patent Documents (please provide 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 opened in May 2002. It trains a diverse group of people interested in IPRs and inventions in general 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 2004, the academy extended to 85 courses from 57 courses in 2003 and hosted approximately 63,000 users. In particular, the Academy had agreements with 16 universities for promotion and use. Of those universities, seven universities granted class credit to the 2700 students who finished the Cyber IP Academy courses with the help of individual tutor.

KIPO is also developing interactive multimedia content on intellectual property (IP) for small and medium-sized enterprises (SMEs) under an agreement with WIPO in November 2004. KIPO agreed with the WIPO Worldwide Academy to jointly launch courses such as DL-101 (covering the main areas of IPR in English) and KL-101 (covering science technologies in IP in Korean) for students of domestic universities affiliated with KIPO.

International Intellectual Property Training Institute
In 1987, the International Intellectual Property Training Institute (IIPTI) was established in Seoul as a KIPO affiliated organization. It initially offered 11 IPR training courses and moved to Daedeok Science Valley in Daejeon with the support of WIPO and the UNDP in February 1991. As of 2004, of the total 80 courses, IIPTI offers three courses for foreign trainees as follows:

·WWA Seminar on IPR: 3-day Seminar for people who have completed Distance Learning (DL-101) provided by WIPO/WWA to discuss international intellectual property rights trend and its development

·Introduction of Korean IPR (Sponsored by KOICA): 14-day course for public officials working on IP related area from developing countries and LCD countries to introduce Korean policies of promoting invention, techniques in invention and other education, and the exchange of information related to invention education with participating countries

·WIPO Asia Region Seminar: 3-day seminar to discuss the latest issues and trends in the areas of domestic and international intellectual property rights with Asia and Pacific region developing countries' government officials and IP experts

The Institute also jointly launched a distance-learning course with the WIPO Worldwide Academy in the spring and autumn of 2004. The course is three-month distance learning course (DL101 of WIPO/WWA) about patent, trademark and copyrights for the general public, while The Cyber International Patent Academy run the same course for college students.

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

Technical Cooperation Project for developing countries
Succeeding in ISP consulting for Thailand in 2003, we conducted further ISP consulting service for Vietnam in May 2004. According to the Technical Cooperation Project of IP Automation in APEC Region, by matching APEC's funds with an equivalent sum, we have successfully conducted technical consultations on automation for those IPOs.

We analyzed the IP procedures and IT status of each Office, and established an ISP to give direction to its policies on IP automation. The results and KIPO's experience acquired during the development of KIPOnet show that a universal automation vision could be applied to all IPOs with the help of efforts to harmonize IPR administration. Most problems that IPOs face during system development can be prevented by common strategies since problems stem from similar causes.

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

Presentation of the KIPOnet system at international events
KIPO reiterated the efficiency of the KIPOnet system at the following events:

·Presenting the KIPOnet system as a model case for e-government at the International Innovation Exhibition held in Seoul in July 2004, amid participants from 70 countries sponsored by the International Institute of Administrative Sciences and the International Association of Schools and Institutes of Administration.
·Published the Innovation Inventor, Your KIPOnet in June 2004 and distributed to foreign IPOs and visitors to KIPO
·Participated in EPIDOS Annual Conference 2004 in Luxembourg and 2004 Patent Information Fair & Conference in Tokyo in October 2004
·Participated in Far East meets West in Vienna - Forum on patent information from Japan and the Far East in November 2004.

Institutionalization of the Use of Patent Information
Realizing that lack of patent analysis causes redundant investments, we are trying to improve the efficiency of Government-funded R&D by preventing such duplicated investments.

In 2004, we led other government agencies to amend the regulations and guidelines so that patent information can be used in the planning and evaluation of government-funded R&D projects. To prevent duplicated reporting of patent applications that result from government-funded projects, contractors, such as research institutes or universities, must record in the application such relevant details as the name and code of the funding agency and the title of the project. When we receive the contractor's application, we register the application in a separate database to help us analyze the project more efficiently. We also reported a plan for disseminating patent information for effectively reforming government-funded R&D projects at a meeting of the National Science & Technology Council in December 2004.

Other Activities for disseminating patent information
To encourage scientists to actively use patent information whenever they initiate government-funded R&D projects, we held seminars on strategies for using patent information. In 2004, approximately 550 scientists participated in these seminars. We also published the Handbook on Patent Information targeting scientists in December 2004 so that they can better use valuable patent information

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
To encourage greater use of valuable patent information for R&D, we periodically publish an analytical report called Patent Trends of Korea. In 2004, we reported the results of analyzing the trends of approximately 970,000 patent applications filed from 1983 to 2003 and 400,000 patents granted from 1948 to 2003 in Korea. They were analyzed by domestic or foreign applicant, technology, academic field, region and company. We also strengthened the foundation for analyzing patent information by creating patent indicator statistics such as activity index, location quotient as well as introducing annual increasing rate, grant rate, survival rate, and transfer rate relating patent.

Patent Analysis and Patent Maps
To take advantage of patent analysis in planning R&D policies of industry and government, we produce comprehensive patent maps. The maps are the result of categorizing, analyzing, processing, and visualizing patent information.

From 2000 to 2004, we produced patent maps covering 24 technical areas each year. The maps are freely accessible on the Web site of our affiliated organization, the Korean Invention Promotion Association. KIPO also distributes patent maps on CD-ROM or through seminars and also provides training on how to use the maps.

In 2004, we also published a special issue on analysis for global patents in biotechnology and nanotechnology for relevant industry, giving an explanatory meeting.

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.