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JAPAN PATENT OFFICE

STATE INTELLECTUAL PROPERTY  
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## WIPO ASIAN REGIONAL SYMPOSIUM ON THE IMPORTANCE OF THE INTELLECTUAL PROPERTY SYSTEM FOR HIGH-TECH INDUSTRIES

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INTELLECTUAL PROPERTY INFORMATION SERVICES: PATENT DOCUMENTS AS  
A SOURCE OF BUSINESS AND TECHNICAL INFORMATION; AVAILABILITY,  
ACCESS AND COST – ONLINE DEMONSTRATION

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## I. Introduction

### 1. A Patent Documents and Information

#### 1.1 Definition

The patent system is one of the oldest institutions of market societies, and it is designed to promote and to diffuse innovation. A patent gives inventor exclusive rights over the commercial exploitation of the invention for a limited period under certain conditions in return for publication of the invention. As part of the "patent deal" between inventor and society, inventors have to disclose information about their inventions in exchange for patent rights.

This information should be sufficient to allow a skilled person to reproduce the particular invention. Thus, patent information may be helpful, for example, in avoiding some overinvestment of R&D in a particular field, pointing out technological trends and so on. Therefore, a patent document refers to a document containing patent information.

#### 1.2 Contents of Patent Document

A patent document contains two types of information: bibliographic information and technical information.

##### 1.2.1 Bibliographic information

This information is presented on the first page of the patent document and includes, mainly: dates, names and addresses of the publishing authority and of the persons or companies involved in the patent, such as the inventor, the owner of the patent right, the representative or patent agent; Classification symbols of the International Patent Classification (IPC), and, in some cases, also the national patent classification; Title of the invention, abstract of the description and a representative drawing or a chemical formula.

Each of the bibliographic data on the first page of a patent document is identified by a two-digit numerical code called INID, which is an acronym for Internationally Agreed Numbers for Identification of Data, which is universally adopted code that facilitates the understanding of the names, dates, addresses and classification symbols, even without any knowledge of the language in which the patent document is published. The two-digit numerical code is generally printed in a small circle or between brackets and placed immediately before the bibliographic data to be coded.

The presentation of the bibliographic data and the layout of the first page of most patent documents are made according to standards and guidelines elaborated by WIPO.

##### 1.2.2 Technical information

Technical information contained in a patent document usually includes four elements: a short description of the state of the art of the technology known to the inventor; the detailed description of the invention in such a manner that a technician skilled in the art is

able to work the invention; one or more drawings (or chemical formulae) illustrating visually the functioning of the invention; the claims, which define the scope of the invention.

The sequence in which these four elements of information is not internationally standardized. However, every country maintains the same presentation for all its published patent documents. Generally, the technical content of the patent document is presented on sequentially numbered pages as follows: state-of-the-art, detailed description, claims, drawings. The number of the pages of a patent document varies according to the complexity of the invention and according to the technical field. The average length of a patent document is between 10 and 15 pages.

## 2. The Usefulness of Patent Information

Patent information serves many purposes and user groups, which calls for the need to customize it for the appropriate audience. Tertiary information for benchmarking raises the interest among business managers and policymakers. Patent maps produced according to some internal standards are useful for various R&D decision makers and business managers, while drawings and other details in patent documents are useful for researchers and inventors.

### 2.1 Types of Patent Information

There are various types of patent information as follows: primary information, which is published by the patent office, such as patent gazettes; secondary information, which involves abstracts and extracts of the primary information and tertiary information, which means the index for access to the primary and secondary information or patent statistics. Patent statistics are used notably to assess and compare the inventive performance of countries or firms.

### 2.2 The purpose of Patent Information Analysis

By analyzing patent information, we can conduct the following: check the possibilities of infringing patents belonging to other companies; conduct an investigation prior to the filing of a patent application; decide the direction of the research and development activities; search for evidences concerning an opposition to a grant of patent; prevent overlapping studies and researches.

#### 2.2.1 Investigation of patents belonging to other companies

If a product interferes with another company's patent, the case may give rise to an injunction of product shipment or a damage compensation suit. In order to prevent such trouble, it is necessary to investigate whether technologies (patent or utility models), designs (designs), product name (trademarks) are identical or similar to those for which other companies have already obtained rights. If there is any patent which is likely to cause such trouble, the status of the patent should be investigated by inspecting the register. Then, a required measure should be considered such as development or adoption of alternative technologies, introduction of technologies from other companies or technological cooperation with other companies.

## 2.2.2 Investigation (of novelty of the invention) prior to the filing of a patent application

Before filing a patent application, a person desiring a patent investigates prior arts in the technical field related to his/her invention and sees whether his/her invention has already been publicly known. When the person files a request for an examination of his/her invention after the filing, he/she also checks whether there exists a senior application for the same invention filed by another person. By carrying out such investigation, wasteful expenditures such as expenses for applications of unpatentable inventions can be reduced.

## 2.2.3 Technological trend research

By analyzing the subject matter claimed in patent applications specifically in the technological field, one can find past technologies and technologies that should be developed in the future. When, according to the investigation results, it is found that a technology which has been subject to research and development has already been developed by another company, duplicated research and development can be prevented. Since the trends of research themes suggest the direction of the development of related technologies, research and development systems in other companies, the forecast on product demand, etc., one is able to obtain information useful for setting development objectives through this investigation.

## 2.2.4 Investigation of the status of patent

Registered patents may be terminated according to decisions of trials for investigation or for deferred payment of annual fees, or may be assigned or licensed to third parties. Such facts about the status of patents are recorded in the register of the KIPO, therefore, when a company finds the existence of another company's patent, which is likely to interfere with the company's product, the company should inspect the register.

## 2.2.5 Investigation of publicly known examples

When a company learns the existence of a patent application which was filed by another company and that is likely to interfere with the company's product or technology, the company should investigate materials which had been publicly known prior to filing of the patent application in order to make the application invalidated. Such materials may include magazines or catalogs as well as patent documents which the examiners could not find. If the application is still pending, such newly found materials should be submitted as an offer of information in order to prevent the application from being granted a patent. If the application has already granted a patent, an opposition should be filed during the opposition period, or a trial for invalidation should be requested after the opposition period.

## 3. Patent Information service

A government agency cannot provide all the services for the various users' requests for patent information. Therefore, the cooperation between government agency and the private sector is very important. Among these various information services, the government agency focuses on the offer of patent information on internet and the sale of bulk data. And more value-added information can be obtained from private information company.

### 3.1 On-line service

As internet becomes widely used, the patent information services are generally provided through on-line. Big-sized institutions and companies concerning patent information provide these on-line services from patent database of their own or by connecting with outside DB holders free of charge or on fees. This on-line service of patent information gets popular because more and more patent information providers offer information by linking services on internet.

### 3.2 Translation service

The patent translation service usually is used in two cases, for international applications and for abstracts at the request of DB operators such as patent offices. The translation of foreign document is very important as a method of approaching a new technology. The translation service is usually provided by patent law firms, and the service providers prefer to employ people who have the knowledge of both technologies and patent laws. Sometimes, the translation of the lower level tends to be done by the automatic translation software.

### 3.3 Patent Map Service

Patent map has been developed in Japan in the post-war period. Various methods of analyzing patent information have been developed in the West as well. To some extent, the methods are similar as they draw on the same type of information and uses similar approaches. Specialized patent consulting company gives patent mapping service

### 3.4 CD-ROM delivery service

This service collects the patent documents by the subjects or the company names, puts text and images into CD-ROMs, and sell them. This is provided especially at the request of customer to the CD-ROM holders.

### 3.5 Patent-watching services

A regular scan of recently published patents from around the world will help you keep a track of developments in a particular area of technology or to maintain current awareness of the patenting activities of competitors. The watching service can be set upon a monthly, quarterly or annual basis.

### 3.6 Status checks

Tracing the progress of a patent from the application stage through to grant and to establish whether any post-grant actions have been taken affecting the legal rights of a patent. Status checks are available only for a limited number of patent-issuing authorities.

### 3.7 Family matching

Identification of equivalent patents having common priority details as published by various countries or international authorities. This can help identify equivalents which are published in your own language.

### 3.8 Infringement clearance searches

Identification of patents still in force in any country, whose claimed product or process may be infringed by the manufacture, importation, sale or use of an article.

### 3.9 Other information providing services

This service includes publishing books or recent newsletters, providing patent information education's, seminars, lectures, and developing computerizing tools for patent information or patent management.

## 4. A tool for Patent Information

Since much bibliographical information is disclosed in patent documents, we can search and arrange patent information by utilizing such bibliographical information. Tools for searching and analyzing patent information have considerably improved because patent gazette have been converted into electronic data. In addition to primary information published by the patent offices, there is also a considerable amount of secondary (abstracts) and tertiary (index or statistics) information, and all of such information has been accumulated systematically, which enables anybody to search and to analyze patent information.

## II. Case of Korea

### 1. Access to Patent Information

#### 1.1 Korean Intellectual Property Office

The KIPO provides patent documents for the public by publishing various gazettes, and The KIPO established its website in 1998. Through this website, Patent Information users can gain access to the Korean Institute of Patent Information (KIPI), which provides patent information over the internet free of charge.

#### 1.2 Korea Institute of Patent Information (KIPI)

The Korea Institute of Patent Information (KIPI) is a specialized organization for providing information services related to Industrial Property Rights. It was founded in July 1995 as a closely associated organization to KIPO. KIPI has two purposes: constructing the national infra-network system of information on Industrial Property Rights, and performing a guidance role for creating superior inventions and for developing up-to-the-second technology in Korea. And it actually has strengthened national industrial competitiveness and has contributed to the technological development, by providing people in various industries, institutes, academies and patent fields with both domestic and foreign information relevant to Industrial Property Rights.

The major activities include:

- DB construction and free online service of domestic and foreign patent information;
- prior art search & analysis service;
- supply and distribution of patent information data;

- cooperationwithdomesticandforeignpatentinformation organizations;
- EducationandAdvertisementofpatentinformationmanagement.

### 1.3 KoreanInventionPatentAssociation

TheKoreaPatentAssociationwasfoundedasacorporationaggregat ewith66original memberswhowereinterestedintheprotectionofindustrialpropertyrightsin1973.Itwas expandedandrenamedKoreaInventionPatentAssociationin1982,andwasrebornasKorea InventionPromotionAssociation(KIPA),aspecialcorpor ation,undertheprovisionofthe InventionPromotionActin1994.

TheKIPAsellsnotonlyCD -ROMgazettebutalsopapergazettes .

### 1.4 PrivatePatentInformationCompany

AccordingtothesurveyofKoreanIntellectualPropertyRightsCenter,thereare 45 patentinformationcompaniesinKorea.Theyprovidepatentinformationserviceassuch mentionedinSection I.

Ithinkthatthereareperhapsahundredormoretypesofusersandtypesofusesthat definenumerousnichemarketsacrossthewidespectru moftechnologiesthatarethesubject ofpatentgrants.Privatepatentinformationcompanieswillcreatecustomizedproductsand servicesandwillcatertothesenichesandsub -markets.Forexample,OneKoreanCompany hadsuccessfullycommercializedtheK oreanandJapanesepatentsastheproductin1994. Now,thatcompanyhasbeenprovidingtheservicesforabout1000enterprises,20national policyresearchlaboratories,20universities,50patentofficesand30,000individualmembers.

## 2. ProjectforSM Es

### 2.1 Patent Map Development and Supply Project

Thepurposeofthisprojectistoanalyze theflowandchangeoftechnologythrougha PatentMap(Patenttechnologyanalysismap)byclassifying,processingandarranging ,based onspecificprinciples,a largequantityofdomesticandoverseaspatentinformationrelatedto specifictechnicalfields,and tosupplytheproductstosmall -mediumenterprisesandventure corporations,ultimately toreduceknowledgegap andtopromoteinnovation .

Thisprojecthasbeen developedbyKoreanInventionPatentAssociationsince2000, andwillcontinue.

### 2.2 PatentInformationAnalysisSystemDevelopmentProject

Thepurposeofthisprojectwastoassist SMEs(SmallandMedium Enterprises)by providingausefultoolfor analyzingpatentinformation. Ittakesalotoftimeandcosttoanalyze patentinformation.IftwoR&Dmanagers conduct multidimensionalanalysisof800patentdocuments,arranging anddisplayingthemby assignee(company),inventor,andpatentclass(technologyarea),itoftentakesapproximately 320man hours(16man -hoursperdayx20days) .However,itnormallytakeslessthan2 hoursforone analysttoperformthesamescopeofanalysiswith atoolforpatentinformation (ifyouwanttoknowaboutthisindetail,see [www.wisdomain.com](http://www.wisdomain.com)). Becauseofthisreason,it



is almost impossible for SMEs to make a patent map assessing and forecasting technology in their business area.

The KIPO had launched this project in 2000, and produced Patent Information Analysis System (PIAS) in 2001. PIAS (Patent Information Analysis System) is a free software to analyze patent information downloaded from the Korean Institute of Patent Information (KIPI), and KIPO provided PIAS CD-ROM to enterprises, national policy research laboratories, universities, patent offices and individual members.

### 3. Korean Patent Searching

KIPO provides information on the Korean Patent Abstracts (KPA) with the legal status information of the application, KPA is an English abstract of Korean patent.

In order to search KPA, you need to type the following address in the address window:  
<http://eportal.kipo.go.kr:8581/home/portal/ehhtml/index.jsp>

Another way to get to the KIPO's patent search site is through the KIPO's homepage at <http://www.kipo.go.kr> or the KIPI's homepage at [www.kipi.or.kr](http://www.kipi.or.kr)

### REFERENCES

- [1] Granstrand, Ove, *The Economics and Management of Intellectual Property*, Edward Elgar, 1999
- [2] JPO, *Industrial Property Rights Standard Textbook*, JPO, 2000
- [3] Hitchcock, David, *Patent Searching Made Easy*, nolo, 2000
- [4] WIPO, *Background Reading Material on Intellectual Property*, WIPO, 1988
- [5] Lee, Keun et al., "Impact of Industrial Property Rights System on Technological Innovation by the Firms in Korea", Seoul National University, 2002 (Forthcoming)
- [6] Guellec, Dominique, "Patents as indicators of technology output: A review", OECD, DSTI/EAS, 2001
- [7] Gewehr, H Wesley, "The Information Dissemination Policy of the United States Patent and Trademark Office", *World Patent Information*, Vol. 18, No. 2, pp 61-67
- [8] OECD, *The Measurement of Scientific and Technological Activities using Patent Data as Science and Technology Indicators*, Patent Manual, Paris, 1994.
- [8] KIPO, "Introduction to KIPONet System", Korean Intellectual Property Office, 2001
- [9] Kim, Kyoung Muk et al., "A survey of Patent Information company in Korea and Worldwide", KIPRC, 2001
- [10] [www.kipo.go.kr](http://www.kipo.go.kr)
- [11] [www.kipric.org.kr](http://www.kipric.org.kr)
- [12] [www.uspto.gov](http://www.uspto.gov)
- [13] [www.patent.uk.gov](http://www.patent.uk.gov)

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