

Patent Information Search

Chapter 1: Patent Information Overview

Although the patent information is released after a certain period from the application, the latest technology information is provided for all technology fields, and because the classification & the entry format is standardized information search is made very convenient. The publication of application have a technology information function including technology standard in the related field, technological knowledge, research of overlaps & investment prevention, technology development direction setting etc. and the publication of registration have a function of providing rights information including monopolistic exclusive rights indication, technology transfer & utilization when implementing, licensing & negotiations etc.

1. Patent Information

A. Characteristics

Patent application information is released after a certain period (generally released 1year & 6months after but early release is possible) from the application date, but compared to the technology documents it is the latest and is the technology information that includes all technology fields. It includes information documents not recorded in journals and full texts, and contains records of all technology areas. Information search is made very convenient because the classification & the entry format are standardized. Especially, the publication of registration published after passing the patent judgment is information of rights including exclusive rights and is a standard for determining infringement.

As the source of the latest technology information, the patent information includes specific descriptions of technology background, problem areas & solutions, and search is made convenient because its classification is uniform to worldwide methods like that of IPC. It adopts the patent report types, bibliographies, identification codes prescribed by WIPO so the entry formats are standardized.

B. Function

(1) Technology Information Function (publication of application)

With the publication of application, technology standards can be determined in reference to already developed technologies and technological knowledge can be obtained. They also assist in the research of overlaps and prevent investments, and technology development direction hints can be gained enabling utilization in developments. Technology trends in particular fields can be determined by extracting mutually related technologies thereby enabling the determination of domestic & international corporate technology status.

By forecasting technology development directions & issues of competitors overlapping research & investments can be prevented. Also, after releasing the publication of application, the right is given to warn against patent infringement by others.

(2) Rights Information Function (publication of registration)

The publication of registration indicate the inventor's affiliation, applicant (right holder), technology scope, and rights information to the public, and by preventing overlap research & investments they enable efficiency in technology developments. Also, they provide convenience to technology

transfer from competitor companies and are utilized as important materials in selecting appropriate technology for implementation. It can also assist in the operation of joint research and licensing.

Objections and invalidation judgments can be claimed in relation to other technology registrations that are related to one's own company.

2. Forms of Patent Information

A. Classification of Data Types

Forms of patent information are classified into text type data and image type data. Text data are entered by typing on the keyboard or recorded in text units through character recognition systems. In operating the computer text DB, words and letter units can be recognized. So, with the text type DB, keyword search etc. is possible. On the other hand, the image data are scanned paper documents and if there is no advanced operation function such as pattern recognition, they can only be recognized in single images. So, with the image sections keyword search etc. is not possible.

In the common patent document DB, bibliographies, abstracts etc. are recorded in text form, and specialized information is recorded in image form. This has taken into consideration costs, efficiency, usage etc. in DB construction.

B. Classification of Recorded Details

Depending on the DB construction purpose or usage etc. there are those that have the entire open and registered patent documents while there are those that only record basic details of documents like application number, application date, inventor etc. If individual documents are seen in terms of record scope they can be classified into bibliographic data, abstract, full text etc.

(1) Bibliographic data

The bibliographic data contains only basic document information such as application number, application date, publication number, publication date, inventor, applicant, priority right, patent classification & title of invention etc. and it is used to search priority rights claim or patent processing details, and is recorded in text form.

The representative DB with only the bibliographic data is the IFD and can be used at the patent library at the Intellectual Property Office or the Korean Intellectual Property Office.

(2) Abstract

The abstract is a summary of the bibliographic data and invention details. Because the invention purpose and effects are included in the abstract, there is an advantage in that technology details can be quickly determined in the search. In Korea, a summary must be included in the application documents, and in most cases the details in the summary are included in the abstract, and it is usually recorded in text form.

Of the abstract type data, there is the FPD (first page data) which is in a common format developed jointly by patent offices of 3 countries (Trilateral office: EPO, JPO, USPTO), and it is a data type that contains a one page summary of the bibliography, abstract, and representative drawing. This is a construction using the SGML (Standard Generalized Markup Language) which enables the reading of the mix mode including data text (bibliographic data, abstract) and image data (representative drawing).

In some cases there are DBs that record the FPD in image form. (the first page of ESPACE-EP, US patent report) DBs containing abstracts include the WPI (world patent DB constructed and sold by the English firm DERWENT) and the FPDB in the previously explained FTD format which combines patent documents of 3 countries. And abstracts of each patent office include those from Korea's KPA, Japan's PAJ, the US CASSLS/CD_ROM & US Patent Office internet patent information service, ESPACE-ACCESS of the European Patent Office, and COSMOS of France etc.

(3) Full Text

Full text data records all the contents of the documents including of course the bibliography. In the case of publication documents the bibliography, summary, claim scope & representative drawing are recorded, and in the case of the registered documents the bibliography, detailed explanation of the invention, claim scope, summary, and the entire drawing are recorded. In consideration of cost, time, and printing convenience, the full text DB is mostly recorded in image form.

C. Country Classifications

Most of the patent documents are constructed and provided by the relevant country or the patent office of the region. However, there are cases where many patent offices construct combined DBs like the FPDB of the 3 nation patent offices, and the WPI which collects, constructs, and sells patent documents worldwide for commercial purposes. So, patent documents can be classified into the domestic DB, foreign DB, and the international DB which combines documents of the whole world.

D. Record Medium Classification

If a classification is made according to recorded media, book material types are stored and the micro-film which minimizes these materials are stored long-term, but recently they have been recorded using the digital recording medium which enables computer search (magnetic tape, magnetic disk, CD, DVD).

3. Types of Patent Information

A. Stage 1 documents

The original documents published for the first time at the patent office include patent reports, publication patent reports, utility model reports, publication utility model reports etc. and because the bibliographic data, specifications, drawings etc. are also recorded, technology can be determined precisely.

B. Stage 2 documents

As documents processed from the stage 1 material, they include extracts & summaries of the bibliography, specifications, blueprints etc. and can be classified into rights abstract and chemical abstracts (CAS) etc. of Korean Patent English Abstracts, US Patent Abstracts, Japanese Open Patent Abstracts (PAJ) etc.

C. Stage 3 documents

As documents processed to enable easier access to stage 1 and stage 2 materials, they are patent information that has mainly processed bibliographic data including classification index, patent news, PFS, NDB etc.

D. Miscellaneous

Miscellaneous documents include all the patent documents apart from those in stage 1, 2, & 3 documents such as annual reports, patent classification index, patent classification table, industrial property law booklet, related magazines & theses etc.

4. Forms of Materials by Countries

A. Korea

The patent documents of Korea are divided into publication of patent application, publication of patent registration, publication of utility model application, and publication of utility model registration. 18 months after application, the publication of application is published and once the judgment has been passed and registration is confirmed, the publication of registration is published on payment of the registration fees.

B. Japan

The patent documents in Japan are largely divided into publication of patent, publication of patent official, patent notifications, patent application, publication of utility model application, publication of utility model, and publication of utility model registration.

In the case of patent notifications and utility notifications, they are only published for period between 1927 and 1996 while the notification system was still in place, and with the elimination of the notification system in 1996, the patent reports, and registered utilities are published on payment of the registration fees once the judgment has been passed and registration is confirmed.

With the publication of the utility model pre-registration system in 1994, utility registrations are reports published when registrations are confirmed with judgments on the utility model method and basic conditions, and the official reports are patents and utility models relevant to publication of officials that have applied with the PCT with Japan as the designated country. The document number in Japanese patents indicates the Ilwang year currently used in Japan (Sohwa 1 year = 1926, Pyeongseong 1 year = 1989).

C. USA

US patent documents are divided into patent application open specifications and patent specifications, and because the application announcement system was not in place before 2001 in the USA, the details were released after patent registration. However, in accordance with the execution of the revised law in November 2000, applications are announced 18 months after the application date.

In the case of the US, registration number types are different for each classification which includes utility patent, design patent, plant patent, reissue patent etc.

D. Europe

Patent documents published by the European Patent Office are largely divided into patent application open specifications and patent specifications. Patent application open specifications are classified into 4 categories (A1, A2, A3, A4) depending on whether a research report has been attached.

E. WIPO

Patent documents published by WIPO are the PCT patent application open specifications, and because patent registration status for relevant applications are not decided, notification documents in accordance with patent registrations do not exist, and the PCT patent application open specifications are classified into 3 categories (A1, A2, A3) depending on whether an international research report has been attached.

F. China

Patent documents of China are divided into invention patent application open specifications, invention patent registration report specifications, and utility model patent application specifications, and in China, the patent right of intellectual property is called the exclusive (profit) right and it includes the exclusive invention right, exclusive utility model right, and exclusive exterior design right.