

The Role of Patent Information in Supporting Innovation

Access to technology information has expanded rapidly in recent years, a result of the increasing availability of technical documents in digital format and the progressive development of electronic means of distribution and retrieval. As the quantities of technology information available to the public have grown, so too have the challenges of finding relevant information from which useful knowledge can be extracted. Patent documents represent a rich source of technical, legal and business information presented in a generally standardized format and often not reproduced anywhere else.

A patent has two important functions:

- *Protection.* A patent allows the patent holder to exclude others from commercially exploiting the invention covered by the patent in a certain country or region and for a specific period of time, generally not exceeding 20 years.
- *Disclosure.* A patent gives the public access to information regarding new technologies in order to stimulate innovation and contribute to economic growth.

The presentation and present abstract will focus on the second of these fundamental functions.

It is, therefore, important to remember that although the *protection* offered by a patent is *territorial*, covering only the jurisdiction in which the patent has been granted, the *information* contained in a patent document is *global*, available as a disclosure to any individual or organization worldwide, thus allowing anyone to learn from and build on this knowledge.

Patent information is an important resource for researchers and inventors, entrepreneurs and commercial enterprises, and patent professionals. Patent information can assist users to:

- Avoid duplicating research and development effort;
- Determine the patentability of their inventions;
- Avoid infringing other inventors' patents;
- Estimate the value of their or other inventors' patents;
- Exploit technology from patent applications that have never been granted, are not valid in certain countries, or from patents that are no longer in force;
- Gain intelligence on the innovative activities and future direction of business competitors;
- Improve planning for business decisions such as licensing, technology partnerships, and mergers and acquisitions;

- Identify key trends in specific technical fields of public interest such as those relating to health or to the environment and provide a foundation for policy planning.

Patent information comprises all information, which has either been published in a patent document or can be derived from analyzing patent filing statistics and includes:

- **Technical information** from the description and drawings of the invention;
- **Legal information** from the patent claims defining the scope of the patent and from its legal status;
- **Business-relevant information** from reference data identifying the inventor, date of filing, country of origin, etc.;
- **Public policy-relevant information** from an analysis of filing trends to be used by policymakers, e.g., in national industrial policy strategy.

In particular, this information refers to the following:

- **Applicant:** Name of the individual or company applying to have a particular invention protected;
- **Inventor:** Name of the person or persons who invented the new technology and developed the invention;
- **Description:** Clear and concise explanation of known existing technologies related to the new invention and explanation of how this invention could be applied to solve problems not addressed by the existing technologies; specific embodiments of the new technology are also usually given;
- **Claims:** Legal definition of the subject matter which the applicant regards as his invention and for which protection is sought or granted; each claim is a single sentence in a legalistic form that defines an invention and its unique technical features; claims must be clear and concise and fully supported by the description;
- **Priority filing:** Original first filing on the basis of which further successive national, regional or international filings can be made within the priority period of one year;¹
- **Priority date:** Date of the first filing from which the innovation is protected if the application is successful and from which the one-year priority period for further applications starts;

¹ A group of applications based on a single application as described above is referred to as a “patent family.” Identifying the members of a patent family will not only reveal in which countries or regions patent protection is being sought by an applicant, but may also uncover translations of the application in different languages.

- **Filing date:** Date of submitting an individual patent application at a particular patent office and, therefore, the date from which the innovation is protected if the application is successful;
- **Designated states:** If the application is regional or international, the countries to which the rights may be extended;
- **Legal status:** Indicates whether the patent has been granted or not; if granted, the countries or regions in which the patent has been granted; and whether it is still valid or has expired or been invalidated in a particular country or region;
- **Citation and references:** Certain patent documents also include references to related technology information uncovered by the applicant or by a patent examiner during the patent granting procedure; these references and citations include both patent and non-patent documents;
- **Bibliographic data:** Refers generally to the various data appearing on the front page of a patent document or the corresponding applications and may comprise document identification data, domestic filing data, priority data, publication data, classification data, and other concise data relating to the technical content of the document.

Patent information is made available to the public through a variety of databases. Each database covers a particular set of patent documents. At present no database has complete coverage of all patent documents ever published worldwide. Thus it may be necessary to consult multiple databases in order to find and then access patent documents relevant to your interests.

Many national and regional patent offices provide free online access to their own patent collections as well as to selected patent documents from other offices. An extensive list of national patent databases can be found at:

http://www.wipo.int/patentscope/en/search/national_databases.html

WIPO offers free online access to all international patent applications within the framework of the Patent Cooperation Treaty (PCT) and their related documents through its PATENTSCOPE[®] search service: <http://www.wipo.int/patentscope>

A number of commercial and non-profit providers also offer free patent information databases online. Certain commercial providers have established value-added services for access on a fee-paying basis including translations of patent information and additional systematic classification, for instance by chemical structures and reactions or biological sequences.

Moreover, professional search services exist that can perform prior art searches on behalf of potential patent applicants and may be useful if an initial search does not produce desired results.

An extensive list of patent service providers can be found at:

<http://www.piug.org/vendors.php>

A search carried out in patent documents allows you to find information on recent developments in a range of technical areas. In fact, for some fields of technology, new developments are initially and sometimes exclusively recorded in patent documents. Nonetheless, it is critical to keep in mind the limitations of the data in which the search is being carried out. No single data source covers all available technology information, or even all available patent information. The information may be limited with respect to the range of dates or countries for which records are available or in terms of the search facilities offered.

Effective searching of patent documentation and other sources of technology information often requires a solid knowledge of the technical field to which an invention belongs. An awareness of the terminology and issues related to this field are necessary if appropriate search criteria are to be identified.

Among the search criteria that can be used to find relevant patents are:

- **Keywords** - A specific technology can be defined simply by using very specific words which describe the most basic or essential concept of the invention. Keywords can be searched in any part of a patent document, e.g., in the abstract, description and claims, as supported by the search service used.
- **Applicant or Inventor** - A particular applicant or inventor, whether a company or individual, is often associated with a specific technical field. The name can be used to search technology and patent documentation in this field. Example: Applicants include companies such as Sony, Daimler, Novartis, etc.; while inventors could include names such as Dyson, Jobs, etc.
- **Patent classification** - All patents are systematically classified according to their specific technical field. Though various national classification systems exist, the International Patent Classification (IPC) system is a common system shared by all patent offices. Further information on the IPC, including how to use keywords to find the right classification, is at <http://www.wipo.int/classifications/ipc>.
- **Other search criteria** include: patent document reference numbers such as application (or filing), publication or priority numbers (the latter refers to the first filed patent document from which subsequent filings with other national patent offices are derived), filing dates, country of origin of the applicant or inventor, data concerning the entry of an international patent application into a national procedure, etc.

These search criteria can be searched individually or combined by using logical operators, so as to retrieve the most pertinent documents for a specific technical field, or indeed, feature.