

Lecture 7. Patent information. Patent research

- ▶ Patent information
- ▶ How to conduct a patent research

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 and as specified in the claims in a certain country or region in which the patent was granted and for a specific period of time, generally not exceeding 20 years from the filing date.
- ▶ • Disclosure. The publication of a patent and in many countries patent applications give the public access to information regarding new technologies in order to stimulate innovation and contribute to economic growth

Although procedures vary amongst patent offices, the following illustrates a very generalized procedure for granting a patent:

- ▶ • **Filing**. An applicant chooses a filing route, i.e. national, regional or international, and files an application. The initial filing is considered the “priority filing” from which further successive national, regional or international filings can be made within the “priority period” of one year under the Paris Convention for the Protection of Industrial Property.
- ▶ • **Formal examination**. The patent office ensures that all administrative formalities have been complied with, e.g., that all relevant documentation is included in the application, and that a filing fee has been paid.
- ▶ • **Prior art search**. In many countries, but not all, the patent office carries out a search of the prior art, i.e., of all relevant technological information publicly known at the time of filing of the patent application or when applicable, at the time of the priority filing. Using extensive databases, expert examiners draft a “search report”, which lists relevant prior art.
- ▶ • **Publication**. In most countries, the patent application is published 18 months after the priority date, i.e., after the filing date or the priority filing. In general, a patent is also published once granted

- ▶ **Substantive examination.** Not all offices conduct substantive examination and some only do so if requested within a specified time. The examiner checks that the application satisfies the requirements of novelty and inventive step (non-obviousness) against the prior art listed in the search report. Further, he/she checks whether the invention is susceptible of industrial application and within the scope of patentable subject matter. In many countries prior art search and substantive examination are conducted consecutively.
- ▶ • **Grant/refusal.** In general, if the patentability requirement is not met, the applicant is given an opportunity to amend the application. If the examination process reaches a positive outcome, the patent is granted and the office issues a certificate of grant. Otherwise, the patent application is refused.
- ▶ • **Opposition.** Within a specified period, many patent offices allow third parties to oppose the granted patent on the grounds that it does not in fact satisfy patentability requirements. In some countries, third party observations and opposition may also be allowed in a certain time frame before the grant of a patent.
- ▶ • **Appeal.** In general, decisions of grant or refusal of a patent and decisions of opposition boards can be challenged before an administrative body or a court.

Why use patent information?

- ▶ 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

What information does a patent document contain?

- ▶ 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

Where can patent information be found?

- ▶ 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: www.wipo.int/patentscope/en/national_databases.html
- ▶ WIPO offers free online access to all international patent applications within the framework of the PCT² and their related documents and patent collections from National and Regional Offices through its PATENTSCOPE search service: <https://patentscope.wipo.int>
- ▶ 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: www.piug.org/vendors.php

Which strategies can be used to search patent information?

- ▶ 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
 - ▶ • Patent classification
 - ▶ • Dates (e.g., priority date, application date, publication date, grant date)
 - ▶ • Patent reference or identification numbers (application number, publication number, patent number)
 - ▶ • Names of applicants/assignees or inventors The criteria supported by different search services may vary.
- ▶ Some search services allow patent documents to be searched according to a broader range, others by a more limited range of criteria.

► **Literature:**

1. Lionel Bently, Brad Sherman. Intellectual Property Law 4th Edition. Oxford University Press; 4th edition (December 10, 2014), 1296 pages
2. Commercialization and legal protection of the results of intellectual activity: textbook / ed. A.N. Soldatova, S.L. Minkov. - Tomsk: Tomsk State University, 2011. - 334 p.
3. Kudashov V.I. Intellectual property: protection and realization of rights, management: Textbook / V.I. Kudashov. - Minsk: BNTU, 2004. - 321 p. Dyzhova A.A. Fundamentals of intellectual property management: Lecture notes for students of all specialties. - Mogilev: UO MGUP, 2007. - 129 p.
4. Melissa Schilling: Strategic Management of Technological Innovation, McGrawHill, International Edition 2017.
5. Tidd, J., Bessant, J.R. 2014. Strategic innovation management. Wiley, Hoboken.

Thank you for your attention!