

# Finding **TECHNOLOGY** Using **PATENTS**

An Introduction



*[www.patentscope.wipo.int](http://www.patentscope.wipo.int)*

## Patents represent a vast source of information covering every field of technology. Using patent information to find technology from around the world is easy.

### ▶▶ How does the patent system work?

The **patent system** aims to encourage innovation and economic growth by:

- **Protecting** the creativity and **rewarding** investments made in developing a new invention;
- **Publishing** and **disclosing** technical information related to new inventions.

Patents protect inventions for a specific period of time – generally no more than 20 years – and only in a specific country or a group of countries.

Patents are published after a specific time – usually 18 months after filing – disclosing all the technical details of the invention.

It is important to differentiate between the two principal functions of the patent system:

- **Patent protection** is granted on a **territorial** basis, i.e., protection is limited to a specific country or region; while
- **Patent information** is disclosed **globally**, i.e., anyone, anywhere in the world can learn from this information.

### ▶▶ What does patent information cover?

**Patent information** comprises all information which has either been published in a patent document or can be derived from analyzing patent statistics. It 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 or validity status in specific countries;
- **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 which can be used by policymakers, e.g., in national industrial policy strategy.

More particularly, the information in a patent document refers to the following:

- **Applicant:** the name of the individual or company applying to have a particular technology protected;
- **Inventor:** the name of the person or persons who invented and developed the invention;
- **Description:** a clear and concise explanation of known existing technologies and problems associated with them and how the new technology is applied to solve these problems; specific examples of the new technology are also usually given;
- **Claims:** a statement defining the scope of the protection sought or granted through the patent;
- **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.

Fig. 1 Front page of an international patent application

The image shows the front page of an international patent application. On the left, there are several blue callout boxes with white text and arrows pointing to specific parts of the document:

- Type of application or publication, in this particular case an International Application:** Points to the top header section.
- Applicant's name and address:** Points to the 'Applicant' field in the 'INVENTOR AND APPLICANT' section.
- Inventor's name and address:** Points to the 'Inventor' field in the 'INVENTOR AND APPLICANT' section.
- Agent or attorney representing applicant or inventor:** Points to the 'Attorney' field in the 'INVENTOR AND APPLICANT' section.
- Title:** Points to the 'Title' field in the 'TITLE' section.
- Abstract:** Points to the 'Abstract' section at the bottom of the page.

The document itself is a form with various fields and sections, including:

- Header:** 'INTERNATIONAL APPLICATION PUBLISHED BY THE PATENT COOPERATION TREATY (PCT)', 'PCT NUMBER', 'INTERNATIONAL BUREAU OF PATENT COOPERATION', 'CLASSIFICATION', 'PCT NUMBER', 'PCT NUMBER', 'PCT NUMBER'.
- INVENTOR AND APPLICANT:** Fields for 'Applicant', 'Inventor', and 'Attorney'.
- TITLE:** A field for the title of the invention.
- ABSTRACT:** A field for the abstract of the invention.
- CLAIMS:** A field for the claims of the invention.
- DESCRIPTION:** A field for the description of the invention.
- FIGURES:** A field for figures illustrating the invention.
- REFERENCES:** A field for references to prior art.

The information contained in patent documentation can be aggregated to provide **statistics** on levels of patenting activity within or between countries and regions.



## ▶▶ Why use patent information?

Patent information represents a vast source of technological and legal information presented in a **standardized format** and often **not reproduced anywhere else**. It can assist users to:

- Avoid duplication of 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, and patents that are not valid in certain countries or are no longer in force;
- Gain intelligence on the innovative activities and future direction of business competitors;
- Extract, analyze and review key trends in specific technical fields, in particular those of public interest, such as those relating to health and environment issues.

## ▶▶ Where can patent information be found?

Patent information is now highly accessible through online databases.

- **Free databases.** WIPO as well as many patent offices and other public institutions offer free-of-charge access to patent information. These databases tend to be more suitable for initial simple searches.

- > WIPO's PATENTSCOPE search service is at [www.patentscope.wipo.int](http://www.patentscope.wipo.int)
- > A list of national patent databases is at [www.wipo.int/patentscope/en/dbsearch/national\\_databases.html](http://www.wipo.int/patentscope/en/dbsearch/national_databases.html)
- > Statistics on national, regional and international patent activity are at [www.wipo.int/ipstats/en](http://www.wipo.int/ipstats/en)

- **Commercial databases.** Certain providers offer value-added patent information services on a fee-paying basis.

- > A list of such databases and many others can be found on the website of the Patent Information Users Group (PIUG) at [www.piug.org/vendors.php](http://www.piug.org/vendors.php)

## ▶▶ How can specific patent information be found?

Patent documents contain information in all fields of technology. The following **search criteria** can facilitate an effective technology search:

- **Keywords within text fields.** 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 and can be combined using Boolean logic.

**Example:** Keywords in the example shown on the next page could include: "glove", "sports", "soccer" or "football".

- **Names within Applicant and Inventor fields.** A particular inventor or applicant, 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 many patent offices. Further information on the IPC, including how to use keywords to find the right classification, is at [www.wipo.int/classifications/ipc](http://www.wipo.int/classifications/ipc).

**Example:** The international patent application shown on the next page has the IPC classification: A63B 71/14 "Body-protectors for players or sportsmen, for the hands".



- **Others.** 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 stage of the patenting procedure, etc.

**Example:** The international patent application shown below has:

- > publication number WO2003/071888
- > application number PCT/US2003/003327
- > priority numbers 60/358,607 US and 10/245,919 US
- > filing date of 05.02.2003
- > publication date of 04.09.2003

**Fig. 2 Bibliographic data page of an international patent application**

**International Patent Classification (IPC)**

**Reference data identifying the applicant, inventor, representative, etc.**

**Abstract contains the fundamental features of the invention (keywords are found in the abstract, as well as the description and claims)**

**Countries for which protection has been requested**

**Patent document reference numbers, e.g.,**

- publication number
- application number
- priority number, etc.

**Drawings, pictures, graphical representations are found in the abstract, as well as later in the description**

## ▶▶ An example database: WIPO's PATENTSCOPE search service

The PATENTSCOPE search service provides free access to the technology contained in millions of published patent documents. Its main features include:

- **Full-text search** facilities, permitting the contents of the whole document – and not just bibliographic data or abstracts – to be searched;
- **Status information for PCT applications and file contents;**
- **Graphical analysis** of search results;
- **RSS feeds** to help track technology developments in specific areas.

The PATENTSCOPE search service offers the user four possible levels of search. These can be chosen from the "Search" drop-down menu indicated below:

Fig. 3 Search interface



- **Simple:** for a targeted search using specific search criteria in a selected search field (e.g., full-text, ID/Number, Names, etc.);
- **Field Combination:** for additional search fields that can be combined flexibly (e.g., the title, abstract, description, etc.);
- **Advanced:** for the most flexible search strategy allowing the maximum use of all possible search criteria and their combinations;
- **Cross Lingual Expansion:** for a translation of search queries into several languages.

The user can select from multiple display options for results using the "Options" drop-down menu.



## Practical case

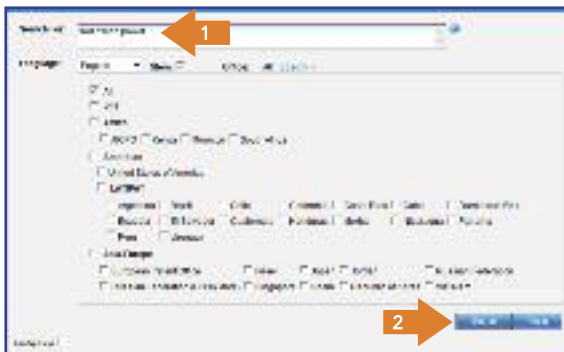
A simple search using the PATENTSCOPE search service can assist users in finding and accessing a broad range of information about a particular technology.

**For example, to gather information on solar and wind power technologies, the following steps can be taken:**

### A. Enter your search query (Fig. 4)

1. Type the keywords best describing the concept of the invention, in this case “solar”, “wind” and “power”.
2. Click the Search button.

**Fig. 4 Advanced search interface of PATENTSCOPE search service**



### B. Browse the search result list (Fig. 5)


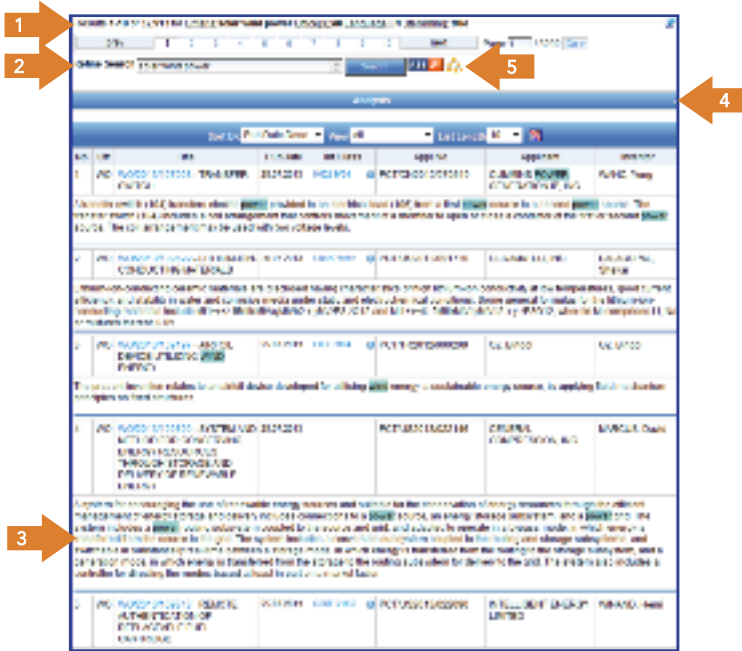
1. Indicates the search query performed and the number of retrieved documents.
2. Allows the search query to be redefined in reaction to retrieved documents.
3. Provides bibliographic data with search terms highlighted and allows access to detailed records by clicking on publication number and title.
4. Gives access to graphical analysis of the search results.
5. RSS  notification of new search results for this search query allows monitoring of patenting activity in specific areas of interest.



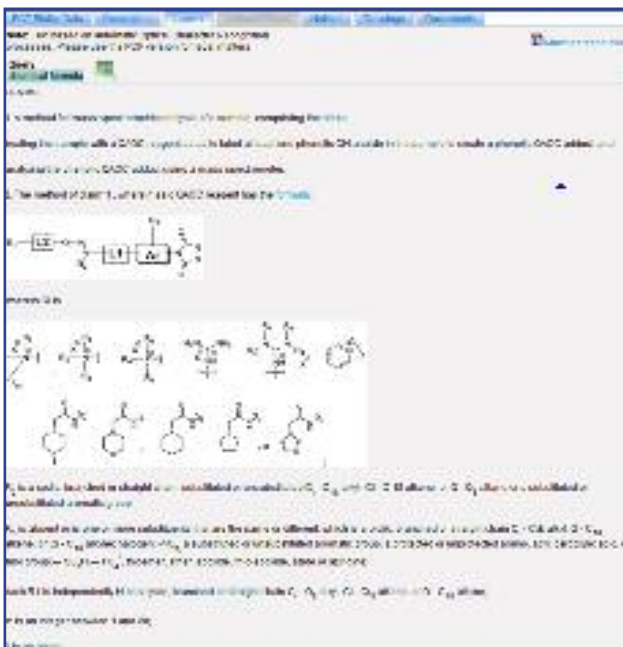
Fig.5 Search result list



C. View details of a patent document

Opening detailed records will allow full **bibliographic data** to be viewed as well as **description and claims**, **national phase entry data**, **notification of changes** in the application after publication, **drawings and related documents** by selecting the appropriate tabs.

Fig. 6 Claims



Related documents are accessible by selecting the “Documents” tab and include the original published application as well as related patent documents and notifications from patent offices (see figure below). These documents constitute important information regarding the status of the international patent application procedure.

Fig. 7 Related documents for a specific international patent application

International Applicant Status				
Date	Title	View	Download	
20.07.2012	International Applicant Status Report	HTML, PDF	PDF (34)	
Filed PCT International Application				
Date	Title	View	Download	
24.07.2011	Filed PCT International Application (A1 20110210)	PDF (12)	PDF (12), ZIP/XML + TIFF	
24.07.2011	Declaration	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Declaration	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Declaration	PDF (12)	PDF (12), ZIP/XML + TIFF	
Priority Documents for the International Stage				
Date	Title	View	Download	
24.07.2011	Request Form (PCT/RO)	PDF (12)	PDF (12), ZIP/XML + TIFF	
24.07.2011	Declaration Concerning Availability of Priority Documents (PCT/DA)	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	International Applicant Fee Copy	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Communication in Cases for Which No Other Form is Applicable (PCT/CA)	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Transmission of the GR	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Notification of Receipt of Hard Copy (PCT/HC)	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Notification of Receipt of Search Copy (PCT/SC)	PDF (12)	PDF (12), ZIP/XML + TIFF	
24.07.2011	EA/2011/081/2011-14.07.2011 (A1 - Goa)	PDF (12)	PDF (12), ZIP/XML + TIFF	
24.07.2011	Declaration Concerning Availability of Priority Documents of the International Application (PCT/DA)	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	International Search Report	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Report of Allowance	PDF (12)	PDF (12), ZIP/XML + TIFF	
25.07.2011	Application Copy as Filed	PDF (12)	PDF (12), ZIP/XML + TIFF	

Regional and international patent application files may contain “national phase entry” data, which is accessed by clicking the “**National Phase**” tab. This is important information which shows the countries where the applicant is seeking patent protection and gives the patent reference number from which it is possible to investigate whether the patent has been granted.

**Fig. 8 National status information regarding a specific international patent application**

Office	Entry Date	National Number	National Status
Australia	24.11.2008	2007263355	Published: 16.12.2008
Canada	18.12.2008	2652457	
European Patent Office (EPO)	28.01.2009	2007726025	Published: 01.04.2009 Withdrawn: 09.09.2011
India	11.12.2008	6813/CHEM/2008	Published: 27.03.2009
Japan	15.12.2008	2008515745	
Republic of Korea	19.12.2008	1020087030943	Published: 24.02.2009 Withdrawn: 15.07.2012
Russian Federation	28.01.2009	2009101385	
United States of America	09.05.2009	12304300	Published: 24.12.2009

To conclude,

Patent information:

- is easily accessible, often for free, from many search services on the Internet, e.g., the WIPO PATENTSCOPE search service;
- provides technical, legal, business and public policy- relevant information; and
- indicates where and whether a technology is protected.

**We welcome your comments**

*Suggestions and questions may be sent to [patentscope@wipo.int](mailto:patentscope@wipo.int)*

For more information contact WIPO at [www.wipo.int](http://www.wipo.int)

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