

## A GUIDE TO PERFORM AN EFFECTIVE PATENT SEARCHING AND ITS ADVANTAGES: A GLOBAL PERSPECTIVE

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### ABSTRACT

Patent search is a search made to determine whether a particular invention is novel when it is invented. It is usually done by searching the databases of previously issued patents. The number of patents being filed is increasing every year. For instance, in 2014-2015, around 42,723 patent applications were filed in India. Patent searching evaluates the chances of getting a patent grant. Therefore, instead of going forth with the filing, if one conducts the patent search, one can get a clear idea about the patentability of the invention; whether the application should be filed and the strengths and weakness of the invention. Before applying for patent registration, it is always better to know the prior arts similar to the proposed invention and possibilities and complexities involved in dealing with the prosecution process and get the benefit of patent search.

**KEYWORDS:** Patent, Prior Art, Patent Searching, Databases, Advantages of Patent Searching, Importance, Conclusion.

### INTRODUCTION

A patent is an exclusive right or rights granted by a government to an inventor for a limited time period in exchange for the public disclosure of an invention. The granting of a patent is dependent on passing tests of patentability: patentable subject matter, novelty (i.e. new), inventive step (non-obviousness) and industrial applicability (or utility).<sup>[1]</sup> Patent search is a search made to determine whether a particular invention is novel when it is invented. This is

done to check whether an invention may qualify for a patent. A patent search is usually done by searching the database of previously issued patents. Certain types of documents such as journal articles and scientific papers that describe unpatented inventions also would be searched for information on the invention.<sup>[2]</sup> Some aspects of patent searching are similar to searching other kinds of technical literature, such as articles in popular science magazines or papers in professional and academic journals. However some aspects of searching patents are sufficiently different from searching conventional literature, that a dedicated mindset, strategy and tactics need to be applied to the task.<sup>[3]</sup>

### **WHAT IS PRIOR ART ?**

A prior art search refers to an organized review of prior art contained in public documents.

- Prior art searches can be of various kinds:
  - patentability searches conducted by an inventor before filing a patent application;
  - invalidity searches in litigation conducted by the accused infringer;
  - patent examination searches conducted by a government examiner in order to determine whether to grant or reject a patent application and state-of-the-art searches for information in a technical field.
- In all cases, searches are conducted using different kinds of databases, from public databases of issued patents on the Internet to exhaustive databases including technical literature.
- Searches can be done by legal professionals, by scientists or by researchers. Prior art refers to scientific and technical information that exists before the effective date of a given patent application.
- Prior art may be found in any public documents such as patents, technical publications, conference papers, marketing brochures, products, devices, equipment, processes and materials.

Prior art is any evidence that invention is already known. Prior art does not need to exist physically or be commercially available. It is enough that someone, somewhere, sometime previously has described or shown or made something that contains a use of technology that is very similar to your invention. A prehistoric cave painting can be prior art. A piece of technology that is centuries old can be prior art. A previously described idea that cannot possibly work can be prior art. Anything can be prior art. An existing product is the most obvious form of prior art. This can lead many inventors to make a common mistake: just

because they cannot find a product containing their invention for sale in any shops, they assume that their invention must be novel. The reality is very different. Many inventions never become products, yet there may be evidence of them somewhere. That evidence whatever form it may take will be prior art.<sup>[4]</sup>

### TYPES OF PATENT SEARCH

Patent search is carried out based on the concern issues

**1. Patentability search:** Patentability search is performed to ensure that the invention in concern is not disclosed or claim or publish or use in India or anywhere else in the world.

**2. Infringement Searches:** An infringement search is conducted to determine if the invention might infringe on or be covered by unexpired patents. This type of search is concerned only with the claims of unexpired patents. Infringement can direct or inherent and infringement search are carried out by the Patent Attorneys or experts in search.

**3. Validity search:** Validity searches are generally undertaken by companies or individuals trying to determine if it is possible to invalidate another's patent. The searcher is looking for issued patents or printed publications that anticipate or make obvious another issued patent. The searcher could also be looking for earlier public knowledge on user of the invention, technical errors, fraud, or anything that would cause the patent to be declared invalid. As a result, a validity search is done to determine if an unexpired patent is valid and enforceable. This type of searching is generally done by patent attorneys.<sup>[14]</sup>

### HOW TO PERFORM A QUALITY PATENT SEARCH?

1. Understand the technology really well and find all the areas where it could be used.

2. Questioning Yourself

-What is the main idea behind this patent?

-Why was it necessary?

-What was already existing prior to this patent and what were their shortcomings?

-How it does the things that it claims?

-Where else could this be used?

-Is it possible to interpret it in a different way?

-What problems does the invention solve?

-What is the solution the invention provides?

-How does it work?

-What are the components?

-What are the applications?

3. Find all the synonyms and related technical terms that could be used.

4. Follow a narrow to a broader approach. Start with targeted logics, limited keywords, perhaps the same as the ones used in your subject patent. Read a few patents, start creating a library of keywords, of phrases and of general concepts that are related.

5. In the past, there could have been a totally different name for the technology when compared to today. Try to find that out, build a technology evolution timeline.

6. If one find a patent to be highly relevant, try to access its file wrapper, check all the citations, and legal events. These things will help us to know the commercial potential of invention and will help find prior art as well.<sup>[5]</sup>

7. Write down all the words one can think of that describe the invention. Be Broad and creative.

8. By using following keypoints, one can search patent documents on databases.

- Application Date

- Title

- Abstract

- Complete Specification

- Application Number

- Patent Number

- Applicant Number

- Patent Number

- Applicant number

- Applicant Name

- Inventor Name

- Inventor Country

- Inventor Address

- Filing office

- PCT Application Number

-PCT Publication number

9. Number search

Patent or published patent application can be searched in official sites of the patent office or paid database by using the publication number, patent application or by using the patent number. The publication number or patent number given to an application is different in every country.

## **DATABASES FOR PATENT SEARCHING**

### **1. PATENTS-COPE - (WIPO)**

-The PATENTSCOPE database provides access to international Patent Cooperation Treaty (PCT) applications in full text format on the day of publication, as well as to patent documents of participating national and regional patent offices. The information may be searched by entering keywords, names of applicants, international patent classification and many other search criteria in multiple languages. WIPO activities for improving worldwide availability, reliability and comparability of patent legal status data, e.g. to further develop patent legal status databases and widen the participation of countries in data sharing. The WIPO Centralized Access to Search and Examination (CASE) system enables patent offices to securely share search and examination documentation related to patent applications, facilitating a more effective and efficient international examination process.<sup>[10]</sup>

Website: <http://www.wipo.int/patentscope/en/>

### **2. PatFT - United States Patent and Trademark Office (USPTO)**

-The PATFT database includes full text U.S. patents (including utility, design, reissue, plant patents and SIR documents) from 1790 to the present. Patents from January 1976 to the present offer the full searchable text, including all bibliographic data, such as the inventor's name, the patent's title, and the assignee's name; the abstract; the full description of the invention; and the claims. The display of each patent's full-text includes a hyperlink to obtain full-page images of each page of the patent. Patents from 1790 to December 1975 offer only the patent number, issue date, and current US patent classification in the text display, and can be searched only within those fields. However, this limited text display also includes a hyperlink to obtain full-page images of all pages of the patent.

The AppFT database provides access to the full text of U.S. published patent applications (including new utility and plant) from 2001 to the present. The full text of a published application includes all bibliographic data, such as the inventor's name, the published

application's title, and the assignee's name, as well as the abstract, the full description of the invention, and the claims. Full page images are included.<sup>[11]</sup>

Website: <http://www.uspto.gov/patent>

### 3. Espacenet – European Patent Office (EPO)

-Espacenet is accessible to beginners and experts and is updated daily. It contains data on more than 110 million patent documents from around the world. Supporting information can help you understand whether a patent has been granted and if it is still in force. With its worldwide coverage and simple search features, Espacenet offers free access to information about inventions and technical developments from 1782 to today.

One can use Espacenet to

- ✓ search and find patent publications.
- ✓ machine-translate patent documents.
- ✓ track the progress of emerging technologies.
- ✓ find solutions to technical problems.
- ✓ see what your competitors are developing.<sup>[12]</sup>

Website: <https://www.epo.org>

### 4. JplatPat – Japan Patent Office (JPO)

-The JPO recognizes the many internal and external changes in the intellectual property environment. It believes in the importance of the intellectual property system as a global infrastructure that can flexibly respond to such environmental changes. And it is the JPO that is expected to serve as an organization capable of bringing about such a system that accommodates continual changes.<sup>[13]</sup>

Website: <http://www.jpo.go.jp/>

### 5. SIPO – China

-SIPO provides kinds of free patent search services for public to retrieve the published patent information.

Websites

-<http://english.sipo.gov.cn/>

-<http://www.psssystem.gov.cn/sipopublicsearch/ensearch/>

searchEn

-HomeIndexAC.do

#### **6. INPAIRS - India**

Website : <http://ipindiaservices.gov.in/patentsearch/search/index.aspx>

#### **7. DEPATIS – Germany**

Website : <https://depatisnet.dpma.de/DepatisNet/>

#### **8. AusPAT - Australia**

Website : <http://pericles.ipaustralia.gov.au/ols/auspat>

#### **9. CPD – Canadian Patent Database**

Websites : <http://www.ic.gc.ca/opic-cipo/cpd/eng/introduction.html>

#### **10. EAPATIS - Eurasian Patent Organization (EAPO)**

Website : <http://www.eapatris.com/ensearch/>

#### **11. Finland**

Website : <http://patent.prh.fi/patinfo/default>

#### **12. Ireland**

Website: [http://www.patentoffice.ie/en/patents\\_searching.aspx](http://www.patentoffice.ie/en/patents_searching.aspx)

#### **13. IPONZ – New Zealand**

Website : <http://www.iponz.govt.nz/cms>

#### **14. Slovenia Intellectual Property Office (SIPO)**

Website : <http://www2.uil-sipo.si/dse.htm>

#### **15. Swissreg - Switzerland**

Website : <https://www.swissreg.ch/>

#### **16. IPSum – United Kingdom**

Website : <https://www.ipo.gov.uk/p-ipsum.htm>

#### **17. IP.com**

Website : <http://ip.com/>

**18. Patents.com**

Website : <http://www.patents.com/>

**19. Google Patents**

Website:[https://www.google.com/advanced\\_patent\\_search](https://www.google.com/advanced_patent_search)

**20. Free Patents online-**

Website : <http://www.freepatentsonline.com>

**ADVANTAGES OF CONDUCTING PATENT SEARCH**

1. Patentability of an invention aims at estimating the scope of patent protection. Patent protection largely depends upon the results of the patent search. If an applicant finds prior arts similar to his invention, the scope of protection would be limited.
2. The search engine aims at exposing most similar inventions. So, the benefit of patent search would lie in the uniqueness of invention. The search result also helps in forming a basis of the cost expenditure that an applicant is about to invest in his invention.
3. Patent search results in benefits patent attorney in drafting patent application keeping in mind prior arts. If attorney finds, a certain prior art similar to the references of applicant's patent description, he can distinguish it with other prior arts. Hence, increasing the scope of obtaining patent protection.
4. A patent search can be referred as the 'foundation pillar of whole patent processes'. A patent search may cost money but it is worth spending as it ensures about patent protection. For better results, the patent search shall be initiated with unique keywords.<sup>[6]</sup>
5. Use a patentability search to avoid wasteful patent applications : Frequently a patentability search will uncover prior art that proves that the invention being considered for the patent application is not new, or that the invention is simply an obvious variation of what others have already done.
6. To improve a patent application : By becoming more knowledgeable and familiar with the literature available for the field of the invention, inventors may also be able to then use this knowledge to their advantage, by implementing strategies and methods to improve their current design and consequently draft a stronger patent application. This is critical not only to increase the chances of having the patent granted but also to help to make it litigation-proof in the future.
7. A patentability search provides information that is useful in drafting a patent application. The results of the search will identify prior art that is close to the invention, allowing the

application to be drafted in light of that prior art. If the prior art is close to the invention, areas that are patentable in spite of that prior art can be emphasized in the patent application. If the patentability search had not been conducted, it is likely that too much time and money would be spent describing aspects of the invention in the application that were not patentable, while not enough time is spent describing the aspects that are more likely patentable.<sup>[7]</sup>

8. Avoid Costly Investment Decisions : Considering that filing a patent application is more expensive than conducting a patent search, going ahead with filing a patent application without knowing if the invention meets the requirements for patentability does not make business sense. It could end up costing more in the long run, if the costs involved in submitting multiple applications are taken into consideration.

9. Gain a Competitive Advantage : One of the most intriguing benefits of performing a patent search, as it applies to a broader scale, is investigating pending patent applications or existing patents. This activity can give the inventor useful insights into their competitor's products or corporate strategies, thus making it easier to make decisions upon the venture's future direction. Technology maps (which can be created using data obtained through the patent search) are particularly useful in this sense since they can offer an accurate visualization of the competitor's R&D expenditure and diversification.<sup>[8]</sup>

### **IMPORTANCE OF PATENT SEARCH**

The number of patents being filed is increasing every year. For instance, in 2014-2015, around 42,723 patent applications were filed in India. Whereas, in 2004-2005, 17,446 applications were filed. This not really means that there was a leap of 250% in the past ten years. Not all patent applications that are filed result in registration. The primary reasons for rejection of an application are either.

- (a) The invention is not novel; or
- (b) It is obvious i.e. it does not involve an inventive step.

This is where the importance of a patent search lies. A patent search is a search conducted in patent databases as well as in the literature available to check whether any invention similar to your invention already exists. In other words, it evaluates your chances of getting a patent grant. Therefore, instead of going forth with the filing, if one conducts the patent search, one can get a clear idea about the patentability of the invention; whether the application should be filed and the strengths and weakness of the invention.

## WHY CONDUCT A PATENT SEARCH?

Filing a patent is an expensive process. The official fees or statutory fees for a basic patent filing can be anywhere from INR.5,600 – INR.28,000. Besides the official fees, the fees of the patent attorney or agent also need to be considered. Besides financial reasons, there are other reasons for conducting a search before filing a patent application in India or globally.

### Reasons

1. A patentability assessment can help us understand whether the invention is patentable and if so, how far can it be protected. For example, computer programs, per se, are non-patentable but computer programs that are manifested in a useful way can be patented.
2. A patent search reveals the prior art in your field of invention. This will come in handy when drafting the patent specification. The knowledge of prior art will help us determine if the invention has any value addition over the prior arts. This will reduce the chances of rejection by the Patent Office.
3. If the invention has no value addition then understanding the prior art will help us refine that the invention so as to make it patentable.
4. The patent search can also reveal certain companies who are keen on obtaining patents in the field of technology relating to our invention. In such cases, it gives us the lead on which companies to contact for licensing of your invention.
5. Ordinarily, every Applicant wants his patent to become commercial and therefore a source of finances. A patent search not only reveals inventions similar to our invention but also the commercial value of the invention in the economy. Based on this one can determine the commercial value of invention.
6. While applying for a patent, the applicant needs to describe his entire invention. Even if his patent gets rejected, his application would be considered prior art, open for all to see. This means that competitors can get free access to his hard work. A patent search helps avoid such a situation. Even if our invention is not patentable according to law, we can use it as a trade secret and gain revenue.<sup>[9]</sup>

## CONCLUSION

Intellectual Property Rights(IPR) is gaining importance in recent years and awareness of patent filing and protecting innovations is increasing globally. Patent filing needs patentability approach which must be evaluated before filing a patent. One of the unique characteristics of patent literature is that, matter published in this document cannot be

reported in any other information resource used by the researcher. Hence patent literature is able to cover more than 80% of the new information on inventions. Patent office databases and patent databases from centers provide information on all subjects. Patent searching information is very complicated and there are different types of searches conducted by users, information professionals, planners, attorneys and patent examiners. These searches are specialized searches and need skill in searching patent information globally. The search strategy must be proper to yield better results. Internet is the best medium to expand the scope and easy access of patent literature search. Patent search provides information about filing patent applications for knowing the developments in the subject field and for drafting of patents. Keeping in mind, the growing awareness about patents, it seems that before applying for patent registration, it is always better to know the prior arts similar to the proposed invention and possibilities and complexities involved in dealing with the prosecution process and get the benefit of patent search.

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