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TECHNOLOGICAL INFORMATION CONTAINED IN PATENT DOCUMENTS
AND ITS USE BY INVENTORS

*Lecture presented by Mr. Eduardo R. Fernandez,
President, Argentine Association of Inventor,
Member of the Executive Committee of the International Federation of Inventor's
Associations (IFIA), Buenos Aires*

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INTRODUCTION

1. When a patent Office receives a patent application, they conduct an exhaustive search. Their main objective is to find out whether the invention is novel, new and unobvious. If other patents or relevant publications exist, then the patent Office may not issue a patent. For this reason, the inventor should check and make sure another similar invention does not exist before submitting the patent application.
2. The patent application process is difficult, time consuming and expensive; therefore, the inventor should conduct a "Pre-Application Search" (PAS) before filling a patent application. In this search, the inventor should look for any printed publications, public knowledge, or patents already issued in his country or a foreign country that may relate to the particular invention. This pre-existing information is called prior art.
3. One of the principal functions of the World Intellectual Property Organization (WIPO) is to offer technical assistance to developing countries. This also includes the access to and use of technological information contained in patent documents in order to accelerate their economic, social and cultural development.

THE NOVELTY SEARCH

4. At first, an invention is just an idea. Many details are not even known or recognized as relevant parts. A novelty search based on a vague idea can only result in a vague picture of the prior art.
5. The inventor's search is not as exhaustive as the patent Office's search, but it does help the inventor determine whether someone has already patented a similar invention. It also helps the inventor obtain relevant information about other patents in the same category as the invention.
6. Seeing how someone else filled a patent application may also help the inventor fill out the forms. Finally a PAS will provide information for the information disclosure statement, which is a part of the patent application process.
7. Before starting a PAS, the inventor must decide how to conduct the search personally, to use the WIPO and patent Office services, or to hire an outside person or company.
8. There are people available who will perform the search for a reasonable fee. In addition, there are computers services that can conduct searches. Finally, there are patent attorneys, agents or searchers who perform the search as part of the application process.
9. An early novelty patent search is usually discouraging. Normally, the basic inventive ideas are formulated in such an unspecified way that many publications will apply to this broad description.
10. Dependent on the outcome of the novelty search, the next decision will be whether to stop or to go ahead in developing the invention. If nothing of relevance was found, it is easy

and you should go ahead. The decision becomes more difficult if you find one or several pertinent documents.

11. Before you start your novelty search, you may reduce your work by elimination, in connection with related inventions. Elimination also goes for the geographical area, in connection with the countries with related industries.

12. Most important is to restrict the search to the appropriate area. If an invention can be used in a different field, the patent Office will classify it in various classes. It is, however, more important to study the patents classified in the most relevant area.

13. In the late sixties, an international system was created to classify the whole field of technology. Nowadays, almost all patent documents are classified according to the International Patent Classification (IPC). The entire field of technology is divided into eight main sections, designated with a capital letter from A to H:

- A = Human Necessities
- B = Performing Operations; Transporting
- C = Chemistry and Metallurgy
- D = Textiles and Paper
- E = Fixed Constructions
- F = Mechanical Engineering; Lighting; Heating; Weapons; Blasting
- G = Physics
- H = Electricity.

14. It is usually easy to find in which of these main groups your invention will be classified. Once this is done, you ask the library officer for the volume with the proper capital letter.

15. It is absolutely essential to read the relevant parts of the Guide to the IPC before attempting to locate the most appropriate place covering your invention.

16. Next, you turn to the contents of the relevant section. You should be able to narrow down your invention to one or two sub-classes. These are designed by a capital letter, followed by a two-digit number, and then followed by another capital letter, e. g., F21S.

17. Now, you look up the appropriate group in the sub-class of interest, which group might have a symbol like F21S 15/01.

18. Once you have located the most appropriate group, you ask for the patent documents classified under that group. If you get printed publications, go over them in the following way:

- (a) note the title,
- (b) study the drawings,
- (c) write down the numbers of the relevant documents and the name of the applicant or assignee and take home a copy for a profound study.

19. It is most likely that you will find in a publication originating from the United States of America, Germany or some other country an indication about "Reference cited."

20. In case you only find few documents of interest, you should check the documents cited. They may suggest other relevant classifications. Another help is that several classifications are indicated on most documents. You should request the documents classified in those places as well, as they may facilitate your search. Further, in some patent applications, you may find a complete search report, e. g., in European patent applications and Patent Cooperation Treaty (PCT) applications.

21. You may find a document in which the drawings are of particular interest, but unfortunately you cannot read it. Here again the information on the cover front page may help you. Often you will find a notice called "Priority" with a reference to a country, a date and a number. This gives you the information that an application for the same invention was first filled in another country and on a certain day. With this information you may be able to find a document published in a language that you may understand.

22. Another possibility is to look for European patents or published PCT applications. While European patent applications are published in the language in which they were filled, the granted European patents contain a translation of the claims in the three official languages, namely French, English and German.

23. On the cover page of the so-called PCT pamphlets, published by WIPO, you always find an English abstract of the description of the invention, which may help you.

24. If all this is of no help and you absolutely need a translation, then you can contact the International Patent Documentation Service (INPADOC) in Vienna. This service center, that has been taken over by the European Patent Office (EPO) can, with the help of a computer, search program, find out in what other countries an invention has been protected, if you have a document or the filling date of an application for that invention in one country.

25. Such a search is called "family search." You can ask for a "family search" only or for one with legal status of all the patent documents granted for that invention (family members). By this search, you get all information regarding any change of the ownership, if the invention is under examination or already granted and if the application is abandoned.

TECHNOLOGICAL INFORMATION

26. As mentioned before, patents generally disclose technological information by describing the inventions in accordance with the requirements of the applicable patent law and by indicating the claimed novelty and inventiveness by reference to the existing state-of-the-art. They are thus sources of information, and in many cases furnish a history, in summary form, of the technological progress in the field to which they relate.

27. The use of patent information is wide and varied. It includes the following:

- (a) avoid duplication of R&D work,
- (b) identification of new ideas,
- (c) technology evaluation and promotion,
- (d) marketing decisions,
- (e) performance indicators.

28. It is observed that a lot of redundant research takes place. For example, a recent report stated that 30% of all R&D in Europe duplicates work already done; in monetary terms, over 100 million US Dollars.

29. Just as patent information can be used to avoid redundant research, it can also be used to find out whether a particular idea is new and most of what is worthwhile knowing about technological advance. This is shown not only by the great number of patents but also by the fact that they cover every branch of technology, be it big or small, simple or sophisticated.

30. Patent information can also be exploited to monitor technology trends as well as competitor's R&D activities. Since patents must be applied for before any public disclosure and are normally published after 18 months, patent information are potentially an early warning of future trends in an organization's activities. While the publication of an individual patent does not in itself tell you much about a competitor's intentions, taken together with several similar patents however provide a strong indicator of that company's likely intention to commercialize a product or process. For example, for a particular company and new technology area, a patent analysis may give results suggesting that the company has a continuing and firm interest in this area, likely to be leading to marketable products.

31. Patents have been found useful as a measure of the success of funded research and development programs. Once research programs are underway, it is necessary to have a base for monitoring their efficiency. By looking at the nature and number of patents granted, it is possible to arrive at some estimation of the success of the program. This is particularly the case when the researchers are aware of the basis of assessment and hence tend to patent worthwhile inventions.

WIPO PATENT INFORMATION SERVICES FOR DEVELOPING COUNTRIES (WPIS)

32. Since 1975, WIPO has been operating a program for providing free of charge state-of-the-art searches to governmental institutions and individuals in developing countries.

33. The WIPO Patent Information Services for developing countries are offered free of charge on the basis of contributions made by some 15 industrial property Offices in industrialized countries, as well the European Patent Office and the International Bureau of WIPO itself, and include the provision of:

- (a) reports on searches and investigations carried out in patent document collections and on-line databases to establish the state-of-the-art in a specific technology;
- (b) search and examination reports of applications for patents of the African Regional Industrial Property Organization (ARIPO) under the Harare Protocol;
- (c) search and examination reports of applications for patents under the International Cooperation in Search and Examination of Inventions (ICSEI);
- (d) information on equivalent patent documents and patent literature cited in earlier examination procedures or identified in documentary searches carried out by other patent Offices;
- (e) information on the legal status of published patent applications and granted patents;
- (f) copies of individual patent documents.

PROCEDURES TO BE FOLLOWED FOR SUBMITTING A REQUEST UNDER THE WPIS

34. All requests should be submitted to the International Bureau of WIPO in Geneva and should comply with a certain number of requirements which are to be found in the WIPO Information Brochure "WIPO Patent Information Services for Developing Countries WPIS."

35. In order to facilitate compliance with the said requirements, a printed form is to be used as the first page of the request. Search requests can be submitted in English, French, German, Russian or Spanish.

36. It must also be borne in mind that it depends to a large extent on the quality and clarity of the description, the summary, the drawings (if applicable), as well as the correct spelling of names and the completeness of bibliographical data, whether a search can be carried out and whether satisfactory results can be expected within a reasonable period of time or only after time-consuming investigations.

37. The search is carried out by a competent technical expert, mostly a patent examiner in one of the contributing patent offices. As a rule, this examiner uses the search files of his special field and other documentation available at the patent office library. The search is normally carried out without undue delay. Copies of relevant documents found in the course of the search are annexed to the search report. Samples search requests, and the corresponding search reports, are given in the WIPO Information Brochure “WPIS,” which contains some further guidelines on the formulation of search requests, including sample requests which have been properly formulated as well as the forms to be used when submitting requests to the International Bureau of WIPO.

CONCLUSION

38. Whether to apply for a patent is a decision that the inventor must make at the end of the “Pre-Application Search” (PAS). The inventor must analyze the data from the search to determine if there is another invention already existing. Then, the potential market for the invention, as well as the business and economic factors of a particular invention must be calculated. Another element the inventor must consider is whether there are others forms of protection that would works as well as a patent. The major decision, however, is how much the inventor wants a patent.

39. The PAS may also help the inventor decide whether or not professional help in is order for the actual patent application. When a PAS determines there are other similar inventions, an attorney may be needed to help complete the actual patent application. If there are no other similar inventions, the inventor may want to try the application process alone.

40. It is likely that the search will uncover an invention similar to the work of the inventor. This does not necessarily cause a problem, as an existing patent may acutely support the inventor’s claim.

41. A list of every patent that covers the area of invention along with other prior art, will help the inventor make this final decision.

42. If after studying the existing patents the proposed invention still has merit, the questions remains—is the invention new, novel and unobvious?

[End of document]