PATENT INFORMATION RETRIEVAL: NEED FOR SUBJECT INDEXES

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Discusses the contents of patents and their utility as source of scientific and technological information. Information services in the field of patents with special reference to the services brought out by Derwent Publications Ltd., London have been described. The need for subject indexes and their usefulness for patent information services like other secondary services has been emphasised.

INTRODUCTION

Scientific and technological information is the life blood of the innovative and inventive process. Along with a number of sources of scientific and technological information, such as, periodicals, reports, conference proceedings—patent specifications are also important sources of scientific and technological information. A patent is basically a bargain and an exclusive legal right between the patentee and the government granting the patent. Every patent contains a patent number, which helps in the identification of the document; date of issue on which the patent is granted; application date on which the patentee applies for a patent to the patent office; serial number given by the patent office on receipt of the application; title of the patent; name of the patentee; classification number i.e. a specific class assigned to a patent by the patent office; details of the specification and the claims made by the patentee.

PATENTS AS SOURCE OF SCIENTIFIC AND TECHNOLOGICAL INFORMATION

Patents contain a wealth of information on developments in all areas of technology, on very many occasions being the first and only published source in any kind of literature. For example, Hollerith's patent on punched cards and machines for processing punched cards was taken in 1889 but no information on them was available in other forms of literature till 1941. The information contained in patents is in much more complete form than other sources of information and these are concerned with specific application of technology. For example, the British Patent Number 749836 on a computing device has 267 printed pages plus 780 drawings. A patent describes not only a novel extension of what was previously known, but may also contain ideas which were not obvious to a person of ordinary skill in the art. Due to all these reasons patent literature is a more fertile source of useful and innovative information. Even then the patent literature is not used to the extent it should be. The various reasons for their meagre use have been mentioned by Liebesney et al [1] as follows:

(1) Patents are written primarily as legal documents in legal language and this has been a deterrent to their use by engineers and scientists who are not accustomed in dealing with legalese.

(2) Ignorance on the part of many scientists, technologists and even some science information workers as to the type of information contained in patent specifications.

(3) Lack of education on the patent system as a whole and how the literature may be acquired. Relative to scientific and technical journals, patents are generally inaccessible.

(4) Owing to the lengthy process of examination of a patent application, there may be a time lag of at least 2-3 years between the filing of the information in the form of a patent
application and its publication as a specification. Therefore, such published information may be considered obsolete.

(5) Secondary patent literature as abridgements, abstracts etc. may not be as efficient and useful as it could be. Also patents are not as well covered by secondary literature sources, such as abstracting and indexing services, except of the chemical area.

(6) It may be considered by providers and users of information that relevant information contained in patents will come to their notice by other means e.g. from periodical literature.

PATENT INFORMATION SOURCES

Existing patent information sources and services can be divided into three categories. These are the national sources and services brought out by the patent office of a country, such as, Official Gazette of the U.S. Patent and Trademark Office published by the Superindent of Documents, U.S.A. The second category includes international services of the World Intellectual Property Organisation (WIPO) and International Patent Documentation Centre (INPADOC). The services brought out by INPADOC include Patent Family Service (PFS); Patent Classification Service (PCS); Patent Application Service (PAS); Numerical Data Base Service (NDBS) and the Patent Gazette. The third category includes commercial services. The most important commercial service is from the Derwent Publications Ltd., London.

The services brought out by the Derwent Publications Ltd, London, are World Patent Index (WPI), Central Patent Index (CPI), Electrical Patent Index (EPI), and World Patents Abstracts. All these publications are published weekly. The WPI is published in four editions which include Chemical, Electrical, Mechanical and General Sections. The CPI is a comprehensive abstracting and retrieval service in the field of chemical patents and started publishing in 1970. The patents covered in CPI are further sub-divided into twelve catagories (Appendix A). The EPI is also available in six different sections with overlap between sections wherever appropriate. World Patents Abstracts, service includes German Patents Gazette, German Patents Abstracts, Soviet Inventions Illustrated, United States Patents Abstracts, Belgian Patents Abstracts, British Patents Abstracts, European Patents Reports, and PCT Patent Report which are published in Chemical, Electrical, Mechanical and General sections. While the French Patents Abstracts, Japanese Patents Reports, Japanese Patents Gazette and Netherlands Patents Reports cover the chemical patents only. For the publication of these services Derwent acquires patents from various countries of the world which constitute 90% of the total patents produced in the world.

Apart from these services, there are publications which include patents as one of the many forms of scientific literature. These are the chemical Abstracts, Computer Abstracts, World Surface Coating Abstracts, Cybernetics Abstracts and Electronics and Communications Abstracts Journal, etc.

NEED FOR SUBJECT INDEXES AND THEIR USEFULNESS

Patent information sources are accessed both for current as well as for retrospective search. Current awareness service can be best provided by scanning the patent information sources and bringing out a local current awareness bulletin in the field of interests of the users. Retrospective search is necessary when one is thinking to undertake a new project or is considering to file a patent application.

The abstracts in the official gazettes as well as in the services published by Derwent Publications are arranged according to World Patent Index Classification scheme which, at best, can provide only a generic subject approach. The indexes provided in these services are usually the Patent Number Index, Patentee Index and the Accession Number Index. These indexes are neither adequate for current information retrieval nor for retrospective search. The following examples will illustrate the fact.
The user cannot lay his hands directly on the patents mentioned above unless he is aware either of the patent number or the name of the patentee. Thus, the indexes provided in the official gazettes as well as in the services published by Derwent Publications are not adequate for directing a user to the patent abstract of his interest.

The above patents have also been covered by Electronics and Communications Abstracts Journal, Vol.15, No.1, 1982 published by the Cambridge Scientific Abstracts, England. A user can access these patents easily in this service because at the end a subject index with various search terms, as described in the next page, have been given.

In the examples cited above, the user need not know the patent number or the name of the patentee because he is well aware with the field in which he wants to collect/search information.

The provision of subject indexes will help a user to locate relevant abstracts of his interest and he will be able to use the subject indexes for his particular search needs. The user will be able to obtain the information he seeks with minimum of efforts and thus, it will minimise the search time. Such indexes could be cumulated periodically, that is, half-yearly or annually. The cumulation will help in retrospective search.

CONCLUSION
It is true, computer search techniques can be helpful in the retrieval of information from the patents data bases. However, it may be pointed out that although most of the prestigious abstracting and indexing services of the world such as the Chemical Abstracts, Science Abstracts have now machine readable data bases still they continue to provide printed subject
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Abstract No.</th>
<th>Title of the Patent</th>
<th>Search Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>00249</td>
<td>Infra-red Multilayer Film Thickness Measuring Method and Apparatus.</td>
<td>Film Thickness Measurement &amp; Measurement. Film Thickness</td>
</tr>
<tr>
<td>2.</td>
<td>00678</td>
<td>Fire and Absence Detection and Alarm System for Bed Occupants</td>
<td>Alarm System. Fire Protection or Fire Protection Alarm System</td>
</tr>
<tr>
<td>5.</td>
<td>01582</td>
<td>Appartus for Encoding and Decoding Data Signals.</td>
<td>Data. Decoder. Encoder or Decoder. Data or Encoder. Data</td>
</tr>
</tbody>
</table>

indexes. One of the reasons for this is that in most of the developing countries, computer facilities are not available and in near future too, they are not likely to be available. In view of this, it is necessary that patent information sources should be provided with subject indexes like other abstracting and indexing services. The provision of such indexes will make the patent information sources more easily accessible and a more useful source of scientific and technological information.

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**REFERENCE**

[1] Liebesney, F. et al; The Scientific and technical information contained in patent specifications, the extent and time factors of its publication in other forms of literature. Information Scientist, 1974, 8(4), 165-167.

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PATENT INFORMATION RETRIEVAL

Appendix ‘A’

CENTRAL PATENT INDEX
CLASSIFICATION

A : PLASDOC
B : FARMDOC
C : AGDOC
D : FOOD DETERGENTS
E : CHEMDOC
F : TEXTILES, PAPER, CELLULOSE
G : PRINTING, COATING, PHOTOGRAPHIC
H : PETROLEUM
J : CHEMICAL ENGINEERING
K : NUCLEONICS, EXPLOSIVES, PROTECTION
L : REFRACTORIES, CERAMICS, CEMENT
M : METALLURGY

ELECTRICAL PATENT INDEX
CLASSIFICATION

S : INSTRUMENTATION, MEASURING AND TESTING
T : COMPUTING AND CONTROL
U : SEMICONDUCTORS AND ELECTRONIC CIRCUITRY
V : ELECTRONIC COMPONENTS
W : COMMUNICATIONS
X : ELECTRONIC POWER ENGINEERING