ROADMAP FOR PATENT CREATION

USE OF PATENT DATABASE FOR RESEARCH/PROJECT TOPIC IDENTIFICATION

LECTURE 26

A very warm welcome in the first module of week 6 of the Course, roadmap for patent creation, titled "Use of patent database for research/project topic identification".There are various types of databases:

1. Open databases like Google Patent, IP India, Patentscope database held by the World Intellectual Property Organization (WIPO) etc.

2. Paid databases like Derwent innovation, Questel orbit, Lexis-Nexis etc.

Difference between free databases and paid databases- Free databases or public databases are freely available in the public domain. One can easily get access to the database by just typing the particular word in the browsing window and Internet.Paid databases are obtained by giving a subscription fee which is generally annual. Through this one gets a license. Paid database have some value additions.Example.In Derwent innovation, a whole group/team of scientists will read the patent carefully whichever are available from the world. The abstract given by the attorney for that particular invention is rewritten and it is made such a way that by simple use of keywords, that patent will be retrieved from the available documents.

As claim is the heart of the patent so one should not believe on the abstract although this is what one sees while searching on various patents using keywords. Due to the beta base one sees the option as abstract and claim in patent databases and hence the possibility of retrieving certain patent documents is literally zero when using free patent databases. Therefore in paid databases the Patent document is rewritten most of the time to increase the possibility of retrieving the maximum relevant patterns.

Note: Patent Retrieving is a skillful job and through the search window one can put the search/key term and will get the required output but this never happens with a patent! Preparing the search report is a very skillful job and only the person who is expert in retrieving the required documents from the available resources can give the correct information about the state of the art.There are many patent offices and almost every patent office have their own database where they give the total list of whatever the patents,

including patent applications granted or published which were filed in that particular patent office.

Espacenet and the Benefits of Espacenet When one is thinking of identification of topic for a research or for the project one can effectively use Espacenet which is a freely available.

➢ There is a worldwide coverage in Espacenet so almost all patent documents which are published in all over the world are available.

➢ There are 100 million plus patent documents available on Espacenet which includes Chinese patent, Korean patents, Japanese patents etc. The translation of complete document may not be there but at least one can identify the title or the kind of patent is.

➢ This collection is since 1836!

➢ Search window which is made available is very user friendly when compared with other patent databases.

➢ There is availability of improved classification like CPC.

There are three kinds of searches- smart, advanced and classification.Under search option these three things –smart search, advanced search and classification search can be seen. Smart search: Advanced search: Classification search

1. **Steps to do Smart Search–** Open Espacenet Select 'Search Options' Click on 'Smart Search'Type "LED Lamp" in double inverted commas.You will be directed to 'Results'. More than 10,000 documents are shown where only the first 500 results are displayed.Click 'Refine Search' for refining the search. You can go further and search in the area you want to use LED lamp by more precise keywords.Suppose you have clicked on one of the patent document, here, "Light emitting diode LED lighting device or lamp with a configurable light qualities" with the patent number US Patent 2019037661 A where 'A' means 'application stage'. Information given: Patent number along with bibliographic data, description, claims, mosaics, and original document. Also there are cited documents, legal status and patent family.

Patent Family: Patents filed in more than one country right and those whole patent documents form the patent family.

Legal status: at what stage that particular patent document is.

Original claim: the first claim. is shown here what Here, claim one is 'LED lighting device; LED packages; semicolon followed by ISM and an indicator for a fixed operating mode and a configurable operating mode; wherein when the indicator is in the fixed

operating mode and responsive to receiving an indication of user input for selecting user selected operating'.

Claim tree: shows how the dependent and independent claims are organized. Click on the 'claim tree' to see how they are organized. Original document comprises two options - cited document and citing documents. There are two types of citations in the patent document -

1.   **Backward citation**- are like Prior-art. They are the different patents referred during the drafting of the patent under consideration.

2.   **Forward Citation**- are the different patents which have referred the patent under consideration, i.e. here the patent under consideration itself forms a part of prior art for subsequent patents based on the similar technology/domain. Example. While referring document X, this X document refers 10 patents. All these 10 patents referred in that X document are the backward citations. Now this document X is referred by the next 5 patent documents. These 5 patent documents are the forward citations. Here, the document X is the base point from where the backward are forward citations are identified. Backward citation and forward citation are very important terminologies which are used while thinking of project topic identification using Espacenet.

2.   **Steps to do Advanced Search-**Advanced search gives the various drop-down menu/parameters that can be used effectively. This is generally useful when one clearly knows the publication number/priority number or keywords can be written in 'Title', 'Abstract' etc. sections in order to retrieve the relevant patent. Also the patents can be retrieved by typing the applicant name, the inventor or assignee name in their respective boxes. Following fields are there in the advanced search:

•   Title
•   title or abstract
•   publication number
•   application number
•   priority number
•   publication date
•   name of the organization that will include the applicants and inventors
•   classification

Example.You can use Advanced Search while thinking about a topic for research. While working on that domain you retrieved the research publications and know the author/

company of that research publication. If you want to know whether the same author/ company have filed patent, you can use the name of author/ company and put it in the 'inventor' window. This will retrieve any patent filed by that inventor if any. In this way you will also get the related patent document. Exercise. Compare the research publication with the patent document and observe the data or the knowledge which is shared through these two documents. 70% information mentioned in the patent document is not present anywhere so probably through patent document, one obtains 70% more knowledge than from research publication. Also one can get more ideas related to that particular area they are working. Similarly IPC and CPC can be used. Boolean amendments

3. **Steps to do Classification Search-** Click on 'classification search' Window opens.

Observe the symbols. These are A B C D E F G H and Y. These are the sections which are present in the patent classification. Example. Suppose you are working in a chemistry domain. In the classification search you are focusing on C that is chemistry/chemical document. You can go further and refine your search in section C. Simply click on that classification C and then move further to see the details. Under that particular section, the classification is 'H 0 1' which says that 'electric discharge tubes or discharge lamps'.The classification is provided minutely to focus on that particular the domain which you are interested. Also the hierarchy is present which shows that section is and then the further classification as a class-> subclass-> group. Merging this hierarchy is the CPC. *Exercise.* Using the keywords, authors/title of the domain you are working in or interested in; perform the 3 kinds of searches in Espacenet.

Derwent innovation Derwent innovations index is a database of international patent literature that combines the Derwent, world patents index, patent Citation Index. At the Derwent chemistry resource it contains over 23 million basic inventions and 51 million patents. These patents come from over 40 international patent issuing authorities and date back to 1963. For PCT, US, European, German, British or Japanese patents from 1973 forward; the database is divided into three general sections-

- chemical engineering
- electrical
- electronic

The patent record will also display patents and articles cited by the inventor and examiner This information can be useful for novelty searches and monitoring patent

infringement. It can be used to address a number of questions or tasks search the data to determine international patent protection for an invention. Avoid or watch for patent infringement research in an area of technology. It determines gaps in the market place where an organization might benefit or simply find English language equivalents for a patent that is originally in another language.

Patents are by nature very technical documents that can be difficult to read and condense into only the most important information. Derwent indexers add valuable information to the basic patent record helping you quickly see what is most important. They provide a descriptive title that describes a novelty of the invention, an English-language abstract that discusses the novelty and claims of the invention. Applications for the same invention from around the world are grouped into a patent family and Derwent class and manual codes help classify patents into specific technology areas allowing for fast retrieval of a segment of patents.

For each Derwent record one will find patent numbers for all members of this patent family representing this invention. One can view the original abstracts for these family members by clicking the 'show equivalent abstracts' button where an abstract provides the full record for this invention. Derwent title and abstract are written by indexers and are designed to be descriptive and highlight the novelty of an invention. Above the abstract one will see information about what patents and articles were cited by the inventor and the patent examiners.Also one will be able to view more recent patents which have cited. All that is required is one click on the hyperlinks to see the cited and citing patents and articles, international patent classification. Derwent class codes help classify the patent into a particular segment of technology. These codes are hyperlinked allowing for a one-click search. To find other patents from the same area the codes are explained in some detail in the search aids available on the general search page.

Additional information found in the Derwent record includes patent and application details, the designated states where protection has been sought for the patent and the field of search meeting the areas of technology that the patent examiner searched to ensure the novelty of the patent. Through the Derwent chemistry resource one will also be able to link to compound records for the chemical substances associated with the patent. With this we come to the end of this session. In See you in the next session.

thank you!