

Mining Patent Data for Competitive Intelligence

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Patents are not new, their presence was noted long back during 16th Century. In U.S. at the Constitutional Convention of 1787, a federal patent power was proposed by James Madison and Charles Pinckney and was adopted without debate as Article 1, Sec. 8, clause 8. The history of Patent Law began all the way back with the Constitution of the United States which was specific about providing protection for those who invent new and unique products. But after the TRIPS, intellectual property rights and patents gained importance to the business communities and industries. The retrieval of the patent information was made easy by internet and access to different patent databases. Patent are the source of the technological innovation and detailed mining of patent literature is proven to be useful of the Competitive Intelligence.

This article attempts to analyze importance and methods for the patent data mining and their future use in the competitive intelligence. The key issues discussed in this article are:

- a. Importance of the patent data mining;
- b. Using patent data for competitive intelligence

Data Mining is a process of discovering meaningful new correlations, patterns and trends by sifting through large amounts of data stored in repositories, using statistical, data analysis and mathematical techniques. Patents are the most valuable and comprehensive source of the technological information and thus are very crucial for the industries. A very strong patent portfolio and IPR system is needed for a industry to compete the global market. An organization's patent portfolio forms a critical part of its IP holdings alongside its designs, trademarks, copyrights and trade secrets. Much of the value from a portfolio can only be realized through its effective management. In turn, that requires tools and techniques to help understand portfolio content, how and where this fits in with the organization's competencies and what the market opportunities are for exploiting the technology owned. There is also a need to identify gaps where complementary technology can be licensed in and identify non-core technology where know-how can be licensed out or divested for financial return. This is the province of patent mining. A clear and effective IP strategy critically incorporates a clear and effective strategy for managing an organization's patent portfolio.

There are several free and paid patent databases consisting of billions of the patent documents. The databases which are free to search the patents are as follows: USPTO, EPO, JPO, SurfIP, SIP, Freshpatents, Patentonline, etc. Whereas different paid databases are, Delphion, Dialog, Micopat, etc. which also include inbuilt analysis tools.

The data obtained from these patent documents can be used for the competitive Intelligence. It is defined as process of discovering "competitor's" strategic decisions, or of business area characteristics, using quantitative analysis techniques applied to data and information, obtained through legal process, regarding the chosen competitor or business area. Patent searching and analysis is done based on the objective. Patent data can be used for the competitive intelligence in different ways as mentioned below:

- Theme Search: Theme searches provide the overview of patents related to your field of interest. These searches are helpful to detect the recent trend of your technology area and to establish your R&D direction. As these searches are fully client-oriented, the point of our work and report format is supposed to be various according to your needs.
- Patentability Search (Novelty Search): Patentability search is the first step of patenting process. A patentability search surveys patents filed in each national intellectual property office to check whether there exist inventions similar to yours. If you have a plan to file your invention to other countries, this search is essential because the foreign application is quite costly.
- Search by keyword (Assignee, Inventor, etc): This search provides the information of patents retrieved by specific keywords including assignee, inventors, or IPC, etc.
- Family patent / Legal status search.
- Current Awareness Search: This search is to report new development in particular technology or patenting activity of competitors regularly. You can keep in touch with recent technology as well as detect your rival's R&D achievement and legal status of a particular patent with which you should consider continuously. This search is performed at interval specified by your requirement: weekly, monthly, or quarterly. Category.
- Legal Status report - Keep informed the current legal status and expected legal action of a particular patent.
- New Patent report - Keep informed the newly published or granted patents categorized in specific technology area defined by your searching queries.
- Patenting Activity report - Keep informed patenting activity of a particular assignee or inventor who you are interested in.

- **Infringement Search:** Infringement search is to check whether patent which can be infringed by your product being supposed to launch newly in a certain country exist or not in that country.
- **Invalidity Search:** When you intend to make some claims of a particular patent invalid, the invalid search can provide some prior art references that disclose claims that are infringed by the subject disclosure.
- **Patent Map (Patent Analysis):** Quantitative analysis based on statistical data of bibliographic information (country, assignee, IPC, etc). Qualitative analysis of core patents, Technological road map, multifarious analysis.
- **Right-to-Use Searches:** Right-to-Use searches are conducted, prior to marketing a new product, to confirm that the new product does not infringe on an existing patent or potentially infringe on a patent application.

Conclusion

These types of searches are primarily done using the different patent database and are very useful for competitive intelligence in the todays global prospective. Patent analysis and mining in combination with market research and financial assessment can build up a strong competitive environment for the competitors for the industries. Vinod Kumar Singh

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