PART I
Patents in the Realm of Independent Information Professionals
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To information professionals, patents may be one of many good sources of information or may be the principal basis for a successful information business. Patents cover most areas of technology, including chemistry, life sciences, electrical engineering, computing technology, mechanical engineering and, in some countries, business methodologies. We will explore the variety of ways information professionals use patent information to support their clients’ business decisions.

What Is a Patent?
A patent is a limited monopoly granted to the patent holder by separate countries through their patent authorities. The grantee has the right to restrict others from making, using or selling the invention within each granting country’s jurisdiction for a limited time of about 20 years. The invention may be a new article, composition, machine or process or a new use for any of them. In exchange for the patent, the inventor must concisely define the invention in patent claims and provide detailed support within the patent specification such that others could make, use or sell the invention once the patent is no longer in force. Patent applications are filed within each country or regional patent authority in which the applicant anticipates pursuing an examination process that could lead to a granted patent. The so-called “world patent application” (WO) under the Patent Cooperation Treaty (PCT) never results in a “world patent,” but rather is the beginning of a process leading to examination and grant in separate countries. The unexamined applications are generally published 18 months after first filing and provide a good source of notification that there is a pending patent. Published patent applications are a good resource on the technology because no new information may be added during the examination process; claims usually undergo revision but must be fully supported by the original specification. Granted patents with final claims are published when the examination process is completed, typically several years after they were first filed.

Patent documents are distinguished from most other forms of technical literature because they are distributed copyright-free within a very systematic bibliographic control system, which makes it relatively easy to identify them unambiguously and order copies. Patent databases were being used to distribute documents to the public via the Internet some years before the first electronic journals. Despite their easy availability, patents are still underutilized as sources of technical intelligence, due in part to the inherently complex legal and technical language that is used in the documents. Nonetheless, even non-specialists and small businesses are today in a position to leverage the content of the patent literature to stimulate their businesses once they have received some introductory guidance on how the system works and what it can deliver for them.

Patents for Competitive Intelligence
Many members of the Association of Independent Information Professionals (AIIP) use patents for competitive and business intelligence purposes. For example, most published patent applications or examined
patents identify inventors and companies to which inventors assign the patents rights. Information professionals can build bibliographies and patent portfolios from the bibliographic information or they may determine who is involved in targeted technologies. The latter may be determined by simple subject searching or use of patent classifications or other database indexing. This scoping work may be carried out using free patent sources such as Google Patents, FreePatentsOnline.com or online search facilities provided by patent authorities such as the United States Patent and Trademark Office (USPTO) or Esp@cenet search sites.

One may even find relevant answers by clever searching on web search engines. Alternatively, searchers may use for-fee information systems such as Dialog to which they already have access and which have patent databases that may be searched just as easily as other databases on the system. Just as with other technical information sources, routine alerting searches can be easily set up to provide continual monitoring of a defined technical field or a set of known competitor companies.

Specialized Patent Searches

A smaller set of AIIP members conduct specialized patent searches and most are members of the Patent Information Users Group, Inc. (PIUG). These patent information specialists frequently have advanced technical degrees and have worked as searchers and as scientists or engineers in large corporations. Some are also patent agents registered to practice with national patent authorities. They may be in solo practice or own patent information services employing or subcontracting with other searchers. Their clients may be patent attorneys or inventors in small or start-up companies, large corporations or law firms. Their association with PIUG affords important networking, development and training opportunities.

The role of the patent searcher is to provide the information to support legal opinions and reasoned business decisions. One of the major challenges facing the professional searcher is the need to distinguish very small changes in technical content within very large numbers of documents; that is, they operate in a very “crowded” area of the prior art. This aspect of patent work requires patent searchers to use extremely complex search strategies combined with an intelligent selection of the appropriate information sources – skills that take some while to acquire and a lifetime to perfect. Patent searchers use their technical and patent search expertise to develop and implement search strategies and evaluate hit references, but they steer clear of all legal judgments. Legal opinions are the exclusive purview of legal professionals, usually patent attorneys, but in some cases, also patent agents.

The breadth of searches that patent information specialists conduct is as wide as the patent, legal and business decisions they support. The broadest are state-of-the-art searches that are used to guide research and development work and overall patent strategies. Patentability searches are typically somewhat narrower in scope and are requested to determine if a specific known invention, which may have already reached an advanced stage of development, satisfies the novelty requirement for obtaining a patent. The issue is whether the claimed invention has ever been disclosed in prior art, that is, in publicly available patent or non-patent literature. For the most part, patent searchers do not address the other requirements for patentability – that the invention be non-obvious, useful and of patentable subject matter – just as they do not offer legal opinions, although recent legal cases in the patents field make it more likely that these factors, particularly obviousness, will need to be considered in the future during routine patentability searches.

A freedom-to-practice search involves trying to confirm that there are no valid, enforceable patents that would bar a business from employing a technology or selling a product. The patent searcher needs to search for patents in the countries in which the client wants to do its business and for patents or pending applications from the recent past. Patents whose term of grant has passed would not be a barrier; nor would patents that had expired due to non-payment of periodic maintenance fees required by patent authorities. However, as a result of the dynamic nature of the legal status of any given patent, there is often an element of continuous monitoring involved, which may be put in place once the initial search is completed. This monitoring helps a client learn if the barrier to practicing the technology has been removed, for example, by a later failure on the part of the patent owner to pay maintenance fees.

Should any problematic patents be identified, business managers may
request an invalidity search. This type of search is similar to a patentability search but normally is even more comprehensive due to the larger financial stake involved. An invalidity search seeks prior art that would have caused the examiner to reject the patent claims had the information been identified and considered during the examination process. Such prior art would allow the client to decide to proceed with the knowledge that there was applicable prior art that could be used in litigation should the inventor charge the client with infringement. Usually, no actual reexamination is undertaken, although in some countries, third parties may contribute such prior art during an opposition that follows initial patent grant.

These critical patent searches generally require use of for-fee, value-added databases or aggregated information systems. A premier patent database is the Derwent World Patents Index (DWPI) from Thomson Reuters. The full power of DWPI is available only with an expensive subscription usually only affordable by large corporations, who may be able to provide independent information professionals with access via their corporate online accounts. Non-subscribers can access DWPI at higher rates and without the value-added indexing. Other databases with patent coverage and expert-applied indexing include the IFI Claims and Chemical Abstracts Service CPlus databases, as well as chemical structure databases such as Merged Markush Service and CA REGISTRY and MARPAT. Most of these specialized technology databases are available on search systems such as Dialog, Questel and STN International. Searchers may use any of a number of extensive and less expensive full-text patent search systems that in some cases mitigate the need for value-added indexing. Leading examples include LexisNexis TotalPatent, Minssoft PatBase, Questel Orbit.com and Thomson Innovation. URLs for these databases are provided at the end of the article.

Patent Analytics

Patent searchers may analyze large sets of patent information to provide critical strategic guidance to their clients. This is sometimes called patent analytics, patent data mining and visualization or patent landscape analysis and can involve software-aided analysis of thousands of full-text patent documents or value-added patent database records. Companies can use large-set patent analyses to predict competitors’ plans or the future directions of technologies. Because most patent applications are published 18 months after first filing and often provide technical information not reported elsewhere, a patent analytical study may allow correlation of patent filings with future product launches. Patent analyses are most effective in technology sectors where the time from first conception of the invention to marketed product, often referred to as the strategic window, is longer than 18 months. By monitoring patent information, companies in these industries may have time to analyze the technical landscape and respond in advance of competitors’ actions. This situation is especially true in the pharmaceutical industry and other highly regulated sectors where the strategic window might be 10 years rather than 10 months.

The skills that patent searchers bring to patent analytics include a thorough understanding of patent information, competitive intelligence skills needed to understand and to make best use of the results of the analyses and expert knowledge of patent analysis tools and methods. Many patent analysis, mapping and visualization tools are available from patent information providers and independent application developers and are covered in numerous publications and patent conferences. PIUG has recently established a task force to evaluate patent analysis tools and help influence development of current and future tools. The goal of the task force is to catalog the tools that are available and to build a community of practice in this area where users can share best practices and their experiences in using these tools.

Consulting Services

Patent information specialists may offer a wide variety of consulting services to patent applicants, legal practitioners, patent database producers and patent granting authorities. This consulting may cover intellectual property management, patent database development or training. The expertise of some AIIP members also includes intellectual property matters beyond patents, such as trademark searching or consultation on copyright matters. In the area of database development, AIIP members have been involved in the creation of completely new commercial databases for very specialized subject domains such as genetic sequences that are now used worldwide.
Search specialists frequently get asked to help in the testing phase for new search interfaces or modifications to the content of existing databases created by the for-profit information sector.

Politics, economics and the law provide a rapidly-moving backdrop to patent searching. There are frequent changes in national and international intellectual property law. In recent decades these alterations have often been associated with political change such as the formation of the newly independent countries in the Balkans and former Soviet states or the reunification of Germany. An effective patent searcher needs to keep up to date with these changes. Some consulting firms and training organizations serve the specialist search community by providing relevant news and professional development services to help searchers serve their clients effectively. Professional networking is a vital part of the searcher’s work, and much information is exchanged during professional conferences and seminars all over the world. The complex and often business-critical nature of the patent information specialist’s work is leading to a realization that some form of professional certification will be of benefit in the future. Various organizations across the world are currently cooperating in seeking to develop a suitable certification scheme.

Wrap Up

AIIP members recognize the value of including patent databases in their search strategies when dealing with technical clients or subjects. The extent to which they delve into the area varies with the subject matter and their level of expertise and comfort with patents. In any case, they always have other AIIP members to call upon to satisfy any client’s information needs.