Patent landscape analysis for innovation and competitive intelligence
All of the greatest, most renowned inventions start with an idea. Patents are a key source of ideas and are often the first and only source of disclosure of an invention, as most are never published elsewhere. Hence, companies around the world are protective of the value held in their intellectual property and realise the importance of monitoring the intellectual property of their competitors.

As the rate at which new inventions are being patented is ever-increasing, the continuous monitoring of new patents is vital to ensure corporate success and financial stability when attempting to access new markets, exploit existing ones and scoping the profitability of emerging products. Patent search and analysis platforms, such as PatBase, are essential for users to search, review, analyse and share patent information, to harness the knowledge found in patents, gain competitive intelligence and build on the ideas of others to drive innovation forward. This article focuses on patent landscape analysis, a process that helps inform policy discussions, strategic research planning and technology transfer within a business. Firstly, we should define some of the terms involved.

Models for innovation

According to Henry Chesbrough’s 2005 book, Open Innovation: The New Imperative for Creating and Profiting from Technology, there are two models for how innovation takes place: closed and open innovation.

Closed innovation has a predefined target market and end goals. The scope of the research is limited and the boundaries within which the firm works are impermeable. Research projects are guided down the funnel laid out by the existing markets while projects deviating too far from the desired criteria are abandoned or de-prioritised.

Open innovation, by contrast, removes the boundaries set down by existing target markets and looks outside of the project/company to locate both internal and external ideas. This allows new concepts to permeate into and out of the business to enhance the innovation process, create new markets, and to identify collaboration opportunities.

Patent landscape analysis

Publicly available patent data is an excellent source of ideas and information that can be used in the open innovation model to identify opportunities and threats to a business and improve its survivability and profitability in the modern marketplace. This information is of vital importance to competitive intelligence, which makes use of public information to accrue data on competitors and the market environment to drive strategic decision making. Businesses that ignore patents as a potential source of information risk building an incomplete competitive intelligence picture and delaying or even preventing innovation.

Patent landscape reports are intended to give a snapshot or overview of the patents in a specific subject area or covering a type of technology. Generally taking one to two weeks to complete, a landscape report can cover hundreds or even thousands of patent families.

They can be used to visualise and discover existing whitespace in relevant areas, gain actionable competitive intelligence by understanding the current landscape, predict where your market is heading and spot trends in areas of interest to aid investment. There are several simple steps that can help to ensure an effective and comprehensive patent landscape analysis.
Define your goal

Prior to any analysis or searching, the scope of the landscape study should be defined, based on the topic, time period and the reasons for the study. Depending on what the end goal is, you may want to address some or all of these questions while conducting your search:

- Is this a growing area of interest?
- What are the fields of current interest?
- Who are the key players?
- Where are the key players filing their inventions?
- Who are the key opinion leaders in this field?
- What is the legal status of the families in this area?
- Obtain a broad overview

Once the scope of the study has been agreed, start reviewing the main articles and literature on the topic. Studying a selection of basic literature will unearth some high-level keywords, as well as identifying key players that are associated with the technology or subject area you’re landscaping. Having a clear understanding of the area you’re investigating is critical when analysing the final landscape and answering the key questions outlined above.

Define your initial search strategy

A successful search strategy should encompass keywords, classification codes, assignees and inventors. Searching your basic keywords within the title, abstract and claims of patents will help you to discover additional relevant keywords as well as active assignees and inventors. Furthermore, a statistical analysis of the IPC and CPC codes used to classify the initial answer set will identify relevant classification codes to add to your search strategy.

Results can be narrowed down by limiting the geographical area, removing utility models and design patents, removing irrelevant patent families identified by acronyms used in multiple technology areas, and limiting by publication years. At this juncture, you should have compiled a solid search strategy and be ready to run your initial search.

Run your initial search

Once your results come back, take a quick review. Determine the percentage of your answer set, which contains relevant answers and judge whether it’s enough for a reliable patent landscape analysis. Typically, if it’s 80 percent or more, your search strategy is sound.

Ensure that the most important patents in the specified area are included in your results. You can check this by sorting your answer set by ‘most cited’ to reveal which are the most cited publications in the area you’re landscaping and therefore the most significant.

Assuming your initial set meets your criteria, you can use the results of this set to optimise your search strategy.

Optimise your search strategy

Improving your initial search requires identifying additional relevant keywords, classification codes, active assignees and inventors. Discover more keywords by reviewing classification code definitions and checking the title and abstract of key patents.

Take advantage of features included in your patent database, such as thesauri, semantic searching, analytics and text-mining to enhance the comprehensiveness of your final answer set and efficiency of your evaluation of patents within your landscape search.

In addition, you’ll need to review and exclude potential sources of irrelevant results, enabling a more comprehensive and clean final landscape search.

Utilise any tools within your patent database to clean up your landscape including grouping assignees together and de-duplicating the answer set to focus on patent families, within which all publications describe the same invention.

Visualise and review

Visualise your landscape search by generating statistical graphs. By viewing the data from many angles (jurisdiction, year, assignee and inventor) and at multiple levels (families, priorities, applications and grants), you can reveal answers to the key questions outlined at the beginning of this article and easily draw some conclusions, ensuring you stay focused on your end goal.

Regular patent landscaping is crucial to survival in any innovation-driven industry to identify white space, monitor competitor activity and identify acquisition, licensing or collaboration opportunities.

The world of patent information continues to grow, and patent search techniques are evolving and becoming more complex. As a result, a comprehensive patent landscape analysis can be both time-consuming and complicated—but Minesoft can help.

Having access to a comprehensive database of global patent data, such as PatBase, is a key first step but ensuring a focused and inclusive search strategy is vital.

The simple steps outlined in this article can help any user identify a complete patent landscape and draw the appropriate conclusions. Minesoft offer several free whitepapers on patent landscaping, access them at www.minesoft.com.

PatBase, the online patent database, allows you to optimise the way you search and review patent literature.

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