

# IDENTIFYING PRIOR ART

A composite image illustrating the intersection of science and technology. In the background, a laboratory setup features a round-bottom flask containing a dark liquid, a condenser, and a flask containing a yellow liquid, all on a stand. In the foreground, a hand in a black glove points towards a laptop keyboard. The text 'IDENTIFYING PRIOR ART' is overlaid in the center.

## Peter J. Vanderheyden looks at the challenge of prior art identification and asks why non-patent prior art makes the difference in patent quality and protection.

**Question:** What do the following three items have in common?

- i) Accelerated patent examination
- ii) Proposed US patent reform legislation
- iii) Proposed USPTO rules changes

**Answer:** All three require, propose or include clauses that focus on surfacing better, more relevant and more exhaustive prior art, as well as providing expert commentary and annotations describing the relevance of the prior art to a given patent application.

It's no secret that the US patent system is experiencing difficult times. The system is evolving and expanding—ever more patent applications are being filed, which puts pressure on patent quality. The US Patent and Trademark Office (USPTO) reported that it granted more than 196,000 patents in 2006, an increase of 24.5 percent over 2005. In the midst of this challenge, the USPTO, Congress and patent applicants are all assessing their options for improving patent quality.

Accordingly, rarely can you attend a patent conference these days where patent quality is not a topic of discussion. In nearly every instance, prior art and the lack of effective identification of prior art is cited as a major cause of low-quality patents.

The perceived problems with patent trolls<sup>1</sup> and the more traditional infringement conflicts between 'reputable' patent holders is another indication. In both cases, prior art can be a deciding factor in who wins and who loses. Philosophical differences aside regarding whether patent trolls should be allowed to exist, a patent is an asset

that can be bought or sold, which affords the current holder the right to exclude others from practising their technology.

In any case, the bigger issue is whether these patent holders are exercising their rights with high-quality patents or whether they are leveraging a patent that simply should never have been issued in light of prior art.

More traditionally, when a patent is asserted against a party, there are a limited number of choices in response. One of those options is to locate invalidating prior art and re-present that art to the court in order to invalidate the patent, making the problem 'go away'.

Fighting 'bad' patents might be justification alone for requiring more extensive prior art searching and, in the heat of battle, it may be the only option.

Regardless, legitimate patent holders genuinely want high-quality patents that can stand up under intense scrutiny, such that they can build their products and businesses around them without fear that the legal barrier to competitive entry will one day simply evaporate.

Simply put, effective identification of prior art is fundamentally important to improving the quality of the US and the world's patent system. Not surprisingly, government action is going to focus on solving this problem in one way or another.

So, what's the rub? Why don't applicants simply provide better prior art? First, there is a contingent of applicants that simply believe it is the job of the USPTO. However, the

government is clearly trying to change that perception. Ultimately, the challenge for patent applicants is finding the time and resources to apply to this very important part of the patent application process, which is already an expensive proposition. At the end of the day, companies and law firms must perform a risk/benefit analysis to determine whether their investment in prior art searching is worth the perceived reduction in risk.

A specific challenge in conducting an economical and exhaustive prior art search is the increasing number of potential sources. Related to this problem is the fact that the content is stored and controlled by different players in different formats. As any IP professional can tell you, knowing how to search the data might be the most valuable asset a person can bring to the job. The existence of the Patent Information User Group, a 20-year-old organisation, is testament to the value of this knowledge.

When the data is stored in many different databases using different indexing and searching systems, the ability to perform a very precise search becomes more daunting. In addition, while patents are highly structured documents, non-patent literature by its nature is unstructured and can include just about any kind of published document in the public domain.

Given all that is riding on the quality of a patent application, and given the current focus of the US government to improve prior art identification and to place some of or the entire burden on the applicant, what can patent applicants do to reduce their risk? How can applicants perform a prior art

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search that, while not exhaustive, can measurably reduce the risk that their application will be rejected or their patent will ultimately be invalidated?

First, focus your search on full-text databases. Regardless of the source or collection, abstracts are only useful for a high-level filtering of the content. When it comes to prior art, the last thing an applicant needs is a pile of more than 100 documents that 'might' include similar technology to an invention. Searching full-text eliminates a huge part of the assessment and identification of prior art.

Determining what content to search and how to approach the search is next. Every inventor should know the primary content collections that typically and regularly cover their area of technology. These sources, again, in full-text, should be 'no brainers'.

Next, find other major sources of full-text non-patent literature that cover science and technology more broadly than the core set of publications. Some good examples include the full-text Elsevier science journals available through Reed Elsevier's Science Direct platform or LexisNexis. Because these journals are available in full-text and cover such a broad area of technology, they dramatically increase the odds of finding relevant prior art or a citation to relevant prior art. There are nearly 1,600 Elsevier titles covering virtually every area of science, medical and technical information—an estimated nearly 25 percent of the world's publications in these areas. The content is accessed by more than 30 million scientists, students and professionals around the world. Such a collection dramatically improves an applicant's insight into the state of the art in nearly every technology.

Another area for research is defensive publications. Due to the expense and time of the application process, most sizable businesses generate far more

unique ideas than they can affordably patent. To that end, for more than 50 years, some of the world's most sophisticated technology companies have engaged in the practice of defensive publications, also known as technical disclosures.

By publicly disclosing an invention into the public domain, the inventor preserves their right to practise the art by effectively burning the right of anyone else to patent the same technology.

Over the years, two powerful collections of technical disclosures have evolved. First, Research Disclosure has been acting as the publishing arm for a number of major corporations for more than 40 years. The Research Disclosure database is small but powerful, highly cited and included on the World Intellectual Property Organization's (WIPO) minimum documentation list.

Newer on the scene is IP.com, which began electronic publishing and digital date-stamping of technical disclosures in 1998, also for a number of major corporations around the world. The IP.com collection includes the IBM Technical Disclosure Bulletins (TDBs) and its follow-on technical disclosures from 1957 until today.

For those patent areas that might be less technical in nature (i.e. business process patents), casting a wide-net, full-text search into large news and business databases can yield some low-cost and interesting results.

The above collections, from full-text Elsevier journals to the full content of the Research Disclosure and IP.com technical disclosure databases, are available for full-text searching on *lexis.com*<sup>\*</sup> and through intellectual property-specific LexisNexis solutions such as *TotalPatent*<sup>TM</sup> and *PatentOptimizer*<sup>TM</sup>.

Performing a prior art search as described above will yield a higher degree of confidence for the patent applicant. Searching popular and extensive full-text collections increases the chance of finding related prior art. Importantly, if highly relevant prior art does not exist in these publications, they may at least include a reference to a more obscure publication that does discuss a similar technology (if such a document exists). This reference would only be discovered with a full-text search.

It is likely that the average patent applicant could locate three to six primary sources of relevant full-text prior-art to analyse for any given application. Doing so is likely to give a high-confidence indication as to whether prior art exists.

As important as full-text searching is, patent research is evolving—beyond standard Boolean search technology. To that end, LexisNexis is

identifying new ways to help users simplify and refine the search process to make it more natural and intuitive, such as offering a 'natural language' search technology.

Additionally, allowing users to simply cut and paste relevant technical disclosures into a search box and receive a very precise set of relevant prior art documents is on the horizon. These are exciting times in the prior art world.

Users who establish a defined, repeatable process for searching are likely to minimise their costs substantially, while reducing their risk of generating low-quality, unreliable patents.

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**Peter J. Vanderheyden**

Peter J. Vanderheyden brings more than 25 years of leadership in the industry. In his role, Mr. Vanderheyden is responsible for the growth and development strategy of LexisNexis services and solutions for intellectual property professionals.

Prior to LexisNexis, Mr. Vanderheyden held a number of leadership positions in the industry, including vice president of marketing and business development for IP.com and consulting engagements helping companies develop strategic business plans for both start-up and product relaunched businesses.

Mr. Vanderheyden spent more than 16 years with IBM in a variety of executive positions, including serving as chief financial officer for a \$900 million trading area and as a solutions development executive in the government sector. During this time, he founded the Delphion Company as a spin-off from IBM, focusing on an innovative and efficient method for researching intellectual property information.

<sup>1</sup> As defined by Wikipedia: Patent troll is a pejorative term used for a person or company that enforces its patents against one or more alleged infringers in a manner considered unduly aggressive or opportunistic. A related, less pejorative expression is non-practising entity (NPE) which describes a patent owner who does not manufacture or use the patented invention.