

# Inventors Say the Darndest Things. Are You Listening?

Finding patent information in unusual places.

In the counterintuitive world of intellectual property management, the twin goals of promotion and secrecy often find themselves in conflict. It's a classic conundrum: companies need attention for their newest innovations to keep investors intrigued, recruit top developers, and establish credibility, yet if they plan to seek patent protection for these ideas, even the slightest information leak can sink the whole ship.

While there is still no surefire solution to hush overzealous marketers or ward off competitors, a bit of carefully guided homework can help companies avoid complete financial disaster. The key to locating potentially damaging information before too many development dollars are wasted chasing futile patent applications is a thorough patentability search.

Done correctly, it is a methodical hunt for prior art, or information about an invention published one year or more prior to a patent filing. If prior art exists, your invention is not patentable. If it does not, you're in business.

## Digging deeper

The key to overseeing a successful search that digs deep enough without sending researchers on wild goose chases is to learn where to look and how to use bits and pieces of information as stepping stones to more detailed information. Researchers need to be able to ferret out the not-so-obvious patent information; the following is a patentability search roadmap to the unlikely sources where prior art information can hide.

However, despite the obvious benefits of rigorous sleuthing for prior art, and the ready accessibility of the information, few patentability searches dig deep enough. It's not uncommon for a company pursuing a new process or product to pay for a computerized patent search and a manual search through the archives at the U.S. Patent and Trademark Office (USPTO), then, if no prior art is found, dive right into the patent application process. While these are good first steps, they are any-

thing but thorough. And, in the new world of patent litigation, they leave open the worst case scenario of securing a patent only to have it invalidated in a court of law.

The broad definition of prior art includes such non-patent-related information as conference papers, handbook data, journal articles, and even sales brochures. So, even if the Patent Office has never seen anything resembling your proposal, if a competitor or one of your own staffers has mentioned it at a conference or alluded to it in some brochure copy, your patent won't hold up.



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## Creative keywords

Keyword searches can be tricky in the patent world, which often has its own language. Patent writers are supposed to use words as they are normally used in the industry, but since they are often forging new ground, they are allowed to make up special definitions and even create new words when needed. They are also writing very carefully to describe the subject of the patent in broad terms, giving the patent the widest potential range of coverage.

For example, if a patent writer were asked to describe a ham sandwich with lettuce and cheese, he's likely to come back with: a glutinous layer, which, if added to proteinaceous, vegetable, and lactaceous layers, can be ingested gastronomically.

Another common patent writing conceit is to use normal words as abnormal parts of speech, such as the common name for a spring in a patent: an urging means which is often found urgingly connecting two parts under tension.

Thus, even if every patent record in the world was scoured it would be very easy for relevant prior art to slip through the cracks given the manipulation of language. Outside the fuzzy English of patent applications, however, most inventors are required to use their industry's common vernacular when describing a new innovation. Searches through conference papers, government records, and handbook data are especially useful in uncovering patents using industry jargon.

### Conference papers: Homing in on innovation

Inventors who give talks at conferences are usually admonished by their in-house counsel to always seek approval for such disclosures prior to taking the stage. Still, despite the astronomical amount of damage an inventor can wreak on a multi-million dollar research investment, few can resist the notoriety that comes with it. In most cases, speakers are cautious enough not to disclose information that would be enabling to competitors or condemning of future patent activity.

Cues about the direction of a company's R&D activity, which will ultimately lead to more detailed patent-level information, can be gleaned very quickly in a scan of conference literature. For example, a company that works with oil recovery that is found to have inventors giving talks on solar power can no doubt give an indication of a change in company strategy. If they have not already been issued, patents are surely in the application stage.

More importantly, a conference search on a particular technology will result in a recurring drumbeat of key authors and companies who will emerge as the major players in the area. Further research of those author names may yield other publications and conference papers that would not be as easy to find otherwise. This stepping stone approach is critical in the search for prior art because innovation, by definition, rarely comes from predictable sources. Intellectual property researchers looking for information on alternative energy sources, for example, would have missed cold fusion altogether if they were only looking in patent filings and alternative energy industry literature. The first disclosure for that particular bombshell was made at a conference held by the American Chemical Society.

Conference papers can also serve to refine particularly hard-to-decipher patent filings by eliminating extraneous information. Patent filings are required to include the best mode of practicing the invention, but there is rarely any indication in the patent about which mode among dozens listed is best. However, conference organizers won't generally allow for that much vagueness in their sessions. It is not uncommon that a conference paper, when paired with a patent from the same company or inventor, will provide a much clearer context for the invention.

### Trademarks and under-the-radar info

Quite often, a company will pursue multiple intellectual property rights for a particular invention in an effort to maximize its impact in the market. Typically, after the patent applications are filed, the company's marketing department will try to find an appealing trade name for the product. Contrary to conventional wisdom, the resulting patent and trademark rarely have anything in common that would lead intellectual property researchers from one to the discovery of the other. That is, with the exception of the trademark owner's name, which is very likely to be the same as the patent assignee's name.

## Peeling Back the Layers of the Patentability Search

1

### State of the Art Search

A state of the art search includes a broad look at everything done in a given area. It guides decisions about entering (pursuing development in) a particular field.

2

### Patentability Search

A patentability search seeks to determine whether an idea is patentable under the laws of the appropriate countries.

3

### Freedom to Operate Search

A freedom to operate search is part of the due diligence process. It aids the patent application process, sheds light on the competitive landscape, identifies potential patenting pitfalls, and directs future development.

**Image 1:** The key to a good night's sleep for intellectual property managers; a comprehensive patentability search scours myriad sources to sniff out prior art.

Thus, while searches for new inventions associated with a trade name will lead you nowhere in a patent search, they can open critical doors in a trademark database search. For example, if you were in the agricultural equipment manufacturing space, you'd be very interested to know what the big players in the field were developing. In the case of well-known companies like John Deere and Vermeer, patent searches by "Company Name" will open doors. But trying to find the patent associated with lesser known brands, like the trademark "Slinger," turns up nothing in the patent database because the patent was likely filed before the trademark was even sought. Looking up the word "Slinger" in a trademark database, however, yields the owner of the mark as Knight Manufacturing. A search in the patent files for this name as the assignee along with some subject terms yields the patents for the Slinger, which is actually a large manure spreader (see image 3).

Some relatively unknown government resources can also be founts of information. The National Technical Information Service (NTIS) is one of these resources. It collects and disseminates copies of government-sponsored research. If that research results in a patent application, then NTIS eventually publishes it. NTIS began publishing such reports more than 20 years before the USPTO started publishing patent applications. Of further interest is that NTIS and the Patent Office are within the Department of Commerce, so while one agency has guards at the door to keep information secret, the other is making copies on demand!

If you were to purchase the report from NTIS, you would receive a document that looks like a patent disclo-

sure, complete with overview and examples, well in advance of publication from the Patent Office. In the accompanying excerpt from an NTIS report, the date of application is September 29, 2005, and unless this application is based upon an earlier application, it will be published by the USPTO 18 months after this date. But here you are reading it clearly more than a year before this official publication date.

Would the NTIS report be considered enabling? Possibly, depending upon how much detail is published, but it is certainly of interest for intellectual property detectives, researchers, and developers, not only for the information contained within, but also for the associated search terms found, such as the inventor's name, the assignee's name, and the application number. Of course, NTIS only covers government-sponsored research.

### Let your fingers do the walking

There are also valuable handbooks published that compile, compress, and assemble prior-art information. Their sources are usually listed and many of the data sources are the result of years of research that has constantly been tweaked, thus resulting in an accumulation of data that puts all the facts into one record. One extremely popular and inexpensive source of information for the more commonly occurring substances is the Merck Index, which is used widely in the pharmaceutical industry. Information contained in this handbook includes the formula, first literature references, brand names, and patent information, which can be enormously valuable in establishing prior art.

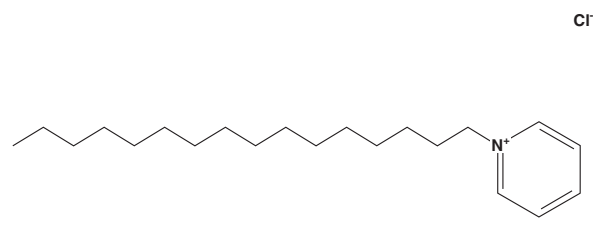
Another interesting handbook is the Beilstein Facts database, which started out as a single volume and has been supplemented ever since by thousands of volumes. A manual search of these many missives could take weeks, but now that the information has been made widely available online, a search can be done in seconds using CAS Registry Numbers, trade names, or even chemical structures, which means it is possible to locate patent information by drawing a picture of the chemical and then searching the entire file for chemicals that contain the structure.

Image 2 shows a structure of the chemical trade named CPC which is a common ingredient in mouthwash. This structure could be used as the start of a search for other chemicals using this compound to find other antiseptics which could then be used to find trademarks for these antiseptics. Then, a search similar to the one used in the Slinger example could be used to find relevant patents.

### Public info

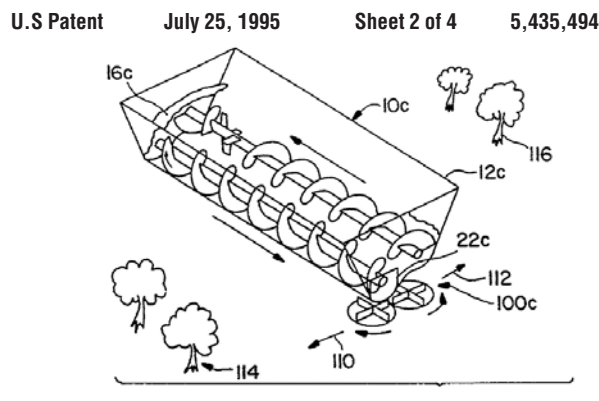
Whether snooping through obscure government databases or trawling conference papers and press releases, it is critical that researchers leave no stone unturned. Newspapers, whitepapers, Web logs, Web site copy, marketing slogans, PowerPoint slides at a trade show; these can all be sources of prior art that will derail a patent application or land a

### Not your ordinary search term



**Image 2:** Online handbooks, such as the Beilstein Facts Database, allow users to search for patent information using drawings of chemical compounds, such as the structure for CPC (above), a common ingredient found in mouthwash.

### What's in a name?



**Image 3:** A search for the "Slinger" trademark yields nothing in the patent database because the patent was likely filed before the trademark was established.

company in court with an infringement case on its hands. In the quest to uncover this information, researchers can independently dig through the resources outlined above, or they can turn to online information aggregators, such as Dialog, from Thomson, which brings together 450 different databases from a broad range of disciplines.

It's also important to remember that if you want to catch an inventor, you have to think like an inventor. What are the considerations most critical to that inventor and his employer? Secrecy is certainly paramount, but it is not mutually exclusive from recognition, which in many cases is the fuel that keeps new innovation growing. Companies on the cusp of major, patentable breakthroughs realize that the faster they can build anticipation for their new product, the more successful it will be.

The gray area between this desire to shroud and the desire to promote is where the intellectual property manager needs to live, constantly watching for the kinds of subtle cues that can signal new product development.

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