

OUR APPROACH TO SEARCHING

Resourceful

We do not follow a prescribed path in designing our searches but will consider whatever seems necessary. The timeliness, coverage, cost and technical suitability of each database and resource available to us is assessed according to the demands of each search request.

We have access to not only to the public databases and resources available to everyone, but also to the patent, scientific, technical and techno-commercial databases available from subscription platforms such as STN, PatBase, Questel•Orbit and ProQuest. Full use of the full-text and value-added databases available via these hosts and where appropriate, we search non-text parameters such as patent class, biosequence and chemical structure, images and numerical data.

PatBase covers over 100 patent-issuing organisations. STN hosts more than 30 patent-related databases, providing bibliographic and family data on patents and utility models. Through this host we also have access to a further 200 bibliographic, factual and full-text databases containing or abstracting some 400 million individual documents, including journals, textbooks, conference proceedings, trade literature and dissertations.

For chemical and pharmaceutical-based searches, we typically use the CAS REGISTRY, CAPLUS, MARPAT, Derwent World Patents Index WPINDEX and Merged Markush Service (MMS) Databases, employing search techniques such as CAS Registry Numbers, chemical name fragments, molecular formulae and chemical structure searching.



For searches involving protein or nucleotide sequences, our database use is extended to include those hosted by STN (Clarivate Analytics' GENESEQ database DGENE, CAS's REGISTRY file, WIPO's PCTGEN and SequenceBase's USGENE) or GQ Life Sciences' GenomeQuest. This enables us to utilise the most appropriate search algorithm for each request. These databases take our search capabilities far beyond what is available on public databases such as GenBank.

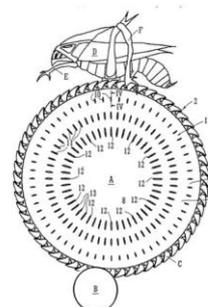
Non-patent literature searches on engineering, electronics, optics and computers typically involve at least the use of Compendex, INSPEC and IEEExplore, and for biomedical subjects a

cluster of many databases is usually employed including a minimum of MEDLINE, EMBASE, BIOSIS and SCISEARCH.

We make use of the many online national registers and databases available (not just those offered in English). For instance, we are able to search designs in over 40 jurisdictions.

The location of our offices in central London allows us to make full use of the extensive patent and technical literature collections of the British Library and other specialist UK libraries, particularly useful for non-patent literature searches and rapid response to document requests.

Corpus clock



Clock, US2009154298 equivalent to EP1941337, Fromental Ltd., PD18, June 2009
This chronophage, literally "time eater", can be seen at Corpus Christi, Cambridge, UK. The grasshopper appears to eat up the seconds. The grasshopper escapement is visible on the outside of the clock.
<http://www.google.com/earth/viewer/#?ll=52.205555555555555,-0.11111111111111111>

We are also happy to take enquiries beyond the confines of the library or the internet, for example, interviewing experts on head-up displays or visiting design museums to inspect lace patterns. In one notable case we were required to find date-marked operating manuals for a machine imported into the United Kingdom 20 years previously. Although the importers had destroyed their records, we were able to contact virtually all early purchasers of the equipment, determine the fate of their manuals, and locate and interview five witnesses whose evidence was crucial to a successful outcome for our client.

We continually review and update our practices, taking advantage of the most recent developments in database technology and searching techniques.

Skilful

Searching is a highly skilled art requiring considerable experience and knowledge. The untrained or occasional searcher often fails to locate important documents because the complexities involved in searching are not fully appreciated. For example, even an apparently straightforward patent search can raise many questions:

"How do I search for patentability, freedom to operate (FTO) or validity?"

Depending on the purpose of your request, different types of searches would be constructed. For example an FTO search is more likely to be based on classes whereas keyword/class combinations might be more appropriate for patentability and validity searches. An FTO search would be limited by date and country; a validity search would be limited by date. Generally more time would need to be spent on an FTO search.

"What search terms should I use?"

Today all enquirers are familiar with using keywords to carry out searches for example with search engines such as Google©. Not everyone is aware that sophisticated hierarchical classification systems have been devised specifically for searching patents. These are maintained and applied by intellectual property offices e.g. WIPO, the EPO, the USPTO and other national patent offices. Because a term defined in such a classification represents a

technical concept that might apply to an invention, they form an invaluable tool for retrieving sets of similar inventions, in ways that cannot always be captured using keywords or key phrases. Our years of experience mean that we are highly practiced in the selection of classes. Keywords can play an important role where a class retrieves a substantial number of patents and one wishes to limit the set to a more manageable size. So hybrid searches, i.e. class and keyword combinations, can be very effective.

"Will a classification search find everything that is relevant?"

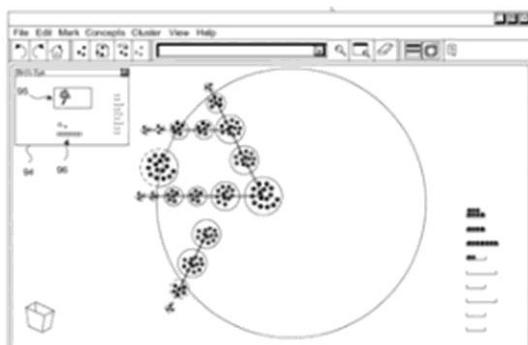
Patents may be assigned multiple classes deriving from a number of classification systems, and yet some publications may have no classification at all. You cannot necessarily expect to find all the patents relevant to your specific question within one class, because the definition of that technology class will not necessarily be an exact match with the definition of what you are interested in. Examiners are only obliged to assign classes for what may be novel in an invention and cannot provide for all the uses that you may wish to make of the classification. They will not know all the invention's possible applications even if they wished to index them. So not all classes which you think would represent your subject query need be assigned by the examiners. It can therefore be difficult to establish which classification system and classes to include in a search. In many instances we use multiple classifications systems simultaneously, particularly when the classes are to be combined with keywords. A pure keyword search may need to be employed in circumstances where it is believed that classes may be absent or insufficient.

"Which classes and classification systems should I use?"

We use more than one source of classification, of which the Cooperative Patent Classification (CPC) system is frequently the core. The CPC system is a refined, hierarchical classification system, which allows for focused, precise searching. It is based on the IPC and has been jointly developed by the European Patent Office (EPO) and the US Patent and Trade Mark Office (USPTO). The CPC harmonises the former EPO and USPTO patent classification systems. It includes EP indexing codes and keywords, a Y section for tagging emerging technologies, or technologies spanning several sections of the CPC and US special collections.

It consists of:

- i) all IPC symbols
- ii) a main trunk of CPC symbols
- iii) a 2000 series of indexing codes for additional information



Computer system for analyzing clusters of coded documents US2017351668, FTI Consulting Inc., PD 7 Dec 2017

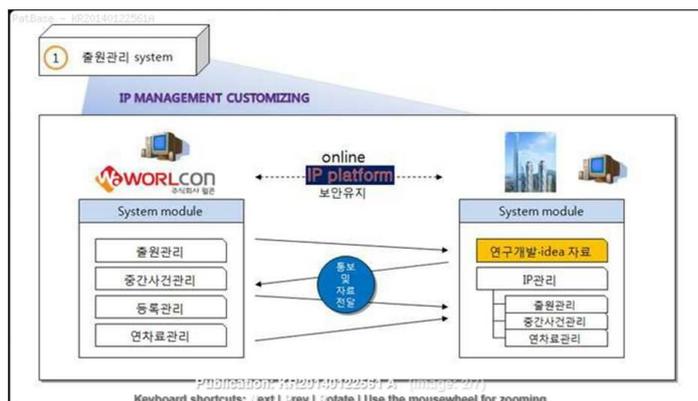
It is possible to search using CPC combination sets, that is, groups of CPC symbols reflecting the co-occurrence of features of an invention. These are of particular value when assessing novelty or validity.

The CPC is continually revised, with regular revisions every couple of months as part of which all documents in a redefined subject area are reclassified. It is usually searched in databases which may include the IPCs assigned by most countries, US Classes, German Classes, the Japanese FI Classes and F-Term Index codes. It is sometimes the case that the classification systems of individual countries locate more extensive or precise results. Countries not covered by CPC may require the entire search to be based on the IPC, sometimes only at group or subclass level.

In many instances we use multiple classifications systems simultaneously, particularly when the classes are to be combined with keywords. For example we regularly broaden the scope of a CPC search simply by including the IPC as well. A pure keyword search may need to be employed for publications where classification is absent, such as many recent PCT specifications.

"How do I know that the database or source I am using contains all possibly relevant documents?"

There are many free and commercial databases available for the searching of patents and other technical information. Relying on a single database source without an acute awareness of the limitations this may bring can easily lead to failure to retrieve key documents. We have the knowledge to decide which sources are most suitable for each particular request, as regards timeliness, coverage, cost and technical suitability.



IP platform system.
KR20140122561, Worlcon Co Ltd, PD 20 Oct 2014
IP asset management and risk management
Image from PatBase. For further information, please see www.minesoft.com.

"How can I be sure I will retrieve very old or very recent publications?"

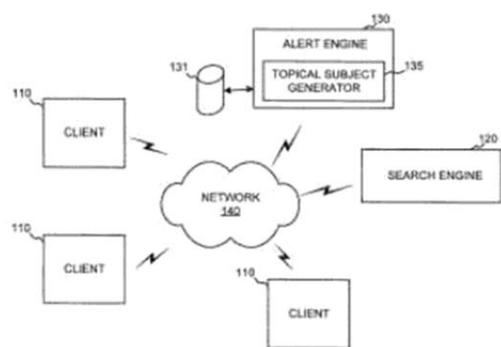
For every FTO search, we would check for patents which have not been classified by CPC and search them using keywords and / or another classification system such as the IPC. Our use of a spectrum of databases also ensures the maximum coverage of both old and new documents

"How will I find documents written in another language?"

The key piece of prior art may be written in a foreign language and would therefore not be retrieved by an English language keyword search. We consider translating all the keywords that we employ in our searches and/or use value-added databases in which the document has been analysed by a trained indexer/abstractor who produces an extended and more detailed abstract in English. Our translations are performed using dictionaries and internet or commercial translation tools, supplemented by the language skills of our employees. We are also able to search and view machine translations of the fulltext of Japanese, Chinese, South Korean and Russian documents where available and make decisions within the quality limits afforded. To some extent we are also able to input the equivalent non-Latin words as keywords in our search. For example in searching with the keyword "inhaler", we can also search the original fulltext non-Latin documents in China, Taiwan, Japan and Korea using: 吸入器, 吸入器 and 흡입기.

"How can I be sure that I have used all the terms defining a particular object, substance or process?"

Patents are often written with the objective of getting patent protection that is as broad as possible. Therefore the language is often characterised by the use of very general descriptions of concepts. Instead of using a common word for an element, e.g. "spring", the author may describe it with multiple words that allow for a broader interpretation, e.g. "energy storing means". We have the experience to discover such language and over the last 30 years we have built up an internal Concept Library of terms, which is continually updated and improved. This unique source enables us to access rapidly even the most unusual of keywords and phrases, giving an advantage over searchers who rely solely on the use of a thesaurus and their own breadth of knowledge. Since we employ an interactive approach to document retrieval, we are also able to add new terms to our strategies that have been identified in the course of the document analysis process. Although one can never guarantee absolutely that all classes, phrases, keywords and synonyms defining the subject of interest have been accounted for, the combined and overlapping use of classes and keywords results in greater reliability compared to either retrieval method alone.



Generation of topical subjects from alert search terms.
US2007073708, Smith AD et al, PD 29 Mar 2007

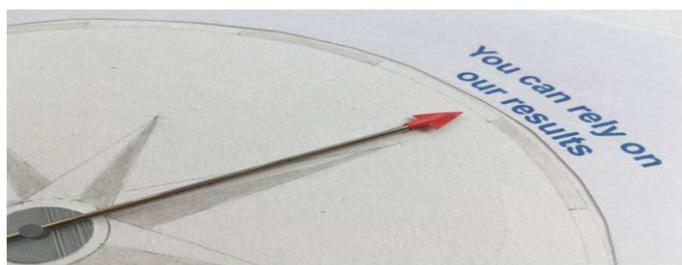
"My search is generating a large number of hits. How can I get to the key documents?"

Searching entire classes may result in a very large number of hits to be reviewed, particularly if they are applied frequently or are over-general in their definition. Similarly, the use of keywords or phrases alone can often result in a large retrieval since keywords may occur in patent texts with different meanings to those required. In such instances it may be wise to

prepare a carefully constructed combination of classes and keywords. At other times, limiting the retrieval may be too great a risk and every patent may need to be examined.

"I have retrieved a set of documents - now what!?"

Devising a good search strategy and retrieving documents is only half the battle. We have the resources and technical knowledge to establish the relevance and usefulness of the documents retrieved. We examine for relevance every document retrieved by our searches, including the claims, description and drawings, where appropriate. This allows us to provide you with only the material genuinely of interest to you, and we are able to rank the documents according to significance. Certain checks for internal consistency of the search are also carried out.



"How do I know when to stop a search?"

Often the most difficult decision is when to stop a search. You may feel that you have exhausted all avenues and searched all the classes and keywords that apply - but have you considered citation network searching for instance? On the other hand, you may feel that there is no end to what could be done. Knowing when to be satisfied with the scope of your strategy is a skill only acquired by experience. We are able to guide you with this and provide you with a full list of limitations that may have been applied, together with a list of possible further searches that could be performed.

Our knowledge and expertise allows us to answer all these questions and more, and our approach of using a carefully selected spectrum of overlapping databases, classifications and search strategies enables us to achieve a very high standard of reliability in all our searches.

CONTACT US

To request a free estimate or to discuss how we may be able to help you, please do not hesitate to contact us.



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