



Can a thorough search help you gain a granted patent?

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Introduction

At Victor Green & Company we provide a range of searches and pride ourselves on the quality of our reports. Three types of prior art search have been selected for a closer look; budget pre-filing/novelty, patentability and validity. Each can affect the likelihood of reaching a strong granted patent. We analysed a sample of patents that had been opposed and considered the searches that may have done by the assignees.

The value of our reports is attested to in our testimonials and we know that attorneys often reword their claims in the light of our novelty search reports.

Types of search

Atal, Akers and Hantos have summarised the different types of search that may be required during the patent lifecycle [1-3]. These can be a 'state of the art' search conducted before research and development investment or a pre-filing novelty search conducted before applying for a patent. A further patentability search may be done before foreign filing, infringement searching before launch and validity searching at the time of grant. The usefulness of our searches is described in our client testimonials [4].

Patentability searches

These assess the patentability of a new product or process and also look for all documents relevant to the novelty, or obviousness of an invention. This type of search is performed before filing or registration, or before seeking commercialisation. It can help a client decide how they should draft their patent claims or whether to file an application at all, thereby reducing unnecessary costs and delays in the filing process.

When a competent patentability or pre-filing search is done, the prior art identified puts the attorney in the best place to draft the specification. It can help the attorney fulfil the requirements of the patent application e.g. demonstrate novelty and inventive step, and describe how the invention has addressed problem(s) in the prior art. It also provides sound preparation for the examination and any opposition that might be filed.

Validity searches

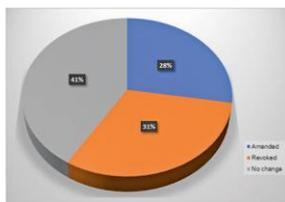
A validity search confirms whether a patent or design (either the client's or a competitor's) is valid with respect to the prior art. For patent validity this may cover both patent and non-patent literature. If relevant previous documentation is found that was not located by the examiner, the patent has a greater chance of being revoked on the basis that it was incorrectly granted.

Validity searches on competitors' patents are therefore useful if the competitor is considering infringement proceedings. Alternatively, if a client wants to take legal action for a competitor's infringement of a patent they own, or is approaching a company to arrange a licensing deal, a validity search may be required to decide if the patent in question is vulnerable to legal challenge.

Analysis results for opposition set

Oppositions to European patents have been described in two papers by van de Kuilen [5-6]. He found that the main reasons for revocation were lack of inventive step (accounting for 43% of revocations), lack of novelty (22%) or added subject matter (11%).

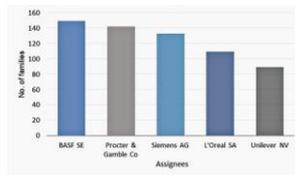
We searched for European patents that had been opposed. The European jurisdiction was chosen as the European Patent Office (EPO) is rigorous in the way it classifies the source and relevance of citations, providing detailed legal status information. We limited the set to those that had been revoked, amended or unchanged; the percentages were 31% revoked, 28% amended and 41% unchanged.



(Fig.1) Legal status of opposed European patents to show proportion amended, revoked or unchanged

We then limited this set of opposed European patents to those which had been revoked and had earliest priority dates between 2001 and 2010. On average, it will take four years for an opposition to reach an outcome, so the date range was chosen to encompass this comfortably. These patents were analysed further in PatBase Analytics. For further information about PatBase, see www.minesoft.com.

Results were similar to those found by van de Kuilen [5, 6]. Patents in high value subject areas were more likely to be opposed. The topics were mainly pharmaceutical and chemical. Harhoff described the patenting strategy of this sector as ‘portfolio optimisation’, involving high levels of patent filings as well as high levels of patent opposition [7]. The graph of top five assignees showed BASF, Procter & Gamble, Siemens, L’Oreal and Unilever.



(Fig. 2) Top 5 assignees from set of opposed and revoked European patents with earliest priority dates between 2001 - 2010

Origin of citations

During the life cycle of patents, citations may be supplied by applicants, examiners or third parties. We wanted to see if there were any trends concerning the percentage of citations from the applicant compared with the total number of citations from all sources. We were interested to see if the source of a citation could clarify the value of external patentability searches.

Cited documents are coded by the EPO in terms of origin (search, examination, opposition, applicant) [7, 8]. Citation categories include documents cited in the description section of the patent application [9]. We looked at a random sample, consisting of every tenth family, from a single year of our set of families that contain opposed and revoked European patents. Using these EPO codes, we analysed citations according to their origin.

Analysis results for citation set

There are many variables affecting the number and source of citations, as they can be supplied over several years by several parties. Different jurisdictions have different approaches. For example, in the US, applicants are required to submit a comprehensive set of citations, see Harhoff [7]. Furthermore, citations may not have always been fully classified or included in the databases. Thus, several caveats must be applied to any conclusions drawn from citation data sets. However, it is possible to make general comments on our sample set. The number of applicant citations fell predominantly into two groups.

- For a few families, it appeared that more citations had been supplied by the applicant than by the examiner or by third parties. This set included two outlier families, where each applicant supplied over a hundred citations. Both were multinational companies. The number of citations suggested that they had done their utmost to gain and retain their patents.
- For other families, it appeared there were many more citations supplied by the examiners and opponents than the applicant. This suggested that for some families, the applicant could have

provided more prior art if they had undertaken a higher quality search before the application was made.

Conclusion

There are a number of reasons why an examiner may not find all relevant prior art. EPO searches are limited to the Patent Co-operation Treaty Minimum Documentation, so searching outside this set could reveal other relevant documents. Furthermore, examiners are allocated a limited time per application to undertake the search. Sternitzke pointed out that there were a variety of reasons why prior art may not be cited by the applicant [10]. Companies may not realise the significance of prior art they are already aware of, or may simply withhold it. Furthermore, they may not have the expertise to search for inventive step and novelty in-house.

For some families for which the European patents were revoked, it appeared that the applicant could have benefitted from supplying more prior art with their application. It is important that searches at all stages of the patent lifecycle are thorough. Further research could undertake to drill down into the individual Register records for families; thus, this area could be usefully revisited.

We conclude that at all stages in the patent lifecycle, thorough patent searches will contribute to strengthening the patent application and the resulting patent.

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