Researchers' Guide to Deciphering Patents

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Researchers often find the first patents they read to be a mutant hybrid of science and law. The writing style is bold and broadly assertive, not the conservative style of top journals. The format, the drawings and the repeated use of "comprising" wording seem to be an ugly stepchild of conventional scientific literature. This article will provide a navigation guide for those new to patents.

To appreciate a patent, you need to keep in mind its purpose. The patent application discloses an invention and requests a 20 year exclusive right to make, use and sell that invention.

The patent notifies the public of the granted scope of exclusivity following adversarial negotiations (examination) with the patent office. The patent application must disclose an invention that is novel, inventive and useful. It is written by the applicant to support the requested scope of monopoly - ideally no more detail than necessary and no less. It is a race to get to the patent office ahead of competitors, since the first inventor to file gets the patent. You don't need Cadillac quality data - it is better to have a compact vehicle that can be filed quickly, with enough support to take you through the patent office to the finish.

When you pick up a patent document, first determine if you are looking at a patent application or an issued patent. Then, determine your purpose for reviewing the document.

State of the art review

This refers to doing a general (background) review of literature and patents in a particular area. If your goal is to improve your broad understanding of technology, then the description of the patent will meet your needs. If you can't find supporting data for a particular assertion, maybe it is not there. Keep in mind that it is not peer reviewed, it is Patent Office reviewed, so the patent applicant may have written a description of the invention that goes much beyond the basic data. Patent applicants are allowed to make reasonable generalizations from their data. There may be speculative description also, though this won't be able to support grant of a patent.

Scope of Patent Protection

Perhaps you are an inventor or a company commercializing a *granted* patent, and you want to know the scope of your patent protection. Focus on the claims. These are the short numbered sentences at the back of the published document. Claims describe the patent exclusivity. Make sure your claims cover your product and commercially valuable variants. Claims should also cover any competitor copies that have emerged.

If you are reading a patent *application*, take the claims with a grain of salt. They will most likely change during negotiations with the patent office about patent scope. Patent applicants try to amend claims to appease the patent office while keeping them as broad as possible.

Validity

If you wonder why the patent is so broad, then first make sure you are looking at an issued patent, not an application. Focus on the claims, not the description. If it is an application, the claims are usually too broad and will be narrowed during patent office examination. The description will remain as broad as it was at the time of filing. Don't be misled by the description, it is the claims that matter most.

If an issued patent claim is properly supported, new, inventive and useful compared to prior information, then it is valid. The claim can recite some old elements as long as the entirety of the elements state a patentable invention. If a claim is speculative, only covers old knowledge or is obvious, then it is invalid. Patent Offices do occasionally issue patents that courts later invalidate. However, keep in mind that patent law often has a lower threshold for inventiveness than a scientist reading a patent for the first time.

Infringement

If you are reviewing a competing product against a granted patent, you may be determining if there is freedom to operate with the competing product. Again, focus on the claims. The claim wording is like a fence enclosing the patent exclusivity. Each element of the claim is carefully compared against the product. A product that falls in the claim wording would be an infringement (unless the competitor takes a license). If the product falls outside the claim wording, there is no infringement. Use a similar approach for claims to processes.

If there is an infringement risk, the company at risk may need to either go in another direction, take a license or design around the patent.

Assessing freedom to operate against a patent application is tricky. The as-filed claims are probably too broadly worded, but you won't know with certainty what scope of claim will ultimately be granted by the patent office. Monitor the claims for changes during examination.

Follow this guidance for an efficient patent review to initially assess the lay of the land. Consult a patent attorney before taking action, since patent interpretation is complex.

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