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Do-It-Yourself Patents

By: **Hugh Loebner**

I have been told that no one should apply for a patent without the help of a lawyer and that any inventor who does so is foolishly risking making a mistake that could cost him or her dearly. But I have six patents under my belt, and I wrote them and applied for all of them myself. I've been through pretty much the whole gamut of U.S. Patent Office travails: rejections, (successful) appeals, and even that rare event—a patent reissue. Much as I revel in being a distinctive and unique individual, I don't believe I possess a special aptitude, and I think most inventors would benefit from writing their own patents.

Consider the following:

- It is very unlikely that your invention (despite its brilliance) will ever be commercially successful, since only about one in 1000 is, so any mistakes on the application probably won't matter.
- Most patents held to be invalid were drafted by attorneys, so a lawyer is not a silver bullet against risk. Among other problems, attorneys can fail to understand the invention adequately and thus make claims that are too broad or too narrow.
- Doing the work yourself—known legally as acting *pro se*—will save you a lot of money.



ILLUSTRATION: MICK WIGGINS

Drafting a patent application is challenging, but for those with an engineering turn of mind, it's also a great deal of fun. The most important part of writing a patent is drafting patent claims that are broad enough to make your invention something that other people should license while making the claims narrow enough to establish the invention's unique and useful nature.

Before you even consider drafting a patent application, you must do a patent search. It is very likely that someone has thought of—and patented—your idea first. In years past, I spent many hours in the U.S. Patent Office, perched uncomfortably on a radiator in the public stacks, perusing boxes of crumbling patents. Now, however, you can do Internet searches from the comfort of your own home or office, knowing that every patent is online.

The first step in conducting a search is to classify what it is you have invented. Look in the government classification manual to find the class and subclass that apply to your invention. The manual is available online at <http://www.uspto.gov/go/classification/uspcindex/indexs.htm>.

Let's walk through a typical search. Suppose you have an idea for a new type of digital tone-detection filter. Under the broad class "F" you will find filters. You will note that electrical filters are mostly in class 455 but that in class 708, subclasses 300+ refer to electrical digital filters. The classes and subclasses are hyperlinked to the descriptions. Clicking on the "300+" leads to a list of subclasses 300 through 323, entitled "Electrical computers: arithmetic processing and calculating." Subclass 312 refers to tone detection.

The next step is to search the patent database at <http://patft.uspto.gov/netahtml/search-adv.htm>. To search on class 708, subclass 312, enter: ccl/708/312 and click "search." This will bring up all U.S. patents that have class 708, subclass 312, as a primary or secondary classification. The point of doing the search in this somewhat *recherche* manner is that it will produce a much shorter and more apropos list of results than simply attempting to search the text of patent applications using keywords such as "filter" or "detector."

Once the list of relevant patents appears, clicking on the patent number brings up the entire patent. Patent drawings are in an obscure version of the TIFF format that requires your browser to have an appropriate plug-in for viewing, which can be a headache. For example, Apple's QuickTime plug-in will display the images when installed in Internet Explorer but not when installed in the Firefox Web browser. But a very good plug-in, AlternatIFF, available free at <http://alternatiff.com>,

enables Firefox to display the images.

Read all the relevant patents. Even if you are fortunate and no patent anticipates your idea, you still have some reading to do. Read some patents in your invention's primary and secondary classifications to get a feel for the language that's used. Pay particular attention to the claims. The goal in drafting claims is to make the first set of claims as general as the patent examiner will allow and then to list additional, dependent claims that more narrowly define the scope of your patent. Note the terms used in previous patents and consider using the same terms in your application.

Also pay attention to the format of the patents. Most follow the same basic structure: title, abstract, specifications, drawings, and claims. You can get software, such as PatentEase, published by Inventorprise Inc., Vestal, N.Y., that will help you construct and format your patents correctly. However, the results, automatically generated from filling in on-screen forms, often require a lot of manual work to get them to a point where they will be acceptable. Instead of using software, I suggest looking at a number of published do-it-yourself guides to drafting patent applications and other helpful reference works.

I strongly recommend the book *Landis on Mechanics of Patent Claim Drafting*, by Robert C. Faber (Ostrolenk, Faber, Gerb & Soffen). This reference covers drafting claims for every type of invention. Don't bother to study the entire volume, though. Just pay attention to those sections that deal with your type of invention. It will really help.

One note of caution: make sure you spend some time and effort on the drawings. I always do my own. The Patent Office is very strict about them, and its standards for them can be found at http://www.uspto.gov/web/offices/pac/mpep/documents/appxr_1_84.htm.

In particular, make sure you always use the same reference numbers for all the elements in your drawings. That is, if your patent uses, say, a particular "circular restraining widget," then decide on a reference number for it and use that number wherever the widget appears.

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drafted by attorneys, so a lawyer is not a
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After filing your application, don't be too discouraged if the examiner rejects it. If the rejection is based on an earlier patent that is identical to yours, there isn't much you can do. But if you feel there are significant differences between your invention and the one cited by the examiner or if there are other reasons for the rejection, you have several options.

If the examiner claims that your application is "nonenabling," that is, that you have not described the invention in sufficient detail for an ordinary worker "skilled in the art" to make or use one, you can simply file another application with the details filled in.

Another option is to file an appeal. I have six U.S. patents: 6959050, 6019393, RE36455, 5525060, 5159322, and 4949079. The first two patents were awarded only after I appealed to the Board of Patent Appeals and Interferences. (Patent 6019393 is for credit card slips in a restaurant; it allows you to indicate your gratuity as a percent of the bill, instead of an absolute amount. Really.)

Getting patent 4949079, for a special type of scanning device, was even tougher. I had to file an appeal with the U.S. Court of Appeals for the Federal Circuit after an appeal to the Patent Office of an initial rejection failed. I appealed pro se, and ultimately the patent was reissued. Frankly, I found writing the appeal briefs enjoyable. And I saved tens of thousands of dollars in legal fees. Had I not appealed, I would not have been awarded those patents and that reissue, so don't be afraid to lodge an appeal yourself. If you can think logically and marshal your arguments, you can file appeals—and win. But that's a topic for another column.

About the Author

HUGH LOEBNER is the president of Crown Industries, an East Orange, N.J., manufacturer. He is also a philanthropist and sponsor of an annual contest for artificial intelligence. He has been awarded six U.S. patents and has a Ph.D. in sociology from the University of Massachusetts, Amherst.

To Probe Further

The official U.S. government guide to patent procedures is the "Manual of Patent Examining Procedure (MPEP)," which is online at <http://www.uspto.gov/web/offices/pac/mpep/mpep.htm>. For inventors who want to write their own patents, this is the most important reference there is; it explains everything.