

Patent Careers For Technical Writers and Scientific, Engineering, and Medical Specialists

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After working more than fifteen years working as a freelance technical writer, I discovered another career option that draws heavily on my technical writing background and potentially offers significantly better money. The purpose of this article is to help other technical writers decide if they want to explore this interesting option. This same career option is also open to scientists (in physical, chemical, and biological sciences), engineers, and doctors. (Possibly nurses, too – read on....)

Please bear in mind that what I describe here applies exclusively to the career option of being a patent agent in the United States of America – I have no idea if there are parallel career options in other countries, though possibly similar career options exist!

What Is A Patent Agent?

Let's start by defining both patents and patent agents.

A patent is a legal document which describes a new invention, and in particular characterizes those aspects of the invention which are really “new” or “inventive”. A patent has several parts, but the crucial parts are the detailed discussion of the invention (sometimes referred to informally as “the disclosure”) and the claims.

The disclosure gives an overall description of the invention, in sufficient detail that someone who is well-versed in the overall field of technology at hand could build the invention based on the disclosure. The claims are a section of the patent which—by means of very specific, structured legal language and conventions—indicate precisely the aspects of the technology that the inventor asserts are original, and which should therefore be protected by law as his or her unique invention.

In the United States inventors are legally permitted to draft patent applications for their own inventions. Most inventors, however, recognize that drafting an effective patent requires specialized training. As such, they turn to patent attorneys or patent agents to draft their patents for them. Patent attorneys and patent agents are licensed to draft, file, and prosecute patents on behalf of inventors.

“Drafting” a patent application entails gathering necessary information from the inventors and writing up the patent application. Patent “prosecution” entails a kind of legal dance between the patent applicant and the United States Patent and Trademark Office, or USPTO. It is common for the USPTO to initially reject all or most of the claims in a patent application. The claims can be rejected on various legal grounds, but the typical reason is that there is a prior public disclosure, in the form of a prior patent or other publication which

the Patent Examiner considers to anticipate the claimed invention. (Sometimes the Patent Examiner argues not that patent application is anticipated by a single existing invention, but rather that the application is “obvious” in light of a combination of existing technologies. These details are not central to our discussion here, so for now we’ll just lump it all under “anticipation”.)

In other words, Patent Examiners at the USPTO will argue that someone else got there first. The patent applicant or applicants—typically represented by their attorney or agent—may then either amend the patent claims, or present factual arguments that the claims are not actually anticipated by prior inventions. Sometimes the attorney/agent will do a combination of both, amending some claims while trying to argue around other rejections. This dance can go through one or more rounds, and sometimes winds up going through administrative appeals within the USPTO. (It can even go beyond the USPTO, into the court system.)

Both patent agents and patent attorneys are licensed to fully represent inventors in all respects before the USPTO. In other words, from the standpoint of patent prosecution with the USPTO, there is no practical difference between a patent agent and a patent attorney.

The difference is, a patent attorney can also represent an inventor in various legal proceedings which may take place in courts beyond the jurisdiction of the USPTO. In addition, attorneys can advise inventors on contractual issues, licensing issues, and other legal matters which are beyond the strict scope of patent filing and prosecution. Still, there is a lot of work to be done just in the realm of patent filing and prosecution, more than enough to keep a patent agent very busy!

A patent agent, under the supervision of a licensed patent attorney, may also engage in “opinion” work. This means, typically, giving legal advice to a client about whether one of their inventions violates a patent claim of another patent (usually from another company or inventor), or whether a competing product violates one of their patents.

How To Become A Patent Agent

Drafting and prosecuting patent applications is not exactly the same as technical writing, but there is significant overlap in the skills involved. Certainly, it is crucial to be able to work with subject matter experts (like engineers or biologists) to gather technical information, and further to be able to write up the information in clear language. Drafting the patent claims involves additional legal skills that would be new to technical writers, but it certainly can be learned.

In the U.S., however, there are strict limits on who can become a patent agent. On the one hand, a law degree is not required. On the other hand, there is a licensing exam which is administered by the USPTO. In order to qualify for the exam, you must have significant technical training in a field such as electrical engineering, mechanical engineering, chemistry, biology, physics, or medicine. (Studies in math are not considered acceptable, but computer science is. Also, please note this is not a full list of the allowed technical backgrounds; you can obtain that from the USPTO Web site, as described further below.)

As such, the patent agent field is wide open both to technical writers with the necessary academic training, and also to engineers, scientists and medical professionals who want to make a switch, and who enjoy working with the written word.

Typically, you must have at least an undergraduate degree in one of the appropriate fields, or the equivalent. In my own case, my college degree was for a kind of independent major, self-designed program of study; however, I was able to provide the USPTO with documentation showing that I had essentially completed all the coursework that one would normally take for a physics major. That was enough to qualify to take the test. The exact requirements for being able to take the test can be found at:

<http://www.uspto.gov/web/offices/dcom/olia/oed/examregist.htm>

(Click on the link for “General Requirements Bulletin” for a .pdf file that lists the exact requirements.)

Once you apply and qualify for the test, you must take the test, which consists of 100 multiple choice questions! (90 of the questions are actually graded, the other 10 will be “questions under development” by the USPTO.) Studying for the test is an entire art in itself, and perhaps I’ll write a separate article on that at some point. In essence, however, the licensing test is not a technical test—if you qualified to take the test, it’s assumed you know something about technology or science already—instead, it’s a test on law and administrative issues related to patents. It’s a very detailed test, and the pass rate is not all that high. In other words, you really need to study for it.

Everything you need to know about patent law and regulations can be found in a book called the MPEP, or Manual Of Patent Examining Procedure, which can be downloaded from the USPTO web site. Unfortunately, it’s about 3000 pages long (really), and it’s hard to know exactly what to study from that book! When I took the test, I was able to study off of old tests, which can also be downloaded from the USPTO web site.

(<http://www.uspto.gov/web/offices/dcom/olia/oed/pastexams.htm>)

However, in 2005 the USPTO switched from paper tests to an electronic testing system. They no longer publish recent test questions, and the existing old tests (from 2003 and before) become progressively more out of date as the patent law and regulations evolve over time. However, I would not completely ignore these old tests. While the specific questions and answers may become dated over time, the types of questions on the old tests still reflect, at least in a broad sense, the kinds of issues likely to be raised in the future.

There are patent prep course which you can take, and others which can be obtained via mail-order. They are not cheap (expect to spend anywhere from \$1000 to \$5000), but if you are determined to make a career transition the prep courses may help you pass the test. For what it’s worth, however, I managed to pass the test my first time, simply by working off of some books I found on patent law at a legal bookstore, plus studying off the old tests.

Here is a link to a site where you can get more advice on studying for the patent agent/attorney licensing exam. (Agents and attorneys both take the exact same exam.)

<http://www.intelproplaw.com/>

(Go to the “forums”, and find the discussions on patent careers.) There are also discussion groups on Usenet related to patent law, where you can get advice. (See the newsgroup misc.int-prop)

Here is one site (among dozens that you will find, if you search the Web) for course materials you can find for the patent bar: <http://www.patentpublishing.com/index.html>

Career Opportunities As A Patent Agent

What are the career opportunities as a patent agent?

I was surprised, after getting my license from the USPTO, that I did not immediately land work with a law firm. I would have thought that my extensive experience as a tech writer would have made me highly attractive to the law firms. What I found is that some law firms, including both general-practice law firms and intellectual property boutiques, seem to be more interested in recent law school grads than in experienced tech writers. Partly, I think it's because they are simply not familiar with technical writers; not that many people make the transition from tech writing to patent work. Partly, however, I think there is a bias on the part of some professionals in the legal community towards lawyers.¹

That said, some patent law firms (and some general practice law firms) will hire technical specialists, meaning people who have technical backgrounds, even if they are not licensed as patent agents. (Some firms use titles other than “technical specialist”, but the idea is the same.) Often, they are seeking people with advanced degrees (M.S., Ph.D., or M.D.), but some of them will be open to candidates with a B.A., B.S., or B.S.E., especially if you do have the technical writing experience on top of that. Extensive experience as an engineer, scientist, or medical professional can also be highly attractive to some of these firms.

If you've passed the patent bar prior to even applying for work—so you are a patent agent, instead of just a technical specialist—that can elevate you above other candidates for technical specialist jobs. On the other hand, even if you have not yet passed the patent bar, some firms will hire you as a technical specialist. The experience you get at the law firm can help you understand the legal and administrative issues that you will encounter on the test itself.

So the bottom line is, not all law firms engaged in patent work will be open to patent agents (or technical specialists), but some will. In addition, some private corporations draft their own patents in-house, and will be open to working with patent agents/tech specialists.

Another issue is experience. Many law firms, and probably some private companies, want someone who is experienced in drafting claims and prosecuting the patent through the actual award of the patent. So, as with work in many fields, getting that first job may take some real persistence. (In my case, it took about six months from getting my license to getting an actual job offer.) But it's pretty clear to me that once you've gotten experience on that first job, more opportunities will open up if you decide to move on.

Also, the money-earning potential is very good. A starting position as a licensed patent agent could easily afford you the same kind of earnings usually seen by senior level technical writers. (I've checked the salary stats on this – a patent agent at two years can make as much or more as a technical writer at ten or fifteen years.) The mere fact that a license is required to do the job (and a license that requires passing a hard test!) elevates the position from non-licensed tech writing work. I'm not as sure how the patent agent salaries compare to salaries

¹ For what it's worth, I was also seeking flexible hours, and that was almost surely a factor in some law firms being less than fully enthusiastic. If you are willing to work conventional hours, that will be one less obstacle in your way.

for engineers or medical professionals, but I'll bet the patent agent salaries easily match what most scientists can earn.

A final, very important perk is that—and, this is a whole other branch of this career path—if you do get a job with a law firm and decide to pursue a law degree, many firms will reduce your full-time requirements while you go to law school at night, and may help pay your law school tuition. So, this is a potential route to making the transition from tech writer/scientist/engineer/doctor to patent attorney. A lot of work, but with the potential for large financial rewards.

The Washington, DC area is particularly fertile for patent work, because so much of patent work revolves around interaction with the USPTO. (For example, it's convenient to be able to meet on occasion with Patent Examiners.) However, most large cities and most major high tech corridors around the U.S. will have at least some law firms that do patent work. Before deciding to pursue a career as a patent agent, you might want to investigate the career possibilities in your geographic area.

Finally, it's worth noting that there are independent patent agents. It's probably hard to start out this way—again, companies want you to have experience before sending work your way—but once you've been in the field for some years, you can probably set up shop on your own as an independent consultant.

Working As A Patent Agent

I have been employed as a patent agent for close to two years now, but in some respects I'm still learning what the job is about. (There's a lot to learn!) But, there are at least a few things I can share:

First, if you work at a law firm, expect to juggle many projects for many clients at the same time. You will not be working on one patent, you will be working on six or eight or possibly twenty. The work tends to be stop and go in nature.

As a beginner, you will do some work on a project and then have it reviewed by more senior staff before continuing. But even as an experienced patent agent, the work has breaks and pauses. A client may send you preliminary information about an invention, and you can start to do some researching and writing, but then put the project on hold until you can interview the inventor or another subject matter expert. Once you've drafted the patent, it will probably be reviewed by another, more experienced legal professional, as well as by the client, before finishing touches are put in place. So, you can see the need to have multiple projects in the pipeline.

In addition to drafting patents, you can also expect to be involved in patent prosecution, meaning you will reply to correspondence from the patent office. As indicated above, the work entails determining whether rejections raised by the patent office are in fact valid, and then either revising the claims in your patent or arguing the merits of the patent vs. the prior references (prior inventions cited by the patent office).

The writing itself is also different from technical writing. There are a host of legal requirements, both formal (meaning things you must do in drafting a patent) and prudent (meaning things that are not legally mandatory, but that make for a better, stronger patent

application). You can expect to constantly encounter new technologies, and you will be called upon to grasp the essence of those technologies quickly.

One thing that I've found particularly challenging is the need to sometimes be more general in my writing. As a technical writer, filling in the details—and filling them in early in a document—was often crucial to clearly conveying an understanding of a technology. With patents, by contrast, the goal is to define the invention clearly, but at the same time to not narrow the invention too much; the ideal patent “claims” the invention as broadly as possible. (The objective is to exclude competitors from gaining patents on inventions that are essentially or substantially the same, with only minor differences).

Broadly speaking, however, the work calls upon the same kinds of writing skills, thinking skills, and people skills as technical writing, while providing a somewhat different challenge, and significantly better opportunities for pay.

A Related Path: Patent Examiner

In addition to opportunities as a patent agent or attorney, another option is to become a patent examiner. Patent examiners work for the United States Patent And Trademark Office (or similar agencies in other countries). Their job is to review patent applications and determine whether or not the applications meet the criteria for patentability (such as the invention being novel, non-obvious, and other criteria).

The USPTO provides free training for its patent examiners, and of course the job can provide the kind of security typically associated with government employment. An additional benefit is that, after some years working as a patent examiner, examiners can automatically be licensed as patent agents without having to take the licensing exam. (I don't know the number of years required, but that information is available from the USPTO. I think [fuzzy memory at work here...] it's on the order of five years or so, so it is not as if you need to spend a lifetime as a patent examiner before skipping out on the exam.)

Of course, once you've waived out of the exam, and become licensed as a patent agent, that opens significant opportunities in the private sector. In particular, some law firms may especially welcome your expertise, precisely because you've worked “inside the system”, and understand how the USPTO operates.

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At the time of Internet publication of this article (January, 2008), Steven Oppenheimer is a patent agent at a boutique law firm specializing in intellectual property. Mr. Oppenheimer specializes in electronics, software, mechanical, and business method patents. He may be reached at steveqdr@yahoo.com.

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