



## *Expert Commentary*

# **Claims?? We Don't Need No Stinkin' Claims!!! (Or Do We?)**

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**In this article, Sanford Warren Jr. explains the parts of a patent: the written description and the undecipherable claims section, as well as the scope of rights granted under a particular patent.**

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As noted in previous articles, the U.S. patent system incorporates a huge body of relatively quirky rules and concepts, many of which are counterintuitive—or at least non-intuitive. In the previous article in this column, *What Does the Word "Comprising" Mean, and Why Should I Care?*, we discussed two of the more esoteric aspects of patent law. The first was the purely "negative" nature of patent rights, under which a patent holder has a "veto" over the actions of other parties. The second was the "collective" nature of patent ownership, under which each part-owner of a patent has complete and transferable rights to the patent. This article focuses on the scope of the rights granted under a particular patent.

### **The Written Description of the Invention versus the Claims Section of the Patent**

Although a few clients pursue patents primarily because they are proud of their ideas and want to publish them to the world, most pursue patents because they hope to gain a competitive market advantage over their closest competitors in the market. For the first group, the scope of the rights granted under the issued patent is not of great concern. For the second, those seeking to use patents as competitive tools, the scope of the rights granted under the issued patent is the crucial point of the whole exercise.

Anyone who has read an issued U.S. Patent knows that they are generally not the most exciting documents to read. In fact, owing to the process under which they are generated and the goals for which they are drafted, patents can be some of the driest reading this side of the Internal Revenue Code. At the same time, in a well-drafted patent, every word is there for a reason, although not all words carry the same weight. As discussed below, certain words and passages in a patent are significantly more important than others.

In general, a person inexperienced in patent law will tend to treat the patent write-up as a technical paper, not as a legal document. In fact, a patent is both. One of the principal purposes of patent law is to create a publicly accessible database of scientific and

engineering knowledge. Most patent applicants do not, of course, file patent applications out of altruism. Most file to acquire a legal monopoly over a certain technology claimed in the patent.

For a private entity to acquire a patent monopoly, the patent law requires that the inventor disclose to the public what he or she knows about the technology. The patent process, in other words, is founded on a bargain between the inventor and the public. In exchange for a limited monopoly on the invention, the inventor must reveal his "secrets" to the public in the body of the patent. In practice, the "secrets" are generally buried in the middle of a lengthy technical write-up guaranteed to put readers soundly to sleep before they get to any useful information, so the inventor's secrets are usually still pretty safe.

To a technologist, the technical write-up, or "written description," of the invention is the most useful portion of the patent. To a lawyer, the written description is often the last part of the patent read. Being more interested in the legal scope of the patent rather than the scientific and technical details of the technology, the lawyer will generally skip to the very last section of the patent, where "claims" are found.

### **Deciphering the Claims Section**

As difficult as most patents are in general, the unwary will often reach the claims completely unprepared for the odd legalese that lies therein. The written description may be complicated and dry, but at least it's in English. A sample of a written description of an issued patent reads as follows:

In accordance with one embodiment, as illustrated in FIG. 1, a parallel concatenated turbo encoder 10, or turbo coder 10, includes first and second coders 12, 14, an interleaver 16, and a multiplexer 18. The first coder 12 and the interleaver 16 are configured to receive encoder input data 20, which is typically user information or control data. The first coder 12 outputs systematic symbols 22, which are typically a copy of the original input bits 20, and parity symbols 24. The second coder 14 is configured to receive an interleaved output 26 of the interleaver 16 and to output a second set of parity symbols 28. The systematic symbols (not shown) generated by the second coder 14 are suppressed, and the remaining respective outputs 22, 24, 28 of the first and second coders 12, 14 are multiplexed by the multiplexer 18 into an output data stream 30...

Anyway, you get the idea. Hello? I see you're drifting off already? I'd suggest you snap out of it, because, as the song says, "You ain't seen nothin' yet." The above is only a small excerpt of a patent that goes on for many pages. So you can see why the written description can be slow-going, unless you're really into parallel concatenated turbo encoders. After several pages of detailed technological jargonese similar to the above, the reader will generally be met with something at the end of the patent that looks like this:

1. A turbo coder, comprising:

a first coder configured to receive a plurality of input bits in succession and generate a first plurality of output symbols therefrom;

an interleaver configured to receive the plurality of input bits in succession, the interleaver including a plurality of bit storage locations arranged in a matrix of rows and columns and a linear congruential sequence generator configured to pseudo-randomly generate a sequence for shuffling bits within each row of the interleaver; and

a second coder configured to receive a plurality of interleaved bits in succession from the interleaver and generate a second plurality of output symbols therefrom.

As you can see, although claims mostly use English words, they're not written in a form that could legitimately be described as English syntax. The astute will notice that the above text is one continuous "quasi-sentence," beginning with a capital letter and ending with a period. This is not an accident. This form of claim is not merely allowed by the patent rules; it is mandated. This is true whether a claim spans three lines or three pages.

The astute will also realize why the claim is referred to as a "quasi-sentence." The above excerpt has no predicate, merely a relatively detailed elaboration of an object. Under patent rules, each claim is to read as if it begins with the words, "I claim...." When you read the above claim 1 with those words added, it makes a little more sense. At least it becomes a real sentence. Sort of.

You may also notice the use of the word "comprising" in the first line of the claim. Although it's not really used often outside the patent business, "comprising" is, believe it or not, a real English word. According to the dictionary, it has a meaning very similar to "including." In the patent business, the word "comprising" has the very specific meaning: "including at least the following."

In light of this, you can see that the preamble to claim 1, which reads "A turbo coder comprising:" should be read as: "I claim a turbo coder including at least the following:" Read in this way, it makes even more sense. That is, the inventor of the invention described in the patent is making a legal claim to turbo coders that include at least a "first coder," an "interleaver," and a "second coder." In other words, a turbo coder that does not include at least these three elements would not be covered by claim 1. From that point, questions will no doubt arise as to whether the "first conflagulation processor" in a competitor's "super conflagulator" is the same as the "first coder" in the patent, but the analysis of those questions is beyond the scope of this particular article.

With all of the odd formalities and quirky construction rules used by patent attorneys in drafting patent claims, it's easy to understand why most non-lawyers tend to ignore the claims when reviewing a patent. With respect to the use of a patent for a competitive advantage, however (that being the purpose for which most clients acquire patents in the first place), the claims are absolutely crucial. As noted, it is the coverage of the claims, rather than the written description, that defines the scope of the monopoly granted under

the patent. The important point is to understand the relevancy of the claims to the function and purpose of the patent itself.

### **The Patent Prosecution**

To understand the reason why a narrow set of claims is often accompanied by a broad description, it is helpful to understand the patenting process. What often occurs during the patenting process, known in the business as "patent prosecution," is that a patent attorney will prepare an extensive written description covering every aspect of a certain embodiment of a client's new invention. Then, after filing, it will be discovered that most of the aspects of the new invention have been done before, such that a patent on a device or method covering just those aspects would be improper. A skilled patent attorney will generally be able to identify one or more distinctions between prior devices and methods and her client's invention, even if the devices share many features.

So long as identified distinctions are not obvious in light of the "prior art," an inventor is entitled to patent claims directed to those distinctions. Consequently, the patent will issue with a relatively extensive written description but a relatively narrow set of claims. In this situation, an engineer reviewing the patent can be forgiven for reviewing the patent as a whole and coming away with a belief that the patent "covers" what it describes. In its capacity as a technical document, it does, but in its capacity as a legal document, it doesn't necessarily. In fact, a patent's claims generally cover only a small subset or particular combination of the material described in the written description.

### **Conclusion**

As discussed, it is very important to take a close look at the claims before making even a small business decision based on the existence of a patent. To steer clear of a business because it is believed to be protected by a competitor's patent, or to invest in a market in reliance on an extensive patent portfolio, is inadvisable prior to a good, hard look at the claims.

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