PATENT PRIMER

The U.S. Constitution, Article I, Section 8, states that patents will be available "to promote the progress of science and the useful arts, by securing for a limited time to authors and inventors the exclusive right to their respective writings and discoveries". Since the beginnings of our nation, the patent system has been an important component of the free enterprise system that has generated our economic success. The government makes a bargain with inventors - in return for fully disclosing the invention and teaching others how it works, so that the economy and society may benefit from the advance, the government will protect the inventor from competition for a limited time by prohibiting others from using the new idea. The United States Patent & Trademark Office (PTO) is the federal organization charged with reviewing inventions and granting patents to inventors.

In order to obtain a patent on an invention, the inventor must prove to a Patent Examiner at the PTO that the idea meets several criteria. First, the invention must be novel. Second, it must be useful. Finally, it must be non-obvious to a person with expertise in the field of the invention. Often the applicant will spend several years in the process of establishing the validity of these criteria to the satisfaction of the Examiner. One important requirement of U.S. patent applicants is that they fully disclose the best mode for completing the invention as well as any and all literature references they know of that relate to the invention.

A patent application has several parts that must be developed in conjunction with patent counsel. A brief abstract summarizes the invention. The background section places the invention into the context of the current state of the art, cites literature references that relate to it, and explains how the invention is distinct. A short summary is given, followed by a detailed description of the invention in which all known and forecasted uses are specified. In this section, all particular details about the composition, methods of use or administration, mechanical properties, and any other aspects of the invention must be fully explained. Following the description are one or more examples, including experimental results demonstrating the concepts embodied in the invention. Drawings and brief written descriptions of these drawings also may be included. Finally, the claims, the real heart of any patent, specify exactly what the invention is, how it will be used, and any unique features of the invention that need to be protected.

The claims are, in a sense, the fence posts that will enclose a territory to be protected from trespassing by others. The ideal claims in a patent are as broad and expansive as possible so that the territory enclosed will be as large as possible. Patents are issued based solely on the claims, and infringement of a patent is determined only by comparing questioned activities and products to those described in the claims; what is written in the body or specification, is not relevant in a dispute, so careful attention must be paid to how the claims are written.

When several people are involved with research developing an invention, a decision must be made about inventorship. Inventorship is a legal determination about who actually originated the ideas embodied in the invention; it is not equivalent to authorship on a peer-reviewed publication. Patent attorneys make this determination once the patent application has been written because if the named inventors on a patent are incorrect, the patent may be invalidated.

If all requirements are met to the satisfaction of the Examiner, the PTO will issue a patent on the invention. The grant of a U.S. Patent entitles the inventor(s) to a period of exclusivity for twenty years from the date of filing the original patent application. These patent rights are in effect, negative rights because during this period, the inventors are not entitled to anything specifically. They are, however, given the right to prevent others from making, using, or selling the patented invention without permission. Inventors can take advantage of this twenty year limited monopoly to secure revenue and market share by either commercializing the invention themselves or licensing the rights to a strong commercial partner for development. In exchange for this monopoly period, inventors are required to teach the invention to the rest of the world through their patent. When the patent expires, anyone becomes free to make, use, or sell the invention in any way they choose.

The United States patent system is based on the principle that the first one to come up with an idea is the true inventor. In the rest of the world, however, the patent systems function based on the concept that the first person to file a patent application is entitled to inventorship status. These differing laws have an impact on how patent applications are filed. To satisfy U.S. law, patent applications must be filed within one year of the first public disclosure, sale, or offer for sale. This public disclosure bar can be initiated by a poster presentation at a conference, an oral presentation, the publication of an abstract prior to a conference, the electronic publication of an abstract or paper prior to the publication of the journal, or the actual publication of a journal in hard copy. However, if global protection of an invention is desirable, it is critical to file a patent application prior to any publication because the rest of the world, including Europe and Japan, has a requirement of absolute novelty for patentable inventions. In other words, if there has been any public disclosure at all, in any form, the invention or discovery is no longer eligible for patent protection because it is no longer novel. The strategy for filing patent applications will take into account these differing requirements, and hence it is very important that notification of an invention be given prior to any public disclosure so that maximum global protection can be obtained.