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INDUSTRY VIEWPOINT

Patents foster innovation

Editor's note: The following is the first part of a two-part series on patents. This month, the authors discuss US patents. The second part will address foreign patents.

In a competitive marketplace, patents can be powerful tools for protecting investment in product research and development. While competition fosters product development and improvement, too much competition can drive market prices down to subsistence levels before the required R&D costs have been recouped. Concerns about the ability to recoup the necessary costs sometimes discourage companies from trying to innovate.

So what are patents and how do they compare with other forms of legal protection available to companies? What are the standards for and process of obtaining a patent in the US? And what do companies need to know and do in order to maximize their chances for success in obtaining patents?

Patents vs others

A patent is a temporary right to exclude others from using an invention, typically from the issuance of the patent to a date 20 years from the date the inventor applied for the patent. During this time period, competitors of a patent owner are limited to producing previously known products or new products that fall outside the "claims" of the patent.

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Other forms of legal protection—such as trademark protection and copyright protection— may also be available to protect the commercial activities of companies. However, trademarks and copyrights are not intended to protect the way a product works. Instead, they are intended to protect the public from confusion about the source of products, and the artistic efforts that are used in ornamenting, describing, and promoting a product. The primary options for protecting the product and how it works are secrecy, contracts, and patents.

Secrecy and contracts may have their place, but once a product hits the market, a patent usually offers the best hope for a producer to stop competitors from selling functionally equivalent products. For example, trade secret law generally does not prohibit reverse engineering, and today's competitors are often adept at that. Moreover, the typical contractual options for protecting a product might stop particular suppliers from copying the product and selling it to others, but they offer no protection against those who have no contractual relationship with the producer. For that matter, contractual rights may offer only limited protection against suppliers after commercialization of the product begins.

As a consequence, a patent is often the best option for protecting a new or improved product. That's why venture capitalists who are considering funding new enterprises often ask if the enterprise has (or can obtain) patent protection.

The advantages of owning a patent go beyond limiting competitors and securing funding. Having a legal right to stop others from duplicating a functional aspect of a product provides bargaining power, and the patent owner can trade or sell that right. For example, the owner of a patent can grant licenses to others, allowing the use of the invention in return for a royalty (typically either an upfront payment or a series of payments over time) or even a return license from the other company (i.e., the right to use one or more of the other company's patented inventions). The latter option can lead to antitrust issues in some cases, so companies considering exchanging patent rights should consult an attorney. Alternatively, the patent can be sold outright or used as collateral.

Standards and process

Under the US patent system, the process begins with the application, typically prepared by a trained patent attorney or agent who is familiar with the many specialized rules that apply. Once the application is filed with the United States Patent and Trademark Office (USPTO), the application is assigned to an examiner charged with assessing whether the invention described in the application meets the legal requirements for patentability.

The examiner determines whether the new product (or process) embodies "an invention" that meets a threshold level of innovation. The level of innovation that is required depends in part upon the state of the art, which the examiner assesses by reviewing prior patents and literature in the field. When a new invention relates to a long-recognized problem, others in the field may be working on similar solutions to that problem. Thus, the state of the art against which patentability is measured generally advances over time. To the extent that it does, an invention that might have been patentable a year ago might not be patentable today.

At the present time, the process moves slowly. Even the examiner's initial evaluation of an application may take two or three years to complete. Once this evaluation is complete, the applicant is given an opportunity to revise the scope of its claims to attempt to obtain the broadest possible protection without overstepping what the examiner determines to be permissible under the law. These efforts may add additional months or years to the process. This delay can be troublesome for the patent applicant because although patents are sometimes given a limited retroactive effect, the right to stop others from using the invention does not arise until the patent is finally issued by the USPTO.

The USPTO offers several programs for speeding up the process so as not to diminish the incentive for innovation. Many of these programs, however, address specific circumstances. For example, inventions relating to "green" technology can qualify for faster processing. For those

in the medical device field, the standard "accelerated examination" program may currently be the only way to speed up the process. Unfortunately, that program requires considerable expense (potentially in the $20,000 to $40,000 range) and is not widely used.

Fortunately, though, the USPTO is developing a new "prioritized examination" program that may provide a significantly less expensive way to speed up the process. As proposed, the USPTO would offer a pilot program to the first 10,000 applicants willing to pay a $4,000 fee to have their applications processed in a way that may shave years off the normal processing time.

The USPTO has announced that there will be a Prioritized Examination Track, though the start date remains unknown.

What to know

Even if an invention is radically new, the law requires a company to act quickly if it wants to obtain a patent. A Nobel prize-winning device for curing cancer would not be patentable if the inventor waited too long before applying for a patent. The US patent law offers a one-year grace period for a company to publicize and test the market before committing to the expense of applying for a patent. However, companies should be aware that initial development activities could start the clock running on that grace period sooner than they expect.

Publication, public use, or public knowledge of the invention can all start the one-year grace period for applying for a US patent, and it is not just formal publication in a scholarly journal or in an industry magazine that qualifies. If indexed, even a student thesis that details the invention could start the grace period, as could simple demonstration of the product at a trade show. Similarly, educating an outside consultant about the use, construction, and functioning of a product may also start the grace period if the consultant is not contractually obliged to keep the information confidential.

The sale of a product embodying the invention can also start the grace period running. In this regard, it could be the first offer to sell a product that starts the grace period, not the first completed sale or the first receipt of payment for a product. For that matter, the sale does not have to be to a potential customer. One US court found that the grace period began to run when the inventor "bought" the manufactured product from its supplier.

Any company interested in exploring patent protection for a potential new product should contact a patent attorney or agent early in the product development cycle, and preferably before any details of the invention are disclosed to anyone outside the company. As will be seen in the second part of this series, applying early is even more important if foreign patent protection is of interest, because an early US filing can sometimes be used to satisfy even tighter deadlines and restrictions that apply in foreign countries.

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