legal issues of interest to structural engineers

Understanding Patent Issues

Offensive and Defensive Approaches By Christopher A. Rothe, Esq.

Patents encourage innovation. How? They give innovative companies the opportunity to make a return on the time, money and effort invested in developing their inventions. Many times, the return is the ability to license the patented technology and earn a royalty, or the ability to exclude competitors from making and using the invention. If innovative companies were not able to make some kind of return on their research and development costs, they would be far less inclined to invest money in developing and improving technology.

Think of patents as business tools – they can add value and offer distinct advantages to the companies that own them. On the flip side, a patent can create problems for companies that do not have rights to practice the patented invention. Companies that work with patented technology need to be mindful of the advantages of having patents. They also need to be aware of the risks of doing business in areas where competitors own patents. Companies that are concerned with patents can benefit from taking both an offensive approach and a defensive approach to patents.

The Offensive Approach

Suppose that your company comes up with a great invention. The invention is a true breakthrough in your industry. Your company spent a significant amount of time and expense designing and testing the invention. Now it is ready to be used in the products or services you sell. Realizing the importance of this invention, the thought of obtaining a patent crosses your mind. Where do you start?

Getting a patent is a business decision. You should always think about your business objectives before considering patent protection. Understanding your exact objectives is an important step, whether or not you have prior experience with patents. To understand your objectives, you need to answer some basic questions from the offensive perspective.

The first question that you should always ask yourself is: Why do you need a patent? What objective would you serve by getting a patent? Do you want to exclude others from using your invention? For example, would you benefit from being able to submit a bid proposal with patented technology that other bidders cannot use? Or do you believe that you could license the invention to other businesses? Would other businesses be interested in licensing your invention? Or could those businesses find alternatives that avoid using your invention? Perhaps you want to build a portfolio of patents and increase the value of your company's intangible assets. These are all ways to derive value from inventions, and may serve as good reasons for a business to obtain a patent.

Suppose that competitors have a strong interest in using your invention. How often would the invention be used? For example, could the invention become universally adopted for every steel project? Or would it only ever be used in limited cases? Do you see a large potential for licensing, or very limited licensing potential?

If you were to get a patent, who would be a potential infringer? Would it be a company you would be willing to confront, like a direct competitor? Or would it be a company with whom you have a valued relationship, and would not want to confront? After all, patents do not enforce themselves. The patent owner, or someone on the patent owner's behalf, has to approach the infringing party at some point and let them know about the patent rights. If the infringer turns out to be a customer or contractor who provides you with business or potential business, the patent could create a big dilemma for you.

Assume that you know your objectives, are confident that there will be demand for your invention, and are ready to move forward with obtaining a patent. At this stage, it is important to focus on gaining value from the patent process. As stated above, patents

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are business tools. They are a way to create value for your company, but they do not guarantee a return. To add value, a patent must be part of a strategic plan. Should you obtain just one patent on your discovery? Or does your company's discovery really contain a number of inventions that require separate patent applications? Many times, a discovery leads to a series of discoveries, each being a



separate invention. For example, an inventor who develops an improved structural beam may also invent an improved method for fabricating a structural beam at the same time. In such a case, two separate patent applications could be filed to protect the improved beam and the improved method of fabrication. Each patent will be a separate asset that offers its own value to the business.

Who else in your industry is obtaining patents? Do you have competitors who are actively pursuing patents? If so, are any of these competitors actively enforcing their patents? To what extent? Are their patents relevant to what you are doing in your business? Would obtaining patents in the same field as your competitor provide you with more leverage in dealing with your competitor's patents? In many cases, two competitors that own patents will find themselves cross-licensing their technology. This can be mutually beneficial for both companies, who will enjoy a freedom to practice their competitor's inventions with no concern about infringement.

You need to remain aware of your patent strategy even after you obtain approval or "allowance" of your patent application. Your



invention is limited to what is described in the claims section of your application. Once your claims are allowed by the patent office, you should review your claims and file an additional application if there is any other part of the invention that has not been claimed. In some cases, the product or process gets revised over time, and the allowed claims in your patent application may not adequately cover the revised invention. For example, the claims may cover an earlier version of the invention, but not cover later refinements made to the invention. Engineers who have worked with the invention over time should review the claims after they are allowed, and advise the patent attorney if any aspects are inconsistent with the allowed claims. If there is an inconsistency between the invention and the claims, you may want to file an additional patent application to protect any refinements that are not captured in the allowed claims.

You also need to decide whether you want international patent protection. As noted in a previous article for STRUCTURE® magazine, patent rights that are granted in the U.S. are not enforceable against infringing activity occurring outside the U.S. A patent application must be filed in each country where patent protection is desired. Does your business do work internationally, or only in the U.S.? If you offer your products or services in other countries, in which of them would you predict there being value in owning a patent? Would foreign businesses in those countries be interested in selling or using your invention? Would their interest be substantial enough to justify the added costs of obtaining foreign patent protection?

The foregoing questions are just some of the issues that you should consider as you implement a patent strategy. The more you review these issues, the more value you can derive from your company's intellectual property.



The Defensive Approach

Maybe you have no interest in obtaining patents on your invention. You are more interested in bringing the invention to market, or using it in your next big contract. Launching a new product or service carries certain risks, including the risk that someone else might have patent rights that cover your new product or service. If you work with technology that could be patented, it is important to take a defensive approach to patents.

When competitors own patents in a technology, your right to use that technology can be limited. Your ability to use the same technology will depend on whether your use falls within the scope of a claim in your competitor's patent. Obviously, you want to avoid investing a substantial amount of time and money developing a new product or service, only to discover later that your product or service infringes another company's patent. Discovering an infringement problem after a product or service is launched can be devastating. Not only could you be forced to stop the product or service, but you might be forced to cancel contracts, or make other decisions that severely disrupt your business.

These types of risks can be decreased by adopting a patent risk management policy. Before launching a new product or service, it is a good idea to determine what your risks are. How important will the new product or service be to your business? Will it be an essential part of every project? Or will it be used sparingly, or in a small number of projects? Can your business survive without it? If you are forced to discontinue the new product or service, do you have backup plans or alternatives in place that you could use?

If the new product or service is important to your business, or if you would be more comfortable knowing what risk you could be exposed to, then you may want to complete a "right-to-use study". A right-touse study, also called a "clearance study" or "freedom-to-operate study", involves a search of U.S. patents and published U.S. patent applications having claims that are relevant to your invention. A right-to-use search can be done by individuals in your company, but it is advisable to use someone who is familiar with searching U.S. patents. U.S. patents are categorized according to specific invention classes and sub-classes. Finding the most relevant classes and subclasses can be like finding a needle in a haystack, and important patents can be missed if the correct classes are not searched. For this reason, patent searches are often done by consultants who specialize in patent searches and know which invention classes and subclasses to search.



Patents and published patent applications that are identified in a right-to-use search can give you an idea of the "patent landscape" within your industry; i.e., how many patents are issued in your field, and how many of those issued patents are still in force, since patents have limited terms that expire. If the landscape is full of old expired patents that cover your new product or service, and no relevant patents that are still in force, then your risk of infringing an unexpired patent may be small.

The patent landscape will also tell you who is obtaining patents in your field. Relevant patents may be owned by your competitors, or companies with whom you are not familiar. The companies that own relevant patents may be companies with whom you have good business relationships. In such cases, you may be able to obtain permission from them to use their technology at little or no cost. Getting the ownership status and other background information on relevant patents can be very helpful in assessing the risks of introducing a new product or service.

After a right-to-use search is completed, any patents and published patent applications that appear relevant must be reviewed in detail to determine how relevant they are to the proposed product or service. To do this, every claim should be reviewed and compared with the proposed product or service. If a claim appears to cover or "read on" your technology, then the patent or published patent application could be a concern. Claims in published patent applications are not granted and may not get allowed. If a claim is rejected, the applicant can revise the claim and possibly obtain allowance of the revised claim. For this reason, you may wish to monitor a published patent application on an ongoing basis if any claim looks highly relevant to your product or service.

If you have concerns about any claims in a patent, you may want to investigate the patent in detail before making any major decisions. A detailed review of the patent's file history, sometimes called the "file wrapper", can help you interpret the claims. Many times, the file history contains statements by the applicant that limit the scope of the claims in ways that are not apparent from the claims themselves. Alternatively, a detailed analysis may reveal that one or more claims are invalid. There could be a number of reasons why a claim of a patent is invalid, unenforceable, or not infringed by your product or service. A qualified patent attorney can advise you how to interpret difficult claim language and identify issues that you may not see.

Searching patents and identifying potential infringement issues at an early stage can save your company from having to deal with a patent infringement claim after a product or service is launched. In many cases, infringement problems can be avoided very easily by identifying relevant patents at an early stage and modifying the product or service to avoid any patents of concern.

Conclusion

In the last few decades, the number of U.S. patents issued each year has increased almost exponentially. The patent system has provided an incentive for engineers and scientists to develop their inventions more rapidly and allow the public to benefit from new technology. This has not only advanced the state of many professions, but has improved the way we live. At the same time, the increased investment in patents has created more risks for businesses. It is important for businesses not only to learn what patents can do as business tools, but also to understand the patent rights of others and how they may impact their business. To this end, businesses are encouraged to understand patents from both an offensive approach and a defensive approach.

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