

“HIGH-TECH” PATENTS

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Because I have labored long in the intellectual property fields of the midlands of South Carolina, long before intellectual property law was cool, I would like to offer my views – which are not to be confused with actual insights – on “high-tech” patents.

First, the concept of “high-tech” patents perhaps needs a little flesh and bones on it. Calling some patents “high-tech” implies that there are other kinds of patents. This implication is undoubtedly true. I could probably sort patents into several piles, one labeled “high-tech,” one labeled “low-tech,” and perhaps two more piles labeled “no-tech” and “sub-tech.” The last category would be reserved for those patented inventions that evoke the “bwa-ha” response among engineers. If I were to sort patents according to which ones made money, however, not all of the high-tech patents would be in the first pile and not all of the no-tech and sub-tech patents would be in the last one.

There have always been high-tech inventions; that is, those involving the cutting edge, state of the art, science or technology. However, the phrase “high-tech” as currently in vogue suggests inventions in the field of genetic engineering, micro-surgery, nano-technology or software-based business methods as implemented through the internet, but it need not be limited to these.

Are these high-tech patents really different from other patents? Yes, they are, and in several respects. They are (1) harder to prepare, (2) more risky, and (3) require a more dynamic plan. I have listed the “harder to prepare” item first because it affects me more than the other two.

A patent application that involves state-of-the-art technology requires much more effort to prepare. Not only must the patent attorney who prepares the application have a clear understanding of the invention, but the attorney must write the application so that it will teach others who read it just what exactly the invention is all about. That is a requirement of law: the patent specification “teach” others how to practice the invention. The patent laws establish a “quid pro quo” deal between inventors and the public. The teachings are the “quid” in exchange “pro” the “quo” of the inventor’s exclusive rights to the invention for a period of time.

Patent attorneys are required to have technical backgrounds and are usually accustomed to getting up to speed on new ideas. Even so, getting up to speed on a new high-tech invention requires a level of concentration and cooperation with the inventor that is more intense than that demanded by other inventions. This is true, especially when there may be time constraints because of the rapidly-changing nature of the technology and sense of urgency created by the perception that the upside potential for the patent is great.

High-tech patents are more risky because the state-of-the-art is advancing at a rapid rate in an unknowable direction. The resulting uncertainty has a lot of implications for the inventor and the patent owners. Patent searches can be less reliable indicators of the likelihood that a high tech patent will issue because a key limitation of searches, the inability to search pending applications, is more pronounced in high-tech fields. A patent application may not issue for two years or more, especially in high-tech areas because of the shortage of qualified examiners at the US Patent Office to examine

them and the time required to understand each invention and the prior art. Therefore, issued patents only represent technology at least two years old; thus, they are of marginal value in determining whether a truly state-of-the-art idea is patentable.

Furthermore, many inventors decide not to patent their inventions when the technology is changing rapidly, because they believe there is no point in having patents on obsolete technology. As an alternative to patenting, these inventors may keep their inventions secret. Other inventors may decide to file patent applications and then learn, after their patents have issued, that their patents are invalid because they were not the first inventor. Sometimes this knowledge only surfaces well into a patent infringement law suit.

Another factor affecting risk is the relationship between patent applications filed at approximately the same time. The Patent Office may declare an interference between two patent claiming the same invention. An interference proceeding may result in a long delay in the issuance of a patent, if one issues at all. Alternatively, two patents may issue with one “dominating” the other, because it claims a more fundamental invention rather than an improvement to it. The party owning the dominated patent would need to obtain a license from the owner of the dominating patent in order to practice its own invention.

In view of these risks, one may well ask why anyone would bother with a patent. The reason is simple: the potential rewards justify the risks. A pioneering patent in a new field may be of extraordinary value. Even a modest improvement in a high tech field can be of significant strategic importance when two or more competitors are vying for market share. Nonetheless, the inventors and owners of high-tech inventions must be aware that pursuing valid patents in a high tech field involves greater risk than getting patents in the more mature areas of industry.

High tech inventions also require more planning. For most inventions, it is sufficient to develop an idea, then file and prosecute a patent application until it issues as a patent. For high-tech patents, a much more dynamic plan is needed. At the very least, the scope of the patent application should be re-evaluated at least once during prosecution to see if there have been changes to the invention and to re-evaluate the need for the patent. More aggressive planning may also be warranted. The use of provisional patent applications early and repeatedly during the development of an invention may prove vital to getting a useful patent at the end of the patent process. Frequent review of the claims in light of the inventor's commercial plans also provides for "mid-course" corrections in the invention claimed. Finally, patent searches at intervals during the pendency of the application are critical to see what other ideas are being patented. Additionally, periodically updating the patent search can help in assessing the direction, and pace, of the state-of-the-art research itself.

Obtaining patents for high-tech inventions means increased intensity, from the higher levels of effort to prepare the application, from the higher risks associated with a rapidly developing technical field, and from the higher level of attention that these inventions require; but it also means potentially high rewards for the patent owners who balance the effort, the risks, and the attention required.

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(This article was published in the "2001 South Carolina Technology Review: Going High-Tech In South Carolina" by Dwinells Communications, Inc.)

