

Why Continue to Invest in Patents?

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Innovation. In today's economic climate, innovation is a key element in determining a company's ability to survive in the global marketplace.¹ An organization that innovates and brings the fruits of its innovations to market while, at the same time, maintaining exclusivity in its market space, will likely be much more successful than its competitors who either do not innovate or do not effectively protect their innovations. The weapon that often best protects innovation and marketplace exclusivity is patents. Strong patents remain a valuable tool for protecting innovation. But today this protection and commercialization carries with it several challenges.

We examine some factors that argue in favor of creating and maintaining a strong patent portfolio.² We also discuss the challenges that face companies today with respect to building a portfolio. We conclude with some recommendations and strategies for creating a useful portfolio and valuable corporate asset.

The Challenges

Global economic constraints generally cause companies to undertake across the board cost cutting measures to help their bottom line. This cost cutting usually affects all areas of the company, among them the research and development arm. Intellectual property (IP) budgets are often slashed. This results in a reduction in the number of patent applications filed. At the same time, increased legal and technical complexities make drafting and prosecuting quality patent applications more difficult than ever. Finally, there is a growing perception that patents have been devalued by cases such as *KSR Int'l Co. v. Teleflex, Inc.*,³ and *eBay, Inc. v. MercExchange, LLC*,⁴ and the heightened use of reexaminations that make it appear easier to invalidate or limit the effectiveness of patents. Although challenging, these issues are resolvable. By carefully tailoring its IP investment strategy, a company can manage these seeming constraints, complexities, and perceptions while pushing the innovation envelope to its limits.

According to Marilyn E. Glaubenskleee, Director, Patent Portfolio Development, at SanDisk Corporation, cost is a very real consideration. "Even after having created great arguments for spending more on IP, CEOs will say 'I want to do all that you

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just said, but still spend less,'" Glaubenskleee said. In response to these budget pressures, "companies must be more decisive in having a patent application filing strategy that pairs up with their larger licensing and litigation strategy," she said. This approach might result in fewer patent applications (for obvious reasons), but higher quality patents. Higher quality patents are essential to effectively navigating the legal and technical pitfalls that have evolved in recent years, thus increasing the likelihood that these patents will remain valid and enforceable.

Technical Challenges

The patent attorney is always confronted with the challenge of keeping up with the technology and being able to fully divine the inventor's invention in all of its nuances. While many valuable relatively straightforward mechanical inventions continue to be developed, the patent attorney today is often confronted with complex electronic, software, business method, chemical, and biochemical subject matter innovations that cry out for effective patent protection.

Years ago, inventions tended to be restricted to one particular technological area. Today, with the creation of computer technology, computer control, manufacturing, analytics, measurement capabilities, modeling, drug development, and biosynthesis, many inventions span multiple technologies. Most attorneys are not trained in multiple scientific disciplines, such as biotechnology and computer software; or pharmacology and computer technology. To overcome these problems, often two or more attorneys, each having a particular technical expertise, will work together to create a patent application.

Legal Challenges

The legal landmines associated with drafting a quality patent application are also very real, in a number of respects. They force the patent attorney today to consider and weigh many legal issues and nuances when drafting and prosecuting patent applications. For example, consider the "written description," "enablement," and "best mode" requirements of 35 U.S.C. § 112.⁵

These requirements were never really a concern to patent attorneys in the predictable arts years ago. Recent decisions by the U.S. Court of Appeals for the Federal Circuit⁶ have placed more emphasis on these requirements. The failure to satisfy one or more of these requirements has been used to invalidate or severely limit the scope of patents.

Consider also the effect of estoppel. The U.S. Supreme Court's decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*⁷ changed the prosecution landscape for patent practitioners. No longer are patents immune from the consequences of changes made to the scope of claims during prosecution. In *Festo*, the Court affirmed that a patentee cannot recapture rights that were surrendered during prosecution as a result of narrowing the scope of his patent claim. Practitioners now must weigh the value of any change they may want to make to the claims of an application against the impact the change will have on the protection the patent will afford.

And, under *Johnson & Johnston Associates Inc. v. R.E. Service Co.*,⁸ subject matter that is disclosed but is not claimed in a patent will be considered to be dedicated to

the public. Thus, if two embodiments are disclosed, but only one is claimed, the unclaimed embodiment will be considered dedicated to the public. By failing to properly characterize inventive features when drafting the patent specification and claims, the unwary drafter may inadvertently dedicate these features to the public.

The Federal Circuit has had a major impact on patents and their strength as a business asset. On the one hand, the Federal Circuit has brought a certain degree of order and consistency to the interpretation of patents. What was formerly an exercise in forum shopping to find a venue either favorable or unfavorable to patents, depending on your point of view, is now a more consistent approach to patent claim interpretation. On the other hand, the court has developed a fairly strict treatment of what is and is not patentable, and how broadly patent claims should be construed in light of the patent disclosure and the manner in which the patent application was prosecuted.

There is also the perception that the value of patents has been diminished because they can be more easily invalidated or have their effectiveness limited.⁹ Patent quality provides a level of insurance against invalidity. Thus far, the limitations on patent effectiveness remain largely only a perception.

In the aftermath of *eBay*, courts continue to issue permanent injunctions in patent infringement cases.¹⁰ Although *eBay* has limited equitable relief for non-practicing entities (NPEs), many of the strategic planning themes advocated in this paper can be used by NPEs to better cope in *eBay's* wake.¹¹

In its immediate aftermath, patent scholars opined that *KSR* would have a devastating impact on the allowance rates of patent applications under review at the U.S. Patent and Trademark Office (USPTO). However, there has been little evidence of such a dramatic impact.

While practitioners must be mindful about how they prepare and prosecute patent applications, valuable patent rights still can be and are obtained on a regular basis. While the cost of obtaining a patent may seem high, when viewed in the light of a total development and marketing budget, patent cost is relatively low by comparison.

Strategies for Developing a Successful Patent Portfolio

A company's patent filing strategy should be tailored to its licensing and litigation strategy, and more broadly, to its business model. These principles should be reflected in quality driven, strategically focused patent applications drafted by experienced prosecutors who are up to date on the technology and changes in the law. These principles are discussed in greater detail below.

Next, the role and importance of IP must be clearly understood within the organization. This importance is evidenced in some companies by the fact that their IP groups have direct access to the CEO or an executive vice president. A growing trend built upon this concept is the chief intellectual property officer (CIPO). The CIPO is a senior officer in a company with the responsibility for maintaining and enhancing the return on investment of the company's IP assets.¹²

IP departments should be viewed as profit centers, rather than cost centers. Profits produced by patent licensing revenue can be staggering. Some companies with strategically developed patent portfolios report licensing revenue as high as 40% of their total revenue. Well developed patent portfolios can generate revenue indirectly in a number of other ways, such as through cross-licensing arrangements, creating leverage in joint development agreements, and blocking lawsuits by competitors. However, even IP departments that are viewed as profit centers within a company are experiencing significant budget pressures in today's economic climate.

The cost pressures created by the current economic climate force "a much greater reliance on having a coherent IP strategy," says SanDisk's Glaubensklee. In this environment, it's about quality, not quantity. Marketing and engineering teams must rely on due diligence to know where the market is going. IP strategists, business & industry experts, and R&D teams must work together closely to understand the company's business model and quickly communicate any changes in the direction of that model. This integrated approach ensures a balance between technical innovation and business values.

The IP strategists, business & marketing teams, and R&D teams must collaborate to build an IP model that is aligned with the company's business model, according to Glaubensklee. They must decide, among other things, whether the IP model will be more product protection focused, or more licensing or litigation focused. This determination will likely be a function of the maturity level of the company's technology. In fact, a coherent IP strategy would include aspects of each of these components.

If the company is a continuing innovator with rapidly evolving technology, its IP model will likely be more product protection (i.e., defensively) focused to capitalize on its innovation. This model protects the company's core products and inventions, creates the desired barriers to entry for competitors, and builds credibility and confidence with their investors, customers, and partners.¹³ This model also captures all the alternative ways the invention's function can be achieved.¹⁴

On the other hand, if the company's technology is more mature, its IP model may be more licensing (i.e., offensively) focused. This model creates robust licensing opportunities by focusing the patent portfolio on a competitor's products and technology—restricting its ability to improve its products or use its technology. A licensing focused model very often includes some reliance on litigation. Under this model, a patent portfolio that includes a relatively few high quality patents can often provide better product protection, more licensing opportunities, and better litigation strength than a large, quantity driven portfolio. It is better to have 3–5 well written quality patents that offer a strategic advantage and are litigation ready, and/or 5–10 that are licensing ready, than a hundred or so patents that are quality compromised.

Higher quality patents also provide greater value. As used here, patent value measures the merits of the underlying invention, potential marketplace adoption, licensing opportunities, and the ease of discovering infringement, etc.¹⁵ As noted above, the claims of higher quality patents consider both the technical and legal landscape. As a result, these higher quality patents are more likely to survive validity and enforceability challenges—either at the USPTO through re-exams, or in lawsuits in U.S. district courts.

Thus far, we have examined factors that argue in favor of creating and maintaining a strong and viable quality patent portfolio and have discussed some of the challenges companies face with respect to building a worthwhile portfolio. We also provide recommendations and strategies for creating a useful portfolio. In the following section, we provide an example of how these principles have been implemented to create one of the largest and most profitable patent portfolios in the world. The following section is based upon a conversation with Microsoft. Microsoft's comments were provided in written format directly to the authors from Bart Eppenauer, chief patent counsel for Microsoft.

The Microsoft Approach

Microsoft is one of the biggest investors in research and development in the world. It spent over \$9 billion on research and development (R&D) in 2009. The company's patent filings attempt to maximize the value of that R&D by capturing the intellectual property it produces, particularly innovations that are aligned with its business strategies, according to Eppenauer.

While Microsoft files 2000 to 2500 patent applications a year, that is only a portion of what it could patent if it were just trying to build up absolute patent numbers. Microsoft says that it pursues patents on those inventions that match with its business objectives and that have strategic value to the company.

Working in close collaboration with the research, development, and product teams at Microsoft, the intellectual property and licensing team at Microsoft has expanded its patent portfolio into newer business and technology areas, such as hardware, online services, business applications, cloud computing, and cutting-edge research, in addition to its longtime focus on operating systems and productivity software. Close alignment with the company's business strategies, goals, and priorities has enabled Microsoft to become a standard bearer for patent quality in the technology industry.

Microsoft has been recognized by Ocean Tomo and IEEE as having a patent portfolio of the highest quality and value. These firms assess a number of metrics, including the degree to which a company's patents are cited as prior art by other subsequent patent applications, as well as the number of scientific publications referenced in a company's own patent applications, in their respective methodologies. The number of times a patent is cited in other patents is also considered a good indication of its influence in fostering broader innovation.

From Microsoft's perspective, patent quality starts with protecting inventions that are aligned with its business goals. While Microsoft's patents are increasingly being cited by other patents in the industry, Microsoft cites more prior art within its own patents, particularly more scientific and research papers, than most other patent holders in the industry.

Microsoft views IP as the "currency of innovation." IP licensing has been an effective tool for negotiation and collaboration with others—including competitors like Apple, Nokia, Google, and Novell. The exchange of intellectual property makes it possible to keep pace with customer demand and bring new products to market quickly. This exchange is made possible in part by the strong quality and breadth of Microsoft's patent portfolio.

Microsoft argues that its IP licensing programs help to spur innovation and economic opportunity across the industry, by making its innovations available to customers, partners, and competitors. Since Microsoft launched its IP licensing program in December 2003, the company has entered into more than 600 licensing agreements and continues to develop new programs that make it possible for customers, partners and competitors to access its broad IP portfolio. Companies that have taken advantage of these licensing programs have accelerated their product development, entered new growth markets, increased their existing product value propositions, and improved interoperability of their products with other technologies.

Other Approaches

Microsoft's model is just one approach. There are many others. For example, other IP models include leveraging the patent portfolio with a much stronger focus on licensing. A key aspect of this licensing-centric IP model is whether others need your patented technology—not whether you need it. This approach focuses more on how patented technology can be leveraged outside the company.

Licensing-centric IP models include consideration of potential licensing opportunities during the review and evaluation of invention disclosures. Even at this early stage, licensing-centric companies evaluate potential licensing opportunities with others in the market. Invention disclosures are reviewed for not only how well they might protect the patent owner's products, but how the invention might be developed for the rest of the market.

Advocates of licensing-centric IP models acknowledge that product protection focused strategies are appropriate in some cases. One example often cited is the pharmaceutical industry. A pharmaceutical company, for example, might be primarily interested in excluding others from making the same pharmaceutical. Except for this narrow pharmaceutical application, however, the licensing-centric advocates maintain that the key to leveraging patents is to focus on whether others will want to take a license.

Conclusion

Although innovation remains a key element for enabling a company to survive in the global marketplace, the cost pressures exerted on IP budgets are very real. Several strategies for surviving in a climate of reduced IP budgets include, for example, tailoring the patent filing strategy to fit the overall business model, and elevating the role of IP within the organization. The underlying theme: quality, well written patents, continues to be the most valuable tool for protecting and commercializing innovation and ensuring marketplace exclusivity.

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¹ Hewitt Associates, LLC. 2009. Hewitt Best Employers in China 2009, available at <http://www.hewittassociates.com/intl/ap/en-cn/AboutHewitt/Newsroom/PressReleaseDetail.aspx?cid=6485>.

² The authors use the term quality generally in reference to claim scope and validity, difficulty to design around, level of detail of search and examination process, patent attorney prosecution skills, etc.

³ *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007) (rejecting the rigid application of the Federal Circuit's teaching-suggestion-motivation test for a more flexible approach to the obviousness inquiry).

⁴ *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006) (rejecting general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances in favor of the traditional four-factor framework for determining whether to grant an injunction).

⁵ 35 U.S.C. § 112 ¶ 1 states: "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

⁶ The U.S. Court of Appeals for the Federal Circuit was created in 1982 as the exclusive appellate court for appeals of patent cases from the several federal district courts.

⁷ *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

⁸ *Johnson & Johnston Associates Inc. v. R.E. Service Co.*, 285 F.3d 1046 (Fed. Cir. 2002).

⁹ Value of Patents Has Diminished for VC-Backed Companies, Venture Capital J., Aug. 2008.

¹⁰ Kenneth R. Adamo, Ryan B. McCrum, and Chad A. Jira, Licensing In The Wake of The Supreme Court's Decision in *eBay v. MercExchange*, 547 U.S. 388 (2006): How Can Non-Practicing Entities Maintain Leverage? (2009) (paper at the AIPLA Mid-Winter Institute, January 27–30, 2010), available at http://www.aipla.org/html/mw/2010/papers/McCrum_Paper.pdf.

¹¹ *Id.*

¹² Strategies for a Super CIPO, www.managingip.com, Robert Greene Sterne, October 2005.

¹³ Chetan Sharma, What Is Your Patent Portfolio Quotient (PPQ)? (2007), available at <http://www.chetansharma.com/patentportfolioquotient.htm>.

¹⁴ Why Good Patents Go Bad, Law360, January 29, 2010.

¹⁵ Inventing a Better Index, Marian Underweiser/Special to The National Law Journal, April 21, 2008.