



Intellectual Property Risks in the Global Innovation Economy

In our previous two editions of the *impact^{IP}* Bulletin, we discussed how economic globalization is increasing the need for strategic intellectual property (IP) management, and we discussed the US Trade Representative's Special 301 Report as a source of information for developing a global IP strategy. This month we focus on sources of IP risks that are enhanced by changes in the global innovation economy. The increasingly global distribution of innovation means that the locus of innovation is quite likely to be situated in one of the many developing countries around the world where, more often than not, adequate IP protections are lacking. It is now possible to buy innovation on a massive scale in countries like India, China and Singapore at a greatly reduced price, but at what cost to the value of the IP rights that result from and protect that innovation?

Global innovator companies must grapple with the rapidly changing forces impacting their ability to protect their innovation. Challenges facing global innovators include *external risks*, such as inadequate laws and lack of predictable enforcement, *internal risks*, such as lack of IP management knowledge and lack of IP culture among employees, and *technology risks*, such as risk of electronic transmission or Internet publication of IP information. These external, internal and technology risks all conspire to undermine IP protections.

External Risks

The spread of centers of technology innovation to low cost labor markets provides companies with opportunities to reduce the cost of innovation. However, in many low-cost labor markets, IP laws remain inadequate, and even where laws are improving, enforcement often remains unpredictable. Shifting work from countries with strong systems to those with weak or non-existent systems can come at a huge IP cost, particularly where companies do not address the increased risk or employ protective tactics to guard against loss of IP. The employers' ability to protect against the loss of valuable IP depends on where the employee

sits, literally. In the new global competition for innovators, the old IP paradigms don't apply.

While the forces of globalization contend for harmonization of IP laws, unique social and cultural forces continue to ensure that national patent laws remain unique in many respects. For example, laws relating to patentability of computer software, business processes and methods of medical treatment vary widely. The reach of patents is still limited to specific territories, i.e., there is no truly international patent.

The need to file separate patent applications in multiple countries dramatically increases patent costs and thus emphasizes the need for careful analysis and strategic decisions about how and where to protect inventions.

India, for example, passed a new patent law in 2005 in order to bring its system into line with TRIPS. Among other things, the new law provides for the patenting of previously unpatentable subject matter, such as foods, medicines, and substances produced by a chemical reaction. The law also opens the door to patenting software in certain circumstances, moving India's practice closer to alignment with European standards but short of the liberal standards for protecting software in the United States. However, political forces continue to make the lasting impact of the new law uncertain. The International Intellectual Property Alliance estimates that piracy in India cost U.S. firms \$468.1 million during 2002. In India's current political climate, it is unclear to what extent the new patent law will reduce losses to U.S. firms and firms from other countries and how quickly any expected benefits may accrue.

Like India, China is a member of most major treaties, including WIPO and the Berne Convention, and has laws on the books designed to protect IP rights. The real issue in China is much more fundamental than in India, whose

common law legal system is based on the English system. In China, the question remains whether that country will ever move to a law-based system. At present, neither domestic nor foreign firms can rely on China's legal system to uphold IP rights. Due largely to institutional weaknesses and self-interest, the norms written into the laws have not been assimilated into an effective system

of enforcement.¹ The US Trade Representative has reported that China's poor IP record extends to *virtually every form of IP* and pointed in particular to the rampant counterfeit and piracy problems that

plague China's domestic market and the fact that China has become a leading exporter of counterfeit and pirated goods to the world. China's IP violations are estimated to cost billions of dollars annually to US firms alone.

So far we have been discussing external risks in terms of the unpredictability of obtaining adequate patent enforcement in many of the new innovation hot spots. These risks, however, are offset by a paradoxically increased desirability for and value of patent protection, which means that despite the unpredictability of enforcement, increasing numbers of innovators are willing to bet that enforcement is likely to continue to improve during the life of patents filed now. These innovators are filing more and more patents in emerging countries, and as a result, the global landscape is becoming more and more populated with patents. For example, the Chinese patent law was passed in 1984. Between 1985 and 2003, China received more than 1.6 million patent applications (about 250 per day!). From 2002-2003 there was a 38 percent increase in Chinese patent applications. Our contacts in Indian patent firms report that the new Indian patent law has resulted in a similar flood of new patent applications.

Companies operating in China, India and other developing countries, whether via outsourcing or off-shoring operations or marketing and sale of products or services, must also place their bets on

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whether the growing pool of patents will be enforced. It is important to keep in mind that patents provide twenty-years of protection. With increasing international diplomatic pressure, countries whose enforcement mechanisms are now only starting to show some improvement may have significantly better enforcement before the expiration of the twenty-year patent term. For potentially expensive losses, such as investment in manufacturing facilities, even the increased possibility of enforcement, improved laws and diplomatic pressures may provide a sufficient deterrent to infringement to would-be infringers even if the country in question doesn't have a strong history of enforcing IP rights.

Internal challenges

Managers and inventors in countries in which IP protections have not traditionally been strong typically lack training in how to identify potentially valuable and patentable inventions, how to evaluate those inventions, how to develop IP strategies for protecting invention, how to prepare patent applications suitable for obtaining foreign patent protection in jurisdictions such as the United States and Europe and how to manage the cost of these processes. For example, Nobex Corp., a drug innovator in Research Triangle Park, North Carolina, entered into a collaboration arrangement in 2004 with Biocon Limited, a rapidly growing biotechnology company in Bangalore, India. Nobex and Biocon worked together to identify ways to use their respective IP strengths to help each other. Nobex was particularly adept at identifying and evaluating patentable inventions and implementing strategies for protecting IP, while Biocon was skilled at understanding its competitors' patents and identifying approaches for avoiding infringement. The companies combined their respective IP strengths to develop products with strong global IP protection and to minimize the risk of infringement of others' patents.

Technology challenges

In addition to the internal and external challenges discussed above, two important IP challenges arise from the rapid spread of technology. The first relates to extinguishing IP rights by publication. In most countries, publication of an invention is an automatic bar to patentability. The United States differs in that it provides a one-year grace period after a publication during which a patent may be filed to protect a published invention. Publication on the Internet is problematic for many companies in the United States, Europe and Japan, where IP knowledge is relatively well understood by managers and inventors. When combined with lack of IP knowledge in emerging centers of

innovation, the ease of Internet publication poses a particularly problematic risk of the loss of IP rights.

The spread of the Internet around the world also means that companies can quickly lose their control of valuable trade secrets. In the time it takes to press "send," intentionally or accidentally, critical technology information can be transmitted to virtually any country in the world. This risk is particularly high in countries where legal and cultural standards have not evolved to value IP.

Conclusion

Many of today's innovation hot spots are struggling to emerge in regions where IP protection is inadequate. Improving IP protections in these regions is expected to yield huge innovation and investment dividends for innovator companies. In the meantime, however, companies must evaluate investment decisions based on their best prediction of the future quality of IP protection. The risks and benefits of IP

options are thus relatively ambiguous. It is difficult, if not impossible to know whether a patent will be granted, whether it will be adequately enforced, and how much that enforcement will cost. Operating in this zone of ambiguity requires companies to make sense of the shifting global landscape of IP laws and regulations and to integrate this information into their business planning activities. Companies that successfully take advantage of IP strengths while at the same time using good business judgment to reduce risks arising from IP weaknesses will have a unique and decided advantage over their competitors. Strategic planning should be applied to IP, just as it is for other areas of business, to provide a framework in which management can create, control and sustain a portfolio of IP suited to the company's business objectives.

¹ See United States Congress, Joint Economic Committee. *China's Economic Future: Challenges to U.S. Policy*. (M.E. Sharpe, 1997) p. 224.

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