

INNOVATION RISK MANAGEMENT – WHAT YOU NEVER THOUGHT TO ASK

Monopolies

played, and will continue to play a significant role in the creation and expansion of enterprises on every scale. Owning a proprietary position is synonymous with the ability to minimize the risk that a good or service will be exposed to commoditization and price erosion. Intellectual property advocates point to the need to protect a monopoly interest to ensure a return on investment in life-saving pharmaceutical research and development; costly engineering advances in telecommunications, transportation, energy; and, the advancement of entrepreneurial activity as a justification for intellectual property including patents – the focus of this article.

Basic facts on patents

Basic facts on patents are prerequisite to understanding them and the risk and opportunities they afford. Since their emergence in Italy and the United Kingdom centuries ago, patents have been used to grant time and market-limited monopolies. The U.S. Constitution sets forth intellectual property as the solely enumerated property right afforded every citizen in exchange for citizen innovators advancing the cause of science, technology and industry. A patent gives its owner the right to prohibit others from commercially exploiting an invention for a period of up to 20 years. If the business enabled by a patent requires other patented technology, an inventor does not gain the rights to practice that which is owned by others merely by virtue of obtaining his or her patent.

Inventors, or agents acting on their behalf, draft patent applications and then send them to a state-sanctioned patent office where the patent is examined for novelty and obviousness. While differing in actual practice, most countries subscribe to a basic expectation that a patent must contain something that has not been described in writing or commercially distributed prior to the application date. At present, there are approximately 40,000,000 patents and patent related documents in the world. To put that number in context, patents represent a

fractional percentage of all written documents in the world. As a point of reference, a user of the Google search engine will note that the company indexes the contents of several billion web pages. In the space of several hours (approximately 20 hours in the U.S.) a patent examiner at a patent office must determine that the patent application complies with the laws governing patentable subject matter and review "all relevant" documents covering the material disclosed in the invention. Further, an examination should also include a review of commercial use – a review that relies on the subjective awareness of the individual examiner of all products in a market. This process is entirely subjective and is performed without any auditable standard. When the U.S. Patent Office instituted a "second set of eyes" examination process for certain patent classifications, the disallowance rate doubled. Despite its experience, this second opinion diligence has been deemed economically impossible to deploy across all patent classifications. In the meantime, the public should be happy to accept that national and international monopolies can be granted based on the decision of one person.

Historically, intellectual property has been viewed as the domain of the esoteric professional – attorneys, patent agents, courts,

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and the intelligentsia. As such, the practice of obtaining patents has operated with minimal governmental or private sector scrutiny. Patent offices in the United States, Europe, Japan and the rest of the global economy member states, have incrementally transformed from the protectors of the public against inappropriate monopolies to the facilitators of patent propagation. Not surprisingly, as most patent offices garner their revenue from application and maintenance fees paid by users of the system, the incentive to minimize the granting of patents, to ensure that only quality monopolies are granted, is contrary to the very economics that sustains the offices. The growing use of patents as litigation avoidance instruments rather than their statutory basis as an enhancement to the public good is but one evidence of this abandonment of the foundations of an effective patent system. Budgets for patent enforcement or defense litigation, not patents themselves, are the modern determinant of monopoly interest. While a select group of domain experts benefit from the ambiguity surrounding patents, corporations, financial institutions, the investing public, and governments are beginning to realize that the long suspected degradation in the quality of the governmental oversight required to regulate the granting of monopolies has actually become an impediment, not an enablement of business.

As evidenced by the recent study conducted by the United States Federal Trade Commission; numerous white papers developed by the Danish Patent Office and the European Commission; and, most recently, in the U.S. Congress 2004 Appropriations Bill, patent quality (a topic once deemed too ethereal to assess) has become a global business and legislative priority. Why? And how should this legislative sea change impact the way you manage innovation risk? In this article we will explore three issues – critical patent due diligence questions; the impact of accounting and tax regulations on business risk; and, risk management strategies to deal with the changing patent paradigms.

Basic due diligence on patents

Basic due diligence on patents should begin with an assessment of uniqueness.

No innovation analysis, business valuation, or litigation should commence without assessing:

1. Legal status – Is there a legally granted patent with claims covering the represented proprietary position and have all jurisdictional fees been paid to keep the patent current?
2. Statutory Enforcement Threats – Is there evidence that the patent or its examination process failed to consider patent or non-patent references that were used when examining equivalent patents prior to, or concurrent with the patent and do these patents impact legal or market fitness?
3. Commercial Validity – Are there patents covering the same invention issued to third parties prior to or during the patent pendency that have never been formally reviewed in the context of the patent's claims?
4. Commercial Utility – Are there dependencies on third party properties or public domain disclosures that would be required to fully practice what is disclosed in the invention? For example, does a drug patent require a license to the patent holder on the underlying compound? Does a solar powered innovation require a license to the patent covering batteries used to store energy? Basic analysis of utility considers the adequacy of patent claims to the desired proprietary position and the degree to which others claim enabling elements of the disclosed invention. Basic analysis of utility considers the adequacy of patent claims to the desired proprietary position and the degree to which others claim enabling elements of the disclosed invention.

In answering these fundamental questions of title and utility, a patent can be assessed as a contingent asset or a liability. A recent study conducted by the University of Virginia's School of Systems Engineering showed that a company's risk of being involved in patent-related litigation **increases ten-fold** when it owns a patent that is impaired by commercial validity or commercial utility problems. M•CAM Inc. has estimated that 20% of all patents are impacted by this risk. As patent litigation costs rise, detecting these impediments has become a necessity.

Accounting and tax practices

As the basis of corporate value shifted from balance sheet to off-balance sheet, accounting and tax practices failed to correctly address the treatment of most forms of innovation. As patents enjoy the unique position of being the granting of an adverse right (you have the right to block others from doing your invention but are not necessarily granted rights to do what is in your invention) an accounting predicament exists surrounding patents. Are they assets or liabilities? The off-hand answer is that they are assets. However, consider the following. An inventor must pay for a patent application (and, in most cases pay someone to prepare the application). Then they must pay to have the patent recognized in the appropriate national jurisdictions where they seek coverage. Then

A patent system in crisis

Thorough consideration of all relevant documents to establish inventiveness cannot be performed by any patent office or court using the antiquated paper and keyword search databases deployed therein. Infrequently, the vigilant public can detect egregious patent allowance errors and can inform a patent office of an inappropriate monopoly grant using opposition or interference proceedings. However, this vigilance intercepts a minority of cases. The time and resource constrained examinations that are performed by patent offices (and those providing patent searching or patent mapping services) rely on a mixture of keywords and patent classification schemes – indexing processes, known for over 20 years to be inadequate when applied to patent data. With patent applicants using terms like “thermal refreshing of bread” to describe “toast,” it is not a wonder that keywords are useless in understanding what is really claimed in inventions. U.S. patent law states that an applicant can be his or her own lexicographer. The granting of a monopoly should not be based on someone's use of a thesaurus even if a modern patent office or court finds a term “patentably” distinct. If the proprietary position held by a company is based on unconventional linguistics, the financial and operational costs associated with patent enforcement go up. Patent claims and abstracts are frequently constructed to obfuscate the underlying invention. Inventors are under no obligation to disclose any documentation that may be used to limit or negate their claim to an invention. The public should understand, however, that if prior inventions were neither cited nor considered during an examination, the underlying enforcement of the patent might be successfully overturned when challenged. Approximately 50% of contested patents are deemed compromised when reviewed by courts. With most patent systems in world still reliant on paper files for patent processing and examination, the detection of identical or near-identical patents that are co-pending within the same or different patent offices is left to chance.

they must pay maintenance fees to keep the patent enforced. So far, these are all balance sheet liabilities. Recent studies have shown that no more than 5% of all patents ever enable a business or serve as the basis for licensing revenue. While they may have “value” as a litigation deterrent – an unsubstantiated and solely opportunistic assumption – they all enjoy the status of a cost center (the liability side of the balance sheet). Accounting and tax authorities, and the professionals who try to navigate the complexity of the same, have failed to address this anomaly. However, this oversight exposes companies and individuals to significant operational dangers.

The U. S. Financial Accounting Standards Board promulgated Statement 142 in 2001 in which acquired intangible properties, if held on the balance sheet, must be valued and amortized. Further, the properties must be tested for impairment over the life of their amortization and, if found to be impaired, must be written down or off. Accounting firms and corporations have failed to provide investors with evidence that they have validated the basic due diligence questions identified above or that they have taken into account the liability intrinsic to patents. The International

Accounting Standards Board is exploring the treatment of intangible properties and, to date has not published any comment evidencing their awareness of the natural impairment and liability associated with patents – a construct absent from IAS-36 and IAS-38. While the term “asset” is liberally used by regulatory agencies and accounting professionals, this moniker does not obviate the need to quantify the impairment to title and the cost of maintaining title – both of which are unquestionable financial liabilities.

Increasingly, companies and their accounting firms are designing tax strategies to creatively manage intangible properties. Donating patents to non-profit organizations for tax deductions, the growing use of in-process research tax credits, and the recognition of business or capital assets resulting from corporate transactions (including M&A) are among the ways intangible property tax treatment can inadvertently expose businesses to intellectual property risks. Patent donations serve as an ideal case study to highlight the incongruity between patent valuation for tax purposes vs. the valuation of the same for securities reporting. Caterpillar, recently promoting its “6-Sigma” patent donation methodology, and other companies, has made use of patent donation to achieve remarkable tax deductions. If one reviews the quarterly financials for Caterpillar focusing on the balance sheet value attributed to patents and intangibles and then views the value ascribed to the donated properties, one could erroneously conclude that up to 50% of the entire value of the intangible property owned by the company had been conveyed to non-profit interests in a single transaction. Upon closer inspection, in a quarter-to-quarter comparison prior to and following the donation of tens of millions of dollars of value, no commensurate reduction of value is evidenced on the balance sheet. Given that the creation of the donated properties had likely been expensed in previous years, the “value” of the donated properties could be roughly estimated in an itemized review of previous R&D expenditures. This process would inevitably be time consuming and lack precision. This case highlights the challenge facing businesses and investors in understanding how, if at all, to value patents given that value for purposes of securities reporting and value for tax deductions are not necessarily

5 Tips for every Patent Analysis –

1. *Avoid keyword or classification limited “searches” or “maps.” Remember this every time you “place a hermaphroditic matable insertable tongued device into a receptacle” (plug) in your “thermal refreshing apparatus” (toaster) for breakfast on your way to the “passenger conveyance” (tube) in the morning.*
2. *Remember that innovation is dynamic. Each week, thousands of new patents issue. Some were pending when yours were in the patent office and may be in your blind spot. What you don't know you should know is what you should know.*
3. *Embrace quality and accountability. Finding out that your patent is not as strong as you would like in private is far more attractive than having an investor, a court, or a business partner find it out for you. Make sure that you uniquely own (or license the rights to) those patents that are core to your business.*
4. *Look before you leap. Prior to launching an R&D venture, a new business, or new business relationship, quantify your exposure in all the markets you wish to enter. If you encounter obstacles, develop strategies to manage these risks before you enter.*
5. *Expand your due diligence focus. Every business sector has patent risks. The greatest risks are likely to come from those who own intellectual property but do not operate businesses in your sector. Also remember that balance sheet and tax risks often have sizable intellectual property drivers.*

correlated. It also demonstrates the importance of understanding the assumptions used by professionals engaged in such valuation exercises. The associations responsible for accrediting valuation professionals do not presently have any empirical standard requiring the fundamental due diligence questions detailed above.

Does patent valuation matter?

When does patent valuation matter? The obvious cases are in M&A, licensing negotiations and infringement damage awards or settlements. Growing interest in patent, licensing, and whole company securitizations, the use of sale and lease back special purpose corporations along with a variety of alternative financing vehicles require companies, the investing public and regulators to expand their view on where intellectual property issues may surface. Realizing that the same property can be valued differently based on the context for which the valuation is being performed is an essential awareness for those attempting to quantify and manage intellectual property financial and operational risk.

In the context of a global patent system “in crisis” according to senior officials at patent offices around the world, how does the business, investor, or governmental entity manage the risks posed by eroding patent confidence?

On-going Competitive Risk Assessment

A variety of methods can be deployed to measure the risks associated with patents or conducting business that may be impacted by patents held by third parties. Using free databases, like those offered by the United States and European Patent Offices, each patent in a portfolio can be examined for its use by others referencing it in subsequent patents. This process can illuminate known

and previously unknown competitors or strategic allies. More sophisticated analyses can quantify threats posed by uncited prior, concurrent and subsequent innovations that enhance, are neutral, or obviate the usefulness of a patent or patent portfolio.

Conduct Litigation Risk Rating

A few banks and insurers are beginning to provide third party risk rating of litigation exposure. Using complex statutory process reviews and linguistic analysis, the degree to which possession of a patent or a portfolio of patents increases a company's litigation exposure can be quantified and remediation steps – in the form of certain types of insurance or proactive cross-licensing – can be employed to transfer or mitigate the risk. Additionally companies and investors can carefully examine the wealth of expired patents that, as they enter the public domain, afford considerable freedom to operate options for businesses that once were prevented from access to the market due to the existence of these patents. Remember, an expired patent is free for all to use.

Carefully Review Indemnification

A variety of insurance products may directly or indirectly address a company's intellectual property risk profile. While the patent insurance market is still in its infancy, several insurers offer a variety of products including representation and warranty, tax opinion, and loss of value coverage. As underwriters increasingly adopt patent quality auditing techniques now deployed by the public sector, companies seeking intellectual property coverage should bear in mind that having knowledge of a patent deemed an uninsurable risk might have consequences in other aspects of business.

Audit Your Auditors

Until recently, companies and investors had to rely on external advisors – patent agents, attorneys, accountants, and consultants – to provide insights on intellectual property risk. Unfortunately, the business models adopted by these service providers did not accommodate the unknowns associated with patent risk assessment. Paying € 5,000 or € 5,000,000 for patent due diligence without any knowledge of the objectivity or scope of the purchased service is uniformly unattractive. Auditing techniques that address the basic due diligence objectives defined above can be applied to opinion letters and freedom to practice analyses to assess the completeness of contracted work products.

Demand Legislative Accountability

In the wake of recent corporate accountability breakdowns, the public has conspicuously avoided a careful review of the role that government oversight plays in creating the environment conducive to such problems. When the public realizes that poor patent quality is among the leading causes of stock market value erosion, contributing to some of the largest single-day trading price volatility events across most industry sectors, the need to have accountability in the granting of monopolies will become a politically charged issue. As the state fails to protect the public from inappropriate monopolies, the resulting ambiguity engenders business impediments that stifle the very innovation and commerce that patents were once thought to promote. Advocating proactive solutions rather than crisis-driven responses will be essential in the campaign to create a gold standard for this economy's currency.

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