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2014

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Recommended Citation

Jansen, Amy. "Patents as Business Intelligence Tools." *Journal of the Patent and Trademark Research Association* 24 (2014).

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Patents as Business Intelligence Tools

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As most entrepreneurs and business owners can tell you, one of the most significant considerations that companies face is how to protect their work. Managing intellectual property is now integrated with overall business models and corporate strategy. For this reason, patents have become crucial strategic pieces in business and competitive intelligence in the twenty-first century. Having the right patents, and even more importantly, knowing how to use them can either bolster or harm a company. As technology and rapid advancements in innovation become the cornerstone of corporate success, companies' research and development (R & D) and patent spending have become more important than ever.

Companies spend a good deal of time, energy and money assessing and developing their patent portfolios. Patents are a major component of a company's assets; while they are independent of company tangibles, they can be bought, sold, and used as collateral. As a result, patents and other forms of intellectual property are a growing source of both revenue and defense for many companies. Patents can of course protect a company's innovations and creative output, but can also allow an aggressive company to devour innovative authority in a particular field and prevent competitors from developing similar products. Many companies invest heavily in building on a core set of patents, acquiring a larger network of patents, and working towards carving out a niche in the market.

Patents can be viewed as investments for companies in that competitors must buy licenses to design products based on or similar to their patents. If competitors are not willing to buy some form of license or permission, they must "design around" the patent. Many companies are collecting large profits from licensing revenues. IBM in particular collects about \$1 billion per year (Frier, 2013). Licensing a company's patent rights to another party is particularly lucrative when a patented technology has crossover potential in another industry (O'Haver, 2003). Competitors who do not buy licenses or design around a patent may risk an infringement suit, which can be an expensive and lengthy process.

Companies often collect patents as a defensive strategy and to allow themselves "breathing room" in a crowded, competitive market. Apple, for example, holds patents to dozens of inventions which apply to one or more of their products, including the iPad, iPod, and iPhone (Purcher, 2013). One patent will often not cover or protect an entire product or service, much less a line of related products; a complex arrangement and intermingling of patents may combine to create any given product on the market. Nortel Networks, a defunct Canadian telecommunications equipment maker, sold more than 6,000 patent assets to Apple, Microsoft and other technology giants – who beat out Google in this bid – for \$4.5 billion in cash in 2011.

Most claimed – and this claim was confirmed by Google’s general counsel – that Google sought these patents merely as a way to protect themselves and avoid lawsuits.

Not all patents are equal and sheer numbers are not the only variable to consider. The IEEE Spectrum (the magazine and website of the IEEE, the world’s largest professional organization devoted to engineering and the applied sciences) publishes annual Patent Power Scorecards, which rank the top 20 patent-holding entities in each industry segment. The findings published in the Scorecards are based on quantitative benchmarking of the patent portfolios of more than 5,000 leading commercial enterprises, academic institutions, nonprofit organizations, and government agencies worldwide. The Scorecards’ authors are careful to note that, in 2013, newcomers with fewer patents are gaining ground and leveling the playing field with their giant competitors:

Facebook is far from the only newcomer using quality to punch above its portfolio’s weight... Within the same Communication/Internet Services category, there’s SeeReal Technologies (developer of holographic and 3-D display technology) at No. 5 and Cleversafe (provider of dispersed storage solutions) at No. 7. Looking at other scorecards shows DigitalOptics Corp. debuting at No. 1 in Semiconductor Manufacturing. This subsidiary of Tessera Technologies develops imaging systems for smartphones (Thomas & Breitzman, 2013).

The development of markets for IP has created complicated business decisions for many companies. Both selling a patented product and licensing the IP have evolved into viable and lucrative options (Al-Aali & Teece, 2013). In this way, patents can be valuable sources of power and revenue for many organizations.

Patent citation is an area which has undergone much analysis in recent years. A patent citation is a reference to prior technology upon which a current patent is built or uses. Some of these citations are added by inventors, others are added by examiners. Some are simply added to avoid infringement. Patent citations can give evidence to a couple of different aspects of innovation: 1) the historical relationships between inventions, inventors, and assignees; and, 2) citation frequency as an indicator of the importance of individual patents. Some patent historians and analysts claim that patents that are cited by many later patents tend to contain important ideas which later inventors use and from which they build. A company with a large number of cited patents is likely to possess technology that is central to developments in its industry. Many studies have revealed a link between the number of citations and the technical importance of patents. Obviously, if a company has invested in further developing an idea disclosed in a previous patent, then proceeding patents typically signify the economic value of the innovation (Hall, Jaffe, & Trajtenberg, 2005).

Other studies show a strong and clear connection between patent citations and stock valuations. A number of studies reveal a solid relationship between patent citations, R & D, and basic patent counts and the market value of firms and companies (Hall, Jaffe, & Trajtenberg, 2005). Some

scholars assert that patent citations are especially effective in predicting stock values when the knowledge produced in a patent is “reabsorbed” by the inventing firm and evidenced in future patents. Belenzon comments that “citations on which the firm builds in a future period are positively related to stock market value, whereas citations on which the firm does not build are negatively related to market value” (2011). A series of valuable patents is usually the result of a lengthy and productive period of R & D, which is often followed by a company’s future commitment and investment in related R & D, further patenting, and a line of successful, profitable products. Investors tend to appreciate these things and a company’s stock values and market value of equity often feel the positive effects.

Strong ties between scientific literature, innovation, and patents are important in biotechnology and pharmaceutical industries. The cost of R & D in the pharmaceutical industry is rapidly climbing, in part due to increasing regulation, price control, and competition. Yet the number of new drugs being approved is decreasing. For these reasons, some claim that patents applying to the biotechnology or pharmaceutical industries should extend beyond 20 years and that these special extended patents could be issued to “truly innovative products with real social value” (Duxbury & Tuck, 2008-2009). Similar demands – for special, expanded patent laws – in the past have centered on the lengthy time taken to bring new products to the market. Because of the uniqueness of these issues, some executives and legal counsels in these industries are asking that IP protection be reevaluated. Duxbury and Tuck comment that the current patent system “does not distinguish between the relatively minor incremental invention on the one hand and the major breakthrough invention on the other” (2009). IP experts in these industries are making the claim that the “one size fits all approach” to patenting does not work for the pharmaceutical and biotechnology fields. Regardless of varying viewpoints, it is generally acknowledged that patents and IP in general are absolutely crucial to the stability of and to maintaining solid R & D in these industries. Furthermore, patents play a big role in encouraging and driving advancement in these industries and in many more. In short, the patent system should be partially credited for the incredible number of achievements and high level of innovation in the pharmaceutical and biotechnology sectors.

Although they have acquired a negative reputation, “patent trolls” are non-practicing entities (NPEs) which enforce patent rights against infringers and attempt to collect licensing fees, but do not typically manufacture products or services based upon the patent. Some describe it as a form of rent-seeking. Critics assert that trolls often obtain patent rights as part of bankruptcy auctions or by doing just enough specific research to patent an idea, without any intention of ever producing the product, and that their efforts add to the litigiousness of the IP environment and stifle other companies’ genuine innovation. Estimates vary on the costs that patent trolls incur on the U.S. economy, but a recent Boston University study showed that patent trolls cost the U.S. \$29 billion in 2011 alone, and that number only accounted for direct legal costs (O’Rourke, 2013). Others claim that patent trolls are a by-product, not the cause, of problems in the patent system. These patent analysts suggest that the focus on trolls obscures more complex

and fundamental problems (Lemley & Melamed, 2013). Most trolls target hugely profitable companies, such as AT&T, Google, Verizon, and Apple; some defend patent trolls by saying that they level a playing field in which large companies with huge R & D budgets obliterate competition by overpatenting their innovation and dominating markets. The fact remains that patent trolls are legal entities in a complex world of intellectual property and will remain on the scene as long as a profit is to be made.

Patents are key factors in many companies' asset portfolios and business strategies in the twenty-first century. Technology is rapidly changing and drastically important to even the most basic functions in the modern world; this demands that intellectual property issues be addressed constantly and thoroughly by businesses wishing to remain competitive in global markets.

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