

HOW PATENT VULNERABILITY IMPACTS VALUATION

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This discussion presents practical advice with regard to the factors that affect the value of patents and related technology intangible assets. In particular, this discussion summarizes many of the valuation-related risk factors related to (1) patent validity and (2) patent licenses and license royalty rates. And, this discussion explains how such risk factors may affect the intellectual property valuation.

INTRODUCTION

As I often tell the business leaders who attend my course on valuing early stage technologies, valuing patents isn't rocket science. It is much more difficult than that. Or, to paraphrase Winston Churchill: valuing patents is a riddle, wrapped in a mystery, inside an enigma.

The managements of companies that have patents often attempt to achieve a more attractive stock valuation by boasting about their patent portfolio. This boasting is often a successful practice. This is because many investors, customers, and business media representatives are impressed when a company reports a relatively large number of patents or pending patents in its intellectual property portfolio.

Therefore, it is no surprise that many entrepreneurs and venture capitalists have admitted to me that they view patent preparation and filing costs as being akin to marketing expenditures.

However, valuation analysts should not necessarily assign a higher stock valuation to companies that own patents or that are applying for patent protection. Valuation analysts should realize that companies can have a patent on a technology for which there is no possibility of commercializing or selling the related technology. Valuation analysts should realize that a patent pending add particular uncertainty to the intellectual property valuation process.

Pendency (the length of time it takes the U.S. Patent and Trademark Office (USPTO) to make a decision on a patent application) is now an average of 32 months. In some industries—such as semiconductors and electronics—pendency is more on the order of four to five years. Therefore, the market targeted by a patent could become obsolete before the USPTO makes a decision.

In fact, in my opinion, only between 2 percent and 5 percent of patents have any discernible value. Further, two out of every three patents lapse because of the patentholder's failure to pay fees. This fact may be an indication that the patent owners believe that the few thousand dollars in maintenance fees exceeds the value of the patent.

WHAT IS A PATENT?

It is first necessary to dispel a few of the common misperceptions revolving around the definition of patent. A patent is certainly not a right to a monopoly. Inventors can design around a patent by producing another technology that yields the same effects. Having a patent that becomes incorporated into a commercially successful product doesn't always provide substantial profits to the patent owner.

A patent may generate nominal royalties to the patent owner because of (1) its minimal value added to the end product or (2) its early stage of development may require significant future investment on the part of the patent licensee. A patent is simply a license to exclude anyone else from reproducing the same affect by applying a specified process during the time in which the patent remains in force.

WHAT MAKES A PATENT VULNERABLE?

One reason why valuation analysts should not over-value a patent is that the patent could very well be deemed to be invalid. Roughly 50 percent of the patents that are litigated are held to be invalid. The grant of a patent by the USPTO does not ensure patent validity. There is no way that one

could expect USPTO patent examiners to only issue patents that would invariably be ruled valid during litigation.

On average, patentees spend less than \$10,000 on legal fees in connection with the drafting of their patents. And, USPTO patent examiners dedicate an average of 11 hours of review per patent application. The expenditure of less than \$10,000 in legal services and 11 hours of a USPTO examiner's time is not likely to withstand (1) the \$7 million average cost of litigation (that is expended in patent cases where more than \$25 million is at risk) and (2) the thousands of hours of effort by locked-on lawyers who are dedicated to defeating a patent.

In fact, the only way that a patent's validity can be proven is through litigation. Determining which patents will be ruled valid is a very tenuous process. Patent validity often hinges on the interpretation of seemingly common words such as "when" and "either."

Another major reason why patents are vulnerable is that patentees often cannot afford to assert their legal rights. With intellectual property litigation costs on the order of \$7 million, few solo inventors or small companies have the financial resources or managerial bandwidth to challenge patent infringers. If the suspected patent infringer is a large company, then it can usually threaten the plaintiff with a countersuit. This is because the plaintiff may also be violating one of the defendant's patents.

It is this patent vulnerability that is one significant factor behind the typical license brokerage rates. License brokerage rates are the rates that are realized when the intellectual property licensor sells the licensed patent. Typical license brokerage rates are only in the range of between one and ten percent of the anticipated cumulative intellectual property license fees.

Buyers can acquire a patent for as little as one percent of the license royalty income that such patent is expected to produce. This is because there are risks of the patent being ruled invalid immediately after the patent acquisition transpires. This is also because there could be an injunction imposed on a product that incorporates the patent. Such an injunction would cause the associated license royalty income to dry up.

THE IMPACT OF UNCERTAINTY ON PATENT VALUATION

There is tremendous uncertainty associated with assessing the value of patents. However, it is this uncertainty that can be used to make an argument about the value of a patent. The valuation analyst could review certain characteristics pertaining to a patent. And, the valuation analyst could conclude that such set of factors has a positive or a negative influence on the patent's expected value. For example:

1. Years of patent life remaining. Most investors would not want to invest in a patent that has a limited number of years of patent protection (e.g., a patent that is more than 16 years old). However, a patent that was too recently issued (e.g. within the past three years) is unlikely to have been litigated. The average age of patents when they are litigated is three years old. It is better to acquire a patent (1) after it has been proven valid during litigation or (2) after it has passed through the period when challenge to its validity is most likely. As a sweeping generality, those patents that are most valuable are between 10 and 13 years old.
2. Number of inventors listed on a patent. Typically, a higher number of inventors listed on a patent indicates that the patent is of higher quality than a patent that has a lower number of patent inventors listed. The reason is that more intelligent scientists or engineers believed in, and dedicated their time to championing, the technology behind the patent. However, having numerous inventors listed on a patent can also be a source of vulnerability. If these inventors are deposed or cross-examined when their patent's validity is challenged, it becomes more likely that one of the inventors will mention the existence of prior art. Also, failing to list an inventor on a patent risks giving rise to litigation.

WHAT MAKES A PATENT VALUABLE?

While the complexity of—and the uncertainty surrounding—patents makes it difficult to derive definitive valuations, there are a host of factors that affect patent value. A few of these factors are provided below. It is important for the valuation analyst to realize that businesses that attempt to commercialize their patents don't receive the value (deal) that their technology (patent) deserves, they receive the value (deal) that they negotiate.

Some of the factors that may influence the value of a patent include the following:

1. Anticipated license income. A standard procedure in patent valuation is determining the net present value of the royalty income that will be received as a result of licensing the subject patent.
2. Stage of technology development. Typically, the earlier in the commercialization stage a technology is, the lower the license value. This is because there are significant risks in the technology never being brought to the market. And, if the technology eventually becomes market ready, this product commercialization may only be achieved at great expense. In the scenarios in which the patent licensee would have to incur much of this development or commercialization investment, the license fees would be less lucrative for the patentee.

3. Quality of the law firm. Services such as PatentCafe rate and rank law firms on their history of writing patents that successfully sustain invalidity challenge. Patents drafted by law firms that score highly on such rosters are generally of higher quality than patents that score poorly on such surveys.
4. Quality of the patent examiner. Patents that are granted by USPTO patent examiners with longer tenures and more impressive records of granting patents that successfully sustain invalidity challenge are typically more valuable than patents without such lineage.
5. Strategic implications. A given patent usually has a different value to various potential licensees or acquirers. Savvy licensing professionals will conduct intensive due diligence in order to understand the dynamics of their potential licensing partners. The licensing professionals perform such due diligence in order to seize the incremental advantages associated with deconstructing their business models. Some of the factors that may determine how much value a licensee or an acquirer would place on a particular patent include:
 - Ability to commercialize. The value of licensing a patent is reduced if the licensee would have to make significant capital investments to produce a product that incorporates the patented invention—i.e., compared to a licensee who already has the requisite production infrastructure in place.
 - Value of depriving competitors of key technologies. Sometimes (particularly large) companies inbound license or acquire technology solely to keep it out of the hands of competitors. Depriving a competitor of a crucial ingredient in producing a product could (1) result in the competitor's delay in introducing competing products to lucrative markets and (2) force the competitor to make significant expenditures in terms of having to design around hard-to-reproduce technologies. Professionals engaged in negotiating patent licenses should shop their technologies to several competing potential licensees in order to increase the competitive spirits among the potential licensees.
 - Capital raising implications. Licensees can achieve an economic advantage by realizing that signing an intellectual property license agreement can be enormously helpful to the patent licensor that is seeking to raise capital. In other words, a large company may pay a lower patent license royalty rate when it knows that (1) its license agreement will validate the licensor's technology and (2) such patent validation and license agreement will increase the ability of the intellectual property licensor to attract funding.
 - Economic impact of the license agreement. A licensor can negotiate a reduced license royalty rate by

demonstrating that its license agreement will enable the licensee to achieve reduced production costs for its entire product line. For instance, if a licensee is currently producing 150,000 sensors at a cost of \$1.25 each, it may be able to reduce its costs per sensor to \$1.00 if it enters into a license agreement to produce another 50,000 sensors.

- Value of customer appeal. A patent licensee may derive important ancillary benefits associated with selling products with imbedded cutting-edge technologies. The benefits may be in the form of greater traffic generation to its web-site, catalogs, or stores. In such instances, the patent licensor should seek higher license royalty fees from the licensee. This is because the patent licensee will enjoy spill-over benefits associated with selling the cutting-edge technologies.

SUMMARY AND CONCLUSION

Patent valuation requires knowledge of the relevant inventions, market conditions, and patent law. It also entails the ability to bring a myriad of facts and considerations together to build an argument about the value that the owner believes the patent merits.

In the final analysis, the value of a patent is not only a function of the operating income/license income and of the other economic and strategic benefits that the intellectual property will generate. The value of a patent is also a function (1) of the timing of the intellectual property sale/license transaction and (2) of the negotiation abilities of the intellectual property sale/license principals involved.

David Wanetick is a Managing Director at IncreMental Advantage, a valuation and consulting firm based in Princeton, NJ. He teaches Valuation of Early-Stage Technologies and Negotiating Licensing Agreements at The Business Development Academy. And, he taught Industry Analysis at The New York Institute of Finance for seven years. Representatives from more than 435 Fortune 500 companies have participated in the intellectual property seminars run by David Wanetick. The seminars are attended by senior licensing executives and IP asset managers from as far away as Japan, South Korea, Argentina, South Africa, Australia, the Netherlands, Denmark, Lithuania, and the United Arab Emirates. David has lectured on the subjects of IP valuation, negotiating licenses, and industry analysis in more than 30 cities throughout the United States as well as in Israel, the United Kingdom, Canada, Singapore, Kuwait, Hong Kong, and Malaysia. David is the author of three books including the only two books that provide an industry-by-industry repertoire of metrics and methodologies to be applied to valuing companies in a wide range of industries (Bound for Growth: How to Pick Winning Stocks Using Industry Analysis, Irwin Professional Publishing, January 1997 and Hot Sector Investing: Profit from over 100 Emerging Opportunities, Dearborn, June 1999). David writes for major intellectual property publications including IP Frontline and Technology Transfer Tactics.