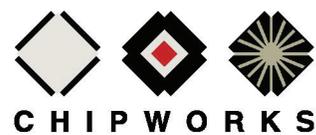
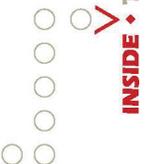


What is my Patent Portfolio Really Worth?
Measuring and Increasing Real Value of your Patent Portfolio

Steven Adam,
Vice President Patent Intelligence, Chipworks
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Abstract

A patent portfolio is not simply a testimony of achievement, a 'proud list' of your accomplishments; it is also and most importantly a resource to be developed, protected and used for the maximum benefit of the company.

Patent portfolio valuation is not a one-time exercise. Technology, markets and business opportunities all change rapidly. Many patent catalogs include 'sleepers', patents that have little value in today's market but which hold enormous promise for future exploitation. Valuation should become part of the patent development process so that patents that have little or no business value, and will never have any business value, are not pursued, while patents with the most potential are identified and tapped at the most opportune moment.

The Importance of Being Valued

It had been more than a year in the making. It was a 'win-win' merger the likes of which an executive sees maybe once or twice in a career. It was a sure thing—then you threw it away. And you knew you were right. Your only regret is that you had not seen the true value of your patent portfolio earlier.

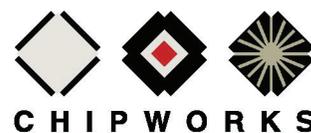
Astounding as it may appear—a senior executive throwing away an apparent 'win-win' merger based on a re-evaluation of his company's patent portfolio—the above scenario may soon be all too common. As will the executive's regrets that he had not properly assessed the value of the portfolio before starting negotiations.

Determining the value of a patent portfolio is one of the trickiest exercises any company can go through, just as it is one of the most crucial. Proper valuation of the portfolio can mean the difference between rags and riches, yet as often as not this exercise is more akin to alchemy than to a set of rational, reasoned business decisions, and there seems to be as many alchemies—as many methods of valuation—as there are companies.

Conflicting Definitions of Value

As with so much that involves patents, definition is at the heart of the problem. In this case, there is no commonly accepted definition of value or method of valuation. At the very least, three quite different—indeed, conflicting—definitions of patent portfolio value have been used. Each has its merits, but none is entirely adequate in today's business environment.

These definitions can be described as the citation definition, the balance sheet definition and the cost definition.



Citation Definition

The citation definition determines the value of a patent portfolio based on the number of times patents in the portfolio have been cited in other patent applications. While this definition has the advantage of simplicity, it has few other merits except perhaps that it feeds the vanity of inventors.

Even Olson's notorious patent 6,368,227 for a "Method of swinging on a swing" has been cited. According to the citation definition of patent portfolio value, this fact would suggest that acquiring the patent would increase the value of a company's patent portfolio. No one is lining up.

Balance Sheet Definition

The balance sheet definition considers a patent portfolio as an asset, like a building or mineral rights over a given piece of land. It usually invokes complex, some might say, arcane, formulas designed to set the asset value of each patent in the portfolio, before summing up the total. Not surprisingly, there is no common standard for these formulas, just as there seldom is rigorous examination of the patents to determine their quality—that is, their ability to generate revenue, for instance; or to defend against patent aggressors in the market.

The balance sheet definition of patent quality is an improvement on the citation definition

approach because it recognizes that a patent portfolio is a tangible asset and attempts to put a price on it. It falls short of a truly workable definition, however, because it fails to set a common standard for valuating the various elements—the patents—that together make up the asset. In short, how valuable is one patent in the portfolio compared to the others; and how valuable is it compared to patents held by competitors? Nor does this method recognize that 95%-97% of patents are valueless. The key to determining portfolio value is finding the potential 'star' patents, and then developing them to match and support strategic business opportunities.

Cost Definition

The cost definition of patent portfolio value attempts to equate the value of a patent portfolio with its cost. Like the balance sheet definition, the cost definition approach recognizes that the value of a patent portfolio is intimately connected to a company's business.

Unfortunately, like the balance sheet definition, the cost definition implies many variables and unknowns. For example, does cost mean the R&D cost of developing the patents, or of the products that use the patents? Simply reducing a patent's worth to its cost suggests that a patent

The much publicized R.I.M.-NTP case, which saw R.I.M. pay US\$ 612 million to settle, has overshadowed many other instances where companies receive substantial revenues on the strength of their patent portfolio. For instance, many companies such as IBM, Texas Instruments and Qualcomm generate \$1 billion and more in revenues from patent licensing, while many Japanese and Asian companies pay out similar amounts for licenses every year.



portfolio's value is static when in fact all evidence points to the contrary. Above all, a patent portfolio is an asset to be understood, developed and exploited.

A Practical Definition of Value

A practical definition of patent portfolio value is based on the premise that portfolio value is primarily a business matter. That is, the intrinsic qualities of individual patents (how well they are written, how revolutionary the invention) are important, but only in so far as they support the company's strategic business objectives.

This premise implies that, though legal advice is essential, it is not a company's legal arm, but *the senior business managers who must have the final word in determining the value of a patent portfolio.*

If we accept the premise that the worth of a patent portfolio is in its ability to support a company's strategic business objectives, then establishing the criteria for measuring patent portfolio value becomes relatively straightforward. The value of a patent portfolio value can be measured by its ability to:

- Directly generate revenue through friendly or adversarial licensing
- Protect present and future business
- Propagate new business opportunities and partnerships.

Different Strategic Objectives, Different Criteria

Different strategic objectives will give different weight to each of the three criteria for measuring portfolio value.

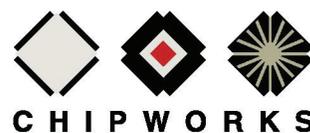
The different approaches IBM and Apple took towards licensing their computer technology clearly illustrate how different criteria for portfolio valuation were used to support different strategic business plans.

IBM chose to generate revenue (today some USD\$ 1 billion+ annually) by licensing its desktop computer inventions. Who has not worked on an "IBM compatible" desktop? Taking a radically different approach, Apple chose to keep its technology to itself and protect and develop its business in a smaller but more exclusive market.

Small pharmaceutical research companies and universities provide many examples of patents being used to establish mutually profitable partnerships. Focused on research, these companies and institutions have little interest in creating and developing markets. They patent their discoveries, then enter into (usually) friendly technology transfer licensing with large companies that have the

Establishing the value of a patent portfolio is not a trivial exercise, but as the enormous sums of money currently changing hands for patent licensing attest, a company that does not know the value of its portfolio may end up significantly out of pocket.

Leaving valuation of your company's patent portfolio to the legal department amounts to shirking responsibility. Legal should and will defend your patents vigorously, but ensuring that costly litigation is the last line of defense, not the first, is a business responsibility.



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means and interest to market products that use these discoveries.

Two Constants

The exact mix of revenue generation, business protection, and opportunities and partnerships will change according to the strategic objectives of your company. The following two truths, however, do not change:

- Patent portfolio valuation is a *business* responsibility
- Valuation must support the company's strategic business objectives.

Note that the practical definition of patent portfolio value makes no mention of citations, does not use complex formulas to calculate the value of a patent against an abstract ideal, and only considers the cost of a patent indirectly, in the company's bottom line. Simply put, the value of a patent portfolio is its value to your business in the marketplace.

How to Improve Patent Portfolio Performance

With a practical definition of patent portfolio value, it becomes possible to apply as required the methods available for improving the performance of the patent portfolio.

At the strategic level, improving performance requires:

- For many companies, a cultural shift at the highest levels to gain buy-in on the value and importance of the patent portfolio.
- A program for technical and legal evaluation of patents and patent applications to ensure that the patents are easy both to defend and to license for revenue.
- Friendly and assertive licensing to generate revenue.
- Monitoring of competitors and potential targets to prevent unfriendly incursions against your patents or to protect markets.
- Monitoring of markets for new opportunities.

At the level of the patent portfolio and the patents themselves, improving performance requires an array of relatively straightforward but crucial initiatives. These initiatives include a range of activities, from the establishment of patent performance metrics to searching for "Rembrandts' in the attic".

Performance Metrics

If you can't measure it, you can't manage it. This adage is as true for patent portfolio as it is for any other area of business. Specifically, it means that if you want to improve the performance of your patent portfolio you must establish metrics for tracking and measuring your portfolio's value to your company.

According to the metrics management company PureShare, "a metric is a measurement in context". The contexts for your measurements should be derived from the practical definition of



portfolio value: revenue generated, business and markets protected, and offering of opportunities and partnerships. These contexts should be weighted differently depending on your company's strategic business objectives.

For each area, develop global and detailed metrics to track the performance of the entire portfolio and of individual patents. Measurements to consider include:

- Number and value of infringements
- Cost of defense against infringements
- Number and value of technological transfer licenses
- Number and value of product revenues protected
- Value of markets protected
- Revenues generated through new opportunities and partnerships
- Patent areas requiring improvement
- Patent areas for future development.

Patent Catalog

A complete and well-documented patent catalog is a cornerstone of every patent portfolio strategy. A patent catalog is in fact an inventory of your resources—probably your most valuable resources.

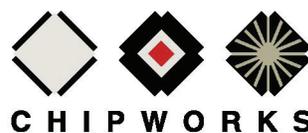
A patent catalog provides a single point of reference for these resources, so that you know exactly what you own. Developing and maintaining a well researched, organized and documented patent catalog is not a trivial exercise, especially for an organization that owns hundreds, if not thousands, of patents. It is, nonetheless, essential; for you cannot reap the benefits of an invention if you do not know what it is and understand its potential.

Using the Patent Catalog to Identify Portfolio Strengths & Deficiencies

The value of a patent portfolio depends on the quality of its patents, but it is more than just the sum of these patents.

A key benefit of addressing the value of your patent portfolio as a whole is that this approach offers a global view so you can develop programs to exploit strengths and remedy deficiencies, not of individual patents, but of the entire portfolio considered as a strategic resource supporting strategic business objectives.

When you know how your patent portfolio measures against those of your competitors you can develop your business strategies to ensure that you gain and maintain the lead in areas that are key to your strategic business plans



Patent Strength					
ABC Tech	□	◇	-	-	Legend: ◇ Strong ● Moderate □ Weak - n/a
XYZ Tech	●	□	◇	◇	
QRS Tech	◇	◇	□	□	
Your Company	□	◇	◇	◇	
	Radio Frequency	Micro controllers	Analog	Power	

You will know in which technologies you need to support research to develop new, valuable patents; and in which technologies you should seek to purchase patents or enter into friendly licensing agreements.

Patent Quality

A good definition of patent quality combines both the legal and business requirements for quality. In short, the quality of a patent can be measured by how well the patent supports your organization’s strategic business objectives: generation of revenue through licensing, product and market and product protection, development of new partnerships and opportunities.

Ensuring that new patents support as completely as is possible the business objectives of your patent portfolio is one of the most effective and cost-efficient means of assuring future revenue streams. A patent portfolio strategy must include a rigorous quality improvement program for new patent submissions.

‘Octopus’ Invention Programs

Patents are sometimes the fruit of fortuitous accident. After months or years of hard work a research team stumbles suddenly upon a solution, a new path that leads to dozens of inventions—and their attendant patents and riches.

A sound business cannot rely on chance to ensure its future, however. The best patent portfolio is a patent portfolio that is not just growing, but that is undergoing carefully managed growth through targeted invention programs.

An effective patent catalog should point to weaknesses in your portfolio, identifying areas where you can focus research and patent development to extend the breadth and depth of your patent portfolio in order to better support your business objectives. An effective ‘octopus’ invention program should be in place to patent in these weaker areas, and all areas around that.



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For example, if your business has patented a process for laying down metal on a microchip, it may be worth your while to experiment with other, similar processes and metals and to patent these processes as well. While you may prefer the original process, your patents for other processes can both protect you from competition imitating your original process, and provide additional revenues through licensing when finding others infringing your 'octopus' processes.

Hidden paper treasures

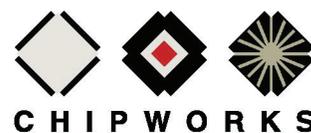
Like all roads less traveled, the path to innovation is neither straight nor obvious. Companies and institutions that have fostered innovation—or that have acquired innovative companies—often do not know the patents they possess, much less the value of these patents.

Among these unknown—and previously untapped—patents gold mines have been found. Sometimes referred to as “a hidden treasure trove”, these patents can become significant source of revenue. In some cases, they are so valuable that they warrant a complete change in business strategy, as was the case of Vtel, a flagging manufacturer of video-conferencing hardware. After discovering it owned a patent for the widely used JPEG algorithm, Vtel recast itself as Forgent and went on to earn, from 2001 to the middle of 2005, some USD\$ 100 million through licensing agreements.

Consult the Experts

Finally, before you begin, consult the experts. Consult your company’s legal, technical and market specialists, and bring in independent expertise in the same areas.

Your company experts have the advantage of knowing your patents, your technologies and your markets. The external specialists bring experience with patent portfolio valuation tools and methods, as well as technical expertise and knowledge of markets, competitors and opportunities beyond your current scope. By providing a fresh perspective, they will also help you review the crucial role of your patent portfolio in your organization, and help prepare you to defend it when the time comes.



The Age Old Question Made Easier: to Litigate or Not to Litigate

One of the most difficult decisions any company faces is how far it should go in defending its patents. There exist no sure formulas that will tell IP executives and lawyers the amount of time and effort they should invest before they settle. Ultimately though, patents have no value if owners are not willing to litigate in defense of their patent rights. Only the threat of a court decision forcing an infringer to cease practicing the invention or acquire a license engenders value in a patent.

Knowledge, however, is crucial. Knowing and understanding the practical value of your patent portfolio will help you make the difficult calls when they come, because you will know precisely what your patents represent for your company's bottom line. The companies with the most vigorous enforcement of their portfolios, not coincidentally, have a good understanding of the value of their portfolio, as well as the corporate will and executive buy-in to generate revenue.

Whether you decide to settle or to go to litigation, you should do so with the knowledge that your decision is supported by rigorous analysis, not just of the present case, but of its implications for the entire company. You will know just how much you stand to gain or lose by holding firm or letting go.

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About the Author:

Steven Adam is the Vice President of Patent Intelligence at Chipworks. He a regular speaker at LES events, and is an active member of AIPLA and IPO. Steven earned a BA in Economics at Wilfred Laurier University in Waterloo, Ontario.

Whatever course you choose, it is always best to initiate friendly actions rather than to react to aggression. However, litigation is sometimes essential in order to establish and maintain the value of your patents. Aggressors must know that you will defend your patents—and that you have the knowledge and the will to do so.

