



Quality (and Value) vs. Quantity: Finding The Balance To Maximize Patent Assets

By Ian MacLean, Vice President, Intellectual Property Services, Chipworks

The release in 1999 of Kevin Rivette's book, "Rembrandts in the Attic, Unlocking the Hidden Value of Patents," helped to generate a ground swell of interest within corporations in the value of patents, which continues to this day. Board members and executives, seeing the billions of dollars attached to the value of a portfolio of patents, have looked at their own decorative patent walls and started asking questions.

- *Are we realizing the true value of the patents we generate?*
- *What ROI could we realize from these assets?*

To answer these questions an organization has to take a hard look at if, and how intellectual property strategies support existing corporate strategies.

To successfully realize the value of a patent portfolio, it must be treated like any other part of a business. There must be a clear understanding of the market opportunities and threats, knowledge of what exists, and a commitment to investing in developing the asset. A number of key components must be in place to successfully leverage a patent portfolio. These include:

- A strategic Intellectual property plan that supports an overall corporate strategy that aligns with business unit goals
- Knowledge of what is (and isn't) in the patent portfolio
- An invention and acquisition program that fills strategic holes, expands and improves the patent portfolio
- Licensing and enforcement programs that support the strategic and business goals of the company

From Quantity to Quality to Value

Whether or not the focus of patent portfolios should be on quality or quantity is an ongoing debate. The answer is both. To succeed, companies must start by ensuring broad and



deep enough patent coverage to mitigate risks and protect the markets defined by their product roadmaps. Beyond that, patents can be strategically deployed to support business goals or generate revenue. Striking a balance between patent quantity and patent quality enables a CIPO to meet their strategic IP goals by extracting value from a portfolio. Typically only about 3 – 5% of a patent portfolio's patents are valuable 'star' patents. These patents are demonstrably valuable because they claim technology that is commercially useful in today's or a very near future's markets.

It wasn't long ago when the predominant patent strategy was simply to file as many applications as possible in the belief that some percentage of the resulting patents would end up generating value for an organization. In 2013, 609,052 patents were filed with the United States Patent and Trademark Office (USPTO) and 302,948 were granted. This increase, about 5.6% for applications and 9.5% for grants over 2012, is the fifth year-over-year increase in the overall number of applications and the seventh year-over-year increase in grants. A large and growing portfolio aims to provide the broad and deep coverage required, but it is a scattered and unfocused approach. How can we do better than 3 – 5% valuable patents? If we focus on generating **fewer** total patents, but **more** valuable patents can we improve results? To this end, a Chief Intellectual Property Officer (CIPO) and their patent prosecution team must answer the following key question:

- How can I maximize the potential value of my patents?

In this article we propose the following set of answers:

1. Define and measure patent quality – incent and reward the creation of quality patents



2. Focus the invention program on developing patents that broadly support licensing, the IP strategy and therefore the business strategy
3. Create or expand a continuation practice that strengthens patents and improves the probability of generating valuable patents

Defining Patent Quality

Not all patents are created equal, yet there is a need to rationally predict the value a patent can generate. Strategic and business considerations usually drive the perception of value while legal considerations often define the measure of quality. While there is no one-size-fits-all definition of patent quality, it is best to agree upon a working definition, which can be tuned for each individual business. Legal and business considerations must be included in any measurement system often separated as quality and value definitions.

We are proposing the following encompassing definition of patent quality: *A quality patent; exceeds the minimum PTO and legal standard of novelty, utility and non-obviousness, its claims are fully supported by its specification, while its claims are as broad as possible they ultimately narrow to specific implementations of the technology, its claims read on high-revenue products, and its claims are strategically constructed for robustness and validity challenges.*

Defining Patent Value

As noted, high quality patents are free of legal flaws that may render them invalid when subjected to rigorous examination, as in licensing negotiations or a court of law, e.g. a clean file



history and litigation history. To extract value from high quality patents, an owner must demonstrate the following:

- The patented technology is being practiced / used
 - By your company and is contributing to your company's revenues
 - By others and is reducing your company's revenue
- Evidence of use can be generated via technical product analysis or product documentation

Litigation-tested patents are thought to have proven quality and potential value based on a courts validation of the patent and a court-tested claim interpretation. Patents are subjected to similar rigorous review during an Inter Partes Review at the Patent Trial and Appeal Board.

Revenue-deriving strategies and market protection strategies generally rely on mapping patents to products. Value is typically realized through licensing campaigns (which are often about obtaining cross licenses to ensure freedom to operate) with litigations as a real and constant danger if negotiations fail.

Measuring Quality & Value

In a perfect world, IP groups could express a strategic IP goal, press a button and have magic software identify the patents best-suited to achieve that goal. In reality, even though the use of automated software tools for cataloguing, rating and mining patents has grown



significantly over the past five years, there is still no magic software solution. Software automation has produced many different tools and techniques that can improve the cost, effectiveness and efficiency of patent portfolio reviews and patent evaluation. However, software tools are only effectively leveraged by a team that understands and acknowledges their tool's strengths and weaknesses. The output of the various tools increases the understanding and high level view of a patent or patent portfolio, but in every case, a subject matter expert (SME) must review (i.e. actually read!) patent claims to find the valuable patents hiding in a portfolio.

Quality and value are indicated by many factors that can be measured. Each of these factors may increase the probability that a patent is high quality and perhaps valuable. They are useful to prioritize and increase the effectiveness of those always essential expert reviewers. The table below outlines some of these indicators, the associated metrics that can be quantified for each, and if commercial software is available from one or more vendors.

Quality/Value Indicator		Metrics	Commercial Software
Support in specification	Q	Number of words in claims that are not supported in the specification.	Few
Maximal disclosure of prior art	Q	Number of cited patent and non-patent references indicates disclosure completeness and therefore robustness to prior art.	Many
Breadth - generic	Q	Number of office actions can be a proxy for their resulting patent claim breadth – more actions generally results in narrower patents.	None
Complete coverage of claimed invention(s)	Q	Length of specification	None



Quality/Value Indicator		Metrics	Commercial Software
Forward citation	v	Number of citations is overused as an indicator that someone else used the technology – really means that someone else noticed the patent and cited it as prior art	Too many
Licensing history	V	Patents that have been supported and licensed successfully	Few
Litigation history	V	Patents that have been supported and litigated successfully	Many
Standards essential patent (SEP) status	V	Number of SEPs. Note, SEPs come with FRAND obligations and are not necessarily essential!	None
Read on high-revenue products	V	Past, present and future revenue of potentially infringing products	None
Breadth - generic	V	Claims language that may limit claim scope (narrow or broad).	Few
Breadth – technology-specific	V	Technology-specific limiting language constructs used.	None
Breadth - construction and structure	V	Number of dependent claims (more = narrower). Number of words in claims (more = narrower).	Few

Patent Strengthening

Effective prosecution can also maximize the *potential* business value through the use of focused claim language. The claim language used should be strengthened by using continuations to map directly on your competitor's revenue-earning products. By observing market and IP trends, existing or up-coming high-revenue products can be identified / predicted



in a technology space, and claim language in open applications can be adjusted to better read on those products thereby maximizing business value through prosecution.

High value patents attempt to strike a balance between legal risk and business reward. Broader patent claims can be challenged more easily while narrow claims can be avoided through design-arounds or be unenforceable because the claim language is too restrictive and thus cannot be mapped to actual products.

Focused Invention Programs

By targeting patents that are fit for specific purposes the value of the overall portfolio can be enhanced and strategic objectives can be more readily achieved. For example, in a negotiation, a patent that covers your competitor's product is more valuable than a patent that covers your own product. An invention program that is designed to generate patents that anticipate your competitor's next generation product innovations will be more likely to develop valuable patents for this purpose.

Conclusion

Maximizing the ROI on IP assets requires a delicate balance between quality and quantity, which is not easy to reach. It starts with a basic definition of patent quality that accounts for both legal and business considerations. A company that is intent on maximizing patent value must put teams and processes in place that constantly and consistently evaluate and monitor patent quality, and make changes that will improve existing and potential patent assets in order to increase potential value. A prosecution process that includes quality monitoring, feedback from licensing professionals and SMEs with broad market knowledge can



increase the percentage of high quality and high value patents produced to more effectively support IP strategies that achieve corporate goals.

About the Author:

As Vice President of Intellectual Property Services, Ian MacLean leads Chipworks' services to IP Groups and Law Firms. Mr. MacLean and his team help clients around the world achieve favorable outcomes in licensing negotiation and litigation, grow their licensing programs, and make sound patent acquisition decisions. In this way, his customers maximize the value gained from their patents through increased royalties or reduced cross license payments. As a result, they repeatedly turn to Chipworks as the trusted patent and technology partner to the world's largest and most successful companies. Mr. MacLean brings over 20 years of executive experience in sales, marketing and business development across a number of high technology companies. He has held a variety of progressively senior roles over the last decade at Chipworks, most notably in the areas of sales and business development, and played an instrumental role in helping the company expand its client reach in new markets worldwide. Mr. MacLean holds a bachelor's degree from the University of Western Ontario.