

Leveraging patent catalogues to reap the benefits of your portfolio

Patent catalogues are invaluable for companies needing a quick answer to what IP assets they own and what these are worth. As investor interest in IP monetisation continues to soar, a well-maintained catalogue can be a crucial part of a business strategy

By **Terry Ludlow**

A sea change is taking place with regard to IP awareness. Senior management in many technology companies are being pressured for answers to the question: “What is our intellectual property worth and how are we seeing returns on this value?” Interest was first sparked by the US\$4.5 billion Nortel patent sale. Follow-on deals – such as AOL’s sale (perhaps prompted by dissident shareholders) of patents to Microsoft for more than US\$1 billion and the high-profile sale of the remnants of Kodak’s patent rights for US\$525 million – have cemented the notion in the investor community that patents are valuable (see Table 1).

A typical mature technology company holds thousands of patents. To an investor, these appear as a cost centre. An average patent will cost between US\$8,000 and US\$10,000 to draft and between US\$2,000 and US\$5,000 per jurisdiction to file. At an average drafting and prosecution cost of US\$10,000 per patent, IBM’s 6,000 patents a year would cost it US\$60 million in the United States alone. Add maintenance fees to this (eg, Round Rock Research’s portfolio of just over 3,000 US patents costs over US\$2 million per year in maintenance fees), and it is clear that developing and maintaining a typical technology company’s patent portfolio is a big budget item.

It is amazing that it has taken this long for senior management (prompted by investors) to ask their IP groups what the return on investment (ROI) is on all of this. This article focuses on the concept of the patent catalogue – a database and workbench that incorporates tools to help IP practitioners develop tactics to define and support an effective patent and licensing strategy. By applying some or all of these tools, practitioners will be better positioned to answer the hard questions related to the ROI and value of their companies’ IP portfolios.

Apple and Samsung are currently locked in a billion-dollar litigation over patent infringement. Allegations of IP theft and unethical conduct abound in the popular press. However, nothing could be further from the truth. The patent thicket is dense in the technology industry and cross-licensing is standard practice. In theory, royalties flow from low R&D companies and new market entrants to high R&D companies, which have invested and pioneered the technology that enables, for example, today’s smartphone handsets. In practice, the advantage goes to the well prepared. A patent catalogue is designed to be a 24/7/365 effort, which prepares any company for the challenges it will face in executing a patent strategy that fully supports its strategic business plan.

Patent quality versus patent value

Although the terms ‘patent quality’ and ‘patent value’ are often used interchangeably, they are in fact separate concepts. ‘Quality’ refers to the legal aspects of a patent – high-quality patents meet or exceed the statutory requirements for patentability. ‘Value’, on the other hand, applies to the business aspects of a patent – that is, a technology’s market value as

incorporated into products and services being sold on the market.

Patent quality

The US Patent and Trademark Office (USPTO) – aided by companies including IBM, Google and Microsoft, and by several law schools in the United States – has studied the legal requirements and best practices for meeting quality legal requirements. A couple of projects, such as the Community Patent Review project and the Software Partnership project, have looked at obviousness, in particular in software patents. The Peer to Patent project and the new AskPatents.com website – which crowdsources prior art submissions – focus on improving validity.

According to most accepted definitions, ‘patent quality’ is a concept best left to legal scholars. Debates on standards for obviousness and improving methods for thoroughly checking prior art during prosecution will result in higher-quality standards for patents. Senior management and the average investor will assume that basic legal standards for patentability, and therefore patent quality, are being maintained in a portfolio. From a business standpoint, value is much more interesting.

Patent value

Patent value can be determined in many different ways and the choice of method often depends on the purpose of the valuation, as outlined below.

Accountants often need to determine the value of a portfolio to report to shareholders or submit to tax authorities. 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 formulae designed to set the asset value of each patent in the portfolio, before summing up the total. Surprisingly, there is seldom any examination of the patents to determine their value. The balance-sheet definition recognises that a patent portfolio is a tangible asset and attempts to put a price on it. However, it fails to set a market-based standard for evaluating the various elements – the patents – that together make up the asset. This method fails to recognise that between 95% and 97% of patents have little or no value. The key to determining a portfolio’s value is to find the potential ‘star’ patents and then leverage them to match and support strategic business opportunities.

By contrast, the cost definition of patent portfolio value attempts to equate

Table 1. Corporations driving up the value of patents

Date	Deal	Amount	# of patents
April 2011	OmniVision acquires Kodak patents	US\$65m	850
July 2011	Google acquires IBM patents	Unknown	1,000
July 2011	Rockstar acquires Nortel patents	US\$4.5b	6,000
April-Aug 2011	HTC acquires patents from ADC, S3* and Dashwire	US\$400m	300+
August 2011	Google acquires Motorola Mobility	US\$12.5b	17,000
September 2011	Google buys more IBM patents	Unknown	1,000
September 2011	Nokia/Microsoft give right to license to Mosaid	Unknown	2,000
April 2012	AOL sells patents to Microsoft	US\$1b	800
April 2012	Microsoft sells to Facebook	US\$550m	650
June 2012	Interdigital sells to Intel	US\$375m	1,700
November 2012	MIPS sells to Bridge Crossing LLC	US\$350m	580
January 2013	Unwired Planet buys Ericsson patents	Unknown	2,000+
January 2013	Kodak sells patents to Apple, Google	US\$527m	1,000

Source: Chipworks, 2013

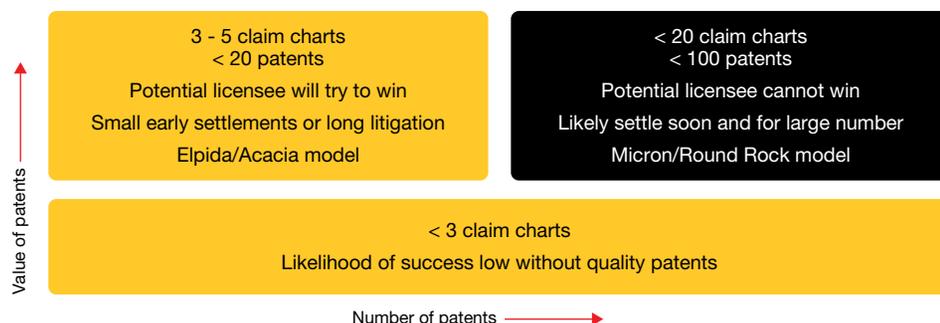
Table 2. Patent portfolios can be used to achieve different business objectives

1. Motivation	→ Motivating employees
2. Brand	→ Attracting customers, partners and investors
3. Protection	→ Protection of your products
4. Improvement	→ Protection of future/improved products
5. Blocking	→ Patents not used by owner, used to block competitor products
6. Confusion/intimidation	→ Intimidating competitors
7. Licensing-out	→ Better market penetration, generating income
8. Assertive licensing	→ Generating income
9. Cross-licensing	→ Access to third-party technologies
10. ROI/salvage	→ Return on R&D – US\$20K patent
11. Patent transfer/M&As	→ Generating income or cost savings; joint ventures or start-ups

the value of a patent portfolio with its cost. However, does ‘cost’ mean the R&D cost of developing the patents, the cost of producing the products that use the patents or simply the cost of drafting, prosecuting and maintaining the patents? Does cost have any relevance to the value that a prospective buyer or licensee puts on a patent portfolio? This definition is best left for accountants who need a simple solution to an accounting problem.

A more practical definition of value looks at the portfolio’s ability to support a company’s strategic business objectives, rather than the intrinsic quality of individual patents (eg, how well they are written; how non-obvious and distinct from prior art they are). This premise implies that although legal advice is essential, it is not a company’s lawyers, but the senior business managers who have the final word in determining a portfolio’s value. This

Figure 1. Patent value versus number of patents



Source: Chipworks, 2013

highlighted by litigators when they are turned loose and have a big enough budget. Serious settlement discussions happen sooner when a sufficiently large group of patents is asserted as a portfolio, convincing the potential licensee that there is a high probability it will need a licence. Conversely, at some point this equation flips. Each additional patent in a specific technology area is worth progressively less once the critical mass is exceeded – value generation can be optimised by splitting the portfolio into parallel portfolios. And thus many a privateer is spawned!

can be measured by its ability to support various business objectives by:

- Directly generating revenue through friendly or adversarial licensing.
- Protecting market share in present and future businesses.
- Propagating new business opportunities and partnerships.

Patent value is thus contextual and is derived from the strategy that the patent portfolio supports (see Table 2). Patents and patent portfolios will have vastly different values to different people or organisations, depending on what use they can put them to. This was illustrated by the Nortel portfolio sale. The patents were worth US\$4.5 billion to the consortium of companies that needed to keep them out of the hands of competitors and non-practising entities (NPEs), while boosting their own portfolios. These bidders were mostly competitors in the fast-growing and changing wireless telecommunications market. Many were new entrants with weak patent positions. The Nortel portfolio was unique in that it both covered key aspects of the technology and was almost totally unencumbered. The bidders' growing businesses justified their part of the US\$4.5 billion price tag. However, NPEs that looked at the purchase as a pure monetary investment dropped out early in the bidding, as they could not get an adequate ROI at such a high initial purchase price.

In addition, patent value is not individual (see Figure 1). The whole can be worth much more than the sum of the parts. As patent aggregation entities well know, a critical mass of patents in a specific technology area needs to be assembled to maximise returns. In litigation, a single patent – no matter how high its quality and value – will be attacked vigorously in today's environment. Most patents have weaknesses that can be exposed and

Strategic objectives for IP programmes

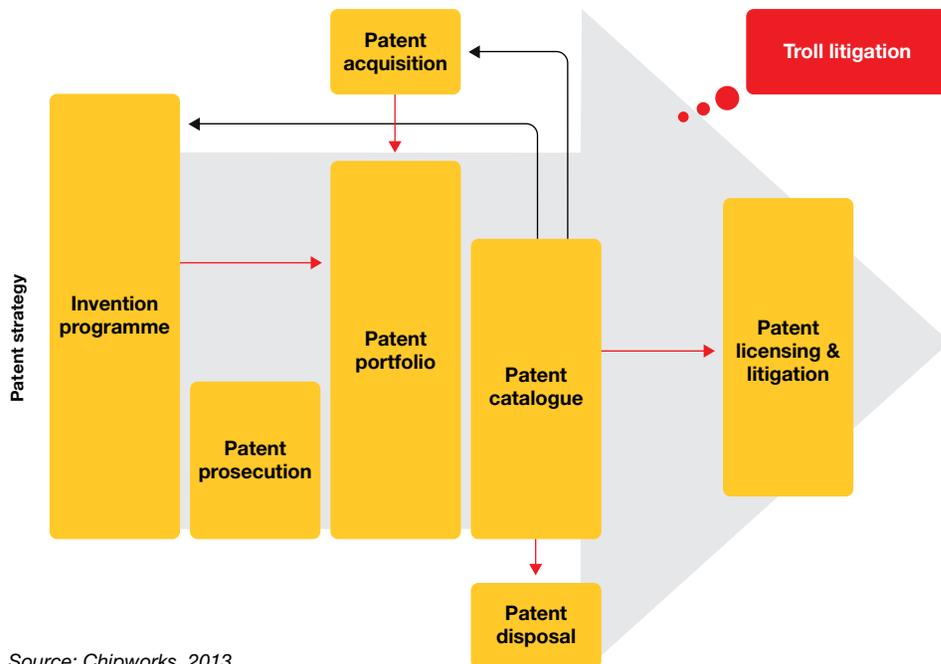
Patent and IP strategies do not exist in a vacuum. Patent strategies should be an important component of an effective business strategy. Examples of the successful use of patent portfolios to support business strategies surface on the public record with increasing frequency:

- Using patent sales to generate revenue from a failed business – recent examples include Nortel's sale of over 6,000 patents for US\$4.5 billion.
- Using patents as loan security – recent examples include Alcatel-Lucent using its 27,000-plus patent portfolio as security on a loan of more than US\$2.1 billion from Goldman Sachs and Credit Suisse.
- Companies acquiring patents before expanding internationally, as Chinese companies are doing now. Anecdotally, we are hearing a lot of stories from brokers about active Chinese patent buyers. Huawei attempted to buy assets from 3Com for its technology in 2008 and patents from 3Leaf in 2011. Both purchases were rejected by US foreign investment controls (Committee on Foreign Investment in the United States). Huawei ranks number three in telecommunications infrastructure worldwide, but nowhere in the US market.
- Using patent litigation to secure divestiture or acquisition of a business unit – years ago, Digital Equipment Corporation (DEC) sued Intel to establish the value of its technology. The lawsuit settled when Intel bought most of DEC.
- Improving patent portfolios through acquisitions. It is widely held that Google paid US\$12.5 billion for Motorola Mobility to acquire an extensive patent portfolio in wireless telephony. Acacia purchased Adaptix for US\$160 million in January 2012

and promptly closed licensing deals with Microsoft and Samsung, followed by litigations against at least seven additional companies.

- Using patent monetisation programmes to buy time for corporate reorganisation:
 - Between 2008 and 2010, Kodak generated more than US\$1.9 billion from licensing its 11,000 patents to delay its entry into bankruptcy reorganisation. The January 2013 sale of a part of the company's portfolio for US\$525 million became a key component of the reorganisation.
 - Currently, Nokia is generating much of its revenue from licensing, while the business adjusts to smartphones and a new Windows mobile operating system. It is estimated that Nokia will collect a royalty of between 1.5% and 2% for every long-term evolution (LTE) mobile phone sold. Nokia is successfully leveraging different entities (eg, Pendrell, Mosaid, Sisvel and Vringo) to monetise certain assets, with annual licensing revenue of more than US\$600 million, including a settlement payment from Apple of €480 million.
- Using patent acquisition to buy your way out of a losing litigation – HTC bought 235 patents with the acquisition of S3 Graphics from VIA Technologies and then used these to help with its counterarguments in an International Trade Commission case against Apple, which was eventually settled.
- Using patent licensing to generate revenue:
 - IBM chose to generate revenue (at times more than US\$1 billion annually) by directly licensing its personal computer, software and semiconductor technology.
 - Texas Instruments generated more than US\$1 billion per year for many years, licensing semiconductor technology primarily to Asian companies which were gaining market share.
 - LSI has reported licensing revenue of more than US\$100 million per year, or 4% of its total revenue, and includes patent licensing in its annual report to shareholders.
 - Ericsson has an active licensing group generating more than US\$1 billion a year in royalty fees. It was also a key player in the Nortel patent purchase and the creation of

Figure 2. The ideal IP department – a theoretical workflow



Source: Chipworks, 2013

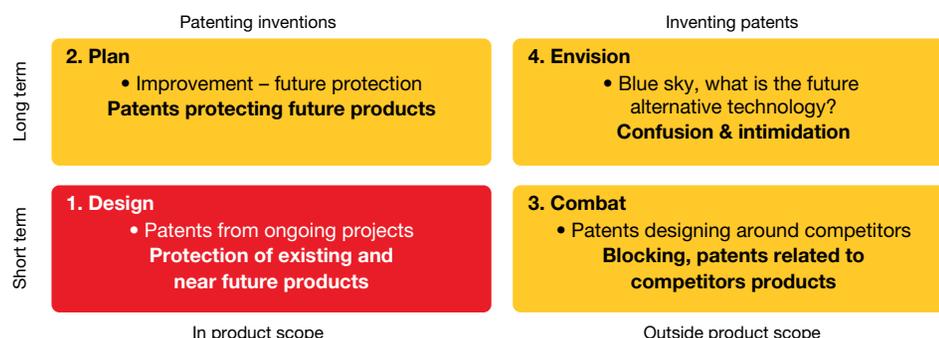
the privateer Rockstar. In addition, Ericsson recently announced a new partnership with Unwired Planet setting up a new privateer to monetise its portfolio.

Different strategic objectives, different criteria

Different strategic objectives will give different weight to each of the criteria for measuring portfolio value. In the pharmaceutical industry, patent value is often driven by the patent's ability to maintain a monopoly for as long a period as possible after the years required for drug development and regulatory approval. In the high-tech sector, patents are more often used to generate licensing revenue and/or reduce royalty fees.

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, which have the means and interest to market products that use these discoveries. There are examples of attempts to transfer this model into the technology world (eg, Rambus and Tessera). Overall, however, the fairly comprehensive rejection

Figure 3. **Strategic patenting**



Source: Chipworks, 2013

of it by most technology companies is yet another example of the vast differences between the pharmaceutical and the high-tech sectors.

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

- Patent portfolio valuation is a business responsibility.
- Value is based on a patent portfolio's ability to support the company's strategic business objectives.

Performance metrics

If you cannot measure it, you cannot manage it. This means that if you want to improve the performance of your patent portfolio, you must establish metrics for tracking and measuring its value to your company. A practical definition of 'patent portfolio value' allows you to apply methods to measure and improve its performance. To generate business value from your patents, the metrics that you establish for evaluating your portfolio's performance must link back to your business strategy. Some measurements to consider may include:

- The number of 'proud patents' – patents that can be documented as covering technology that is actually being used in the market.
- The number and value of infringements identified.
- The number and value of technological transfer licences.
- The number and value of product revenues that are protected or competitors' product revenue that is threatened.
- The value of markets protected.
- Revenues generated through new opportunities and partnerships.

- Patents in areas identified as requiring improvement.
- Patents in areas identified for future development.

The traditional measurement for IP groups is the number of applications filed and/or number of patents issued per year. While this data is easy to obtain, merely counting applications and/or patents includes no consideration of value or contribution to the business. Measuring the number and not the value of patents can lead down a dangerous path. Executives and investors equate quantity with value. Many chief IP officers will know the following story line: "I tried to focus more on getting valuable patents and de-emphasised quantity. Then the numbers came out at the end of the year and our major competitor got more patents than we did. The newspapers questioned whether we had lost our innovative advantage. The shareholders and the CEO got very upset, so we put quantity back as a key metric." Until we can establish that patent portfolio quantity does not equal value, we may be stuck with this situation.

A better quantitative measurement might be the number of new proud patents created each year. Proud (or 'star') patents are the subset of the 3% to 5% of a company's patents that can be documented to show use in products available on the open market. Any patent with demonstrated value is a useful tool to help achieve numerous patent objectives. Unfortunately, this adds a few more years to the timeline between invention and achievement, and has to span the chasm between prosecution and licensing teams.

Metrics also often cover revenue – another simple annual measure. Many technology companies use patents as revenue generators to help offset the cost of R&D. When revenue generation is a business objective, this works well for the licensing team as a measure of overall portfolio quality. However, providing feedback to the prosecution team is difficult and the connection between individual revenue-generating patents and, in particular, patents in the early stages of development and prosecution is distant.

The patent catalogue

How many IP groups can list their top 10 strategic patents? How many can list their 10 most valuable patents? (See Figure 2.) How many can quickly assemble a list of the top 10 most relevant patents to assert in a cross-complaint the day that they are put on notice by a competitor? A patent catalogue

assembles the data required to answer these questions confidently. Various commercial and proprietary search and reporting tools on your patent analysis workbench can then be used to interrogate the catalogue and report results that fulfil these types of query.

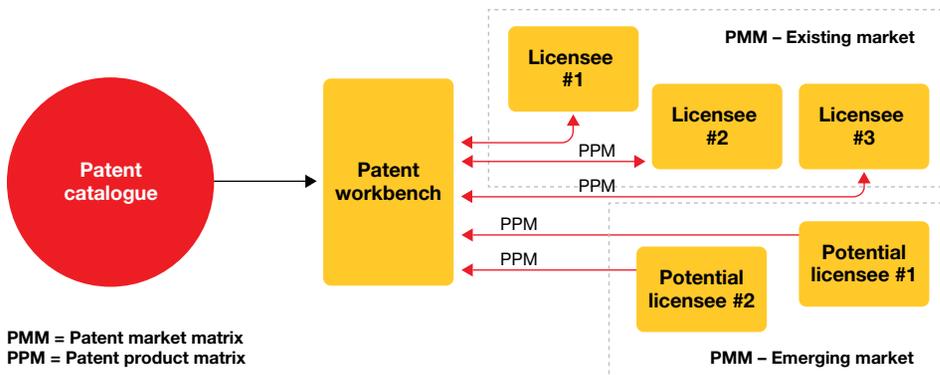
A patent catalogue starts as an inventory of your patent resources. It provides a single point of reference for these resources so that you know exactly what you own. There is no off-the-shelf solution. Many organisations have *ad hoc* systems that attempt to track their valuable patents. In some cases this consists of asking inventors what patents they think are most useful – unsurprisingly, it is often their own! Some companies have a shelf on which are stored the claim charts and assertions that have been used in previous licensing campaigns and litigations. More advanced companies collect this data in Excel spreadsheets.

The task of developing and maintaining a well-researched, well-organised and well-documented patent catalogue is not a trivial exercise, especially for an organisation that owns hundreds, if not thousands, of patents. It is nonetheless essential – you cannot reap the benefits of an invention if you do not know what it is and understand its potential. A patent catalogue requires sufficient resources, but it can be developed apart from the pressures of imminent litigation or licensing threats if it is included as a component, or indeed the foundation, of a patent strategy.

A patent portfolio exists as a group of patents owned by the same entity. Patent docketing software can help with prosecution and maintenance. The patent catalogue adds much more detail, including:

- Patent family – what continuations, foreign equivalents or pending applications exist?
- Categorisation beyond the international patent classification and/or national patent classification (or the new Cooperative Patent Classification) usually codes patents by: technology type – a multilevel taxonomy which provides a meaningful description of the technology claimed in the patent; or market-specific applications – which types of products could this patent apply to? Which markets do they apply to?
- Enforceability/detectability – can the claims be investigated and proven without sneaking in to your competitors' research labs or production facilities?
- Use of your own products – do you actually use your own invention?

Figure 4. The patent catalogue



PMM = Patent market matrix
PPM = Patent product matrix

Source: Chipworks, 2013

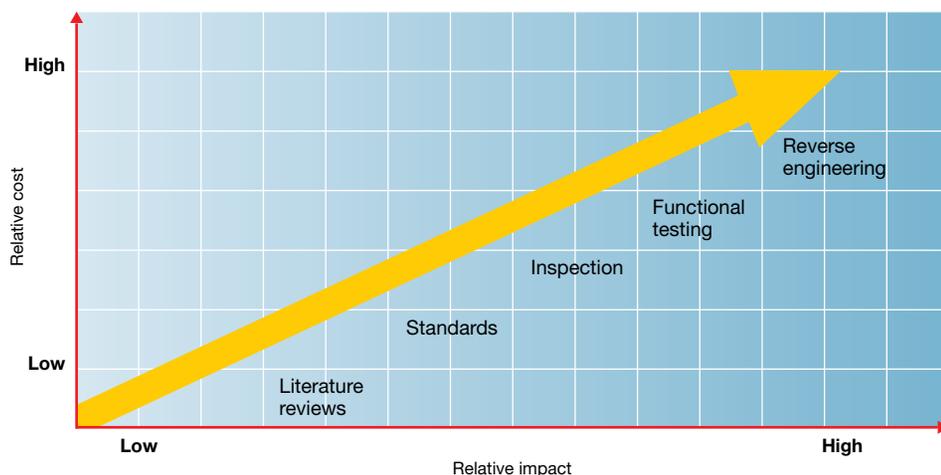
- Use of competitors' products – can you find references or produce documentation showing the use of your patented technology by others?
- Market data – to which products in which markets do your patents apply? Who are the players in these markets? What revenues are they generating and what is the growth forecast?
- Enforcement history – has this patent been documented and used in any licensing negotiations?
- Existing licences – who is licensed to use this patent? For how long and under what terms?
- File history – what are the limitations to claim interpretation inherited from the prosecution process?
- Validity – are there any new concerns or art that limit the scope of the claim interpretation?
- Litigation history – has this patent been enforced in litigation? What are the limitations added to the patent in claim construction or invalidity arguments in its litigation?

Using the patent catalogue to identify portfolio strengths and deficiencies

Many methodologies exist for evaluating patents and portfolios. By understanding the value of your patent portfolio as a whole, you can develop programmes to exploit strengths and remedy deficiencies not just of individual patents, but of the entire portfolio considered as a strategic resource that supports business objectives. Tactics to improve portfolios include:

- Patent acquisition to fill gaps quickly.
- Patent development through invention programmes to fill predicted gaps or needs.
- Targeted patent strengthening

Figure 5. Evaluating products



Source: Chipworks, 2013

programmes to increase patent value through filing continuations, continuations in part, divisional applications or seeking a reissue to continue to build the portfolio value.

Tactics to leverage the value of the portfolio include:

- Patent licensing programmes.
- Patent disposals to leverage residual value through sale of surplus patents to independent buyers.
- Sales to privateers.
- Sales through brokers.
- Abandonment of low or no-value patents to reduce maintenance fees.

When you know how your patent portfolio measures up, you can develop strategies to leverage its value. You will identify the technologies in which you need to support research to develop new, valuable patents and in which you should seek to purchase patents. When faced with a new licensing partner, you will know whether to negotiate a favourable licensing agreement aggressively or whether to enter into friendly licensing agreements quickly.

Invention programmes

Your patent catalogue has helped to identify the types of patent that you need to improve your portfolio, and your existing invention programme can be adapted to fill some of these needs (see Figure 3). Typically, invention meetings get a group of professionals together to review invention disclosures produced by proud inventors, eager to collect the patent incentive bonus, and to determine which inventions should

be pursued as patents and which should be maintained as trade secrets or abandoned. When the key metric is the number of applications filed, budget is the only limitation.

A patent catalogue can provide the invention programme with guidance. An effective patent catalogue points to weaknesses in your portfolio, identifying areas where you can focus patent development to extend breadth and depth in order to support your business objectives better. Incentives and metrics can be developed and used to encourage the development of new patent applications in areas identified as weak or needing help three years out. Strategic patenting can be divided into the following four categories:

- Design – most companies are very good at patenting what they invent. Invention programmes encourage inventors to submit invention disclosures covering the work that they carry out.
- Plan – more visionary companies will also encourage inventors to consider the longer term. What key technologies and key inventions are required for the next generation of products – and the one after that? Spending time identifying areas for future R&D and developing the ideas into patent disclosures can get key and future core technologies into patent applications quickly.
- Combat – a few companies will also consider what their competitors need to be inventing. The most valuable patents in your portfolio are often those covering technology that is central to your competitors’ products. A so-called ‘war game’ exercise casts a group of your inventors in the role of the competition. Competitive intelligence enables you to familiarise your inventors and strategic marketers with the competition’s products and technologies. Turn them loose to create speculative future product roadmaps and identify key new technology requirements. These can then be developed and turned into patent applications that have a higher probability of being valuable against your competitors in future cross-licensing discussions.
- Envision – encourage outside-the-box thinking. What are the potentially disruptive technologies or developments that could leave you producing buggy whips in an automotive age?

Invention programmes should include your company’s legal, technical and market specialists, and bring in independent

research and expertise in the same areas. Your company experts know your patents, your technologies and your markets. External specialists and researchers offer experience of patent portfolio valuation tools and methods, as well as technical expertise and knowledge of markets, competitors and opportunities beyond your current scope.

Doing ‘something’ with your patents

The patent catalogue provides a framework for making decisions on what can be done with your existing portfolio to leverage value and support your company’s business strategy (see Figure 4). A patent market matrix (PMM) plots your patent families against the markets they apply to and identifies potential licensing partners. Once it is known which companies potentially use your technology in which markets, you can do a PMM evaluation to plot your patents against their products. A patent product matrix (PPM) can be developed through technical and legal due diligence to determine the strength of your portfolio when an assertion campaign is being considered. It is also prudent to do some sort of PPM in reverse – what patents does your licensing partner own that could be asserted against your products? Once your relative strength is known, decisions can be made about initiating a licensing programme or seeking a cross-licence. A full-scale technical support programme will generate evidence to optimise your negotiating position.

Technical due diligence

The primary purpose of technical due diligence is to ensure that the patent has value in the industry, enabling it to protect markets or leverage value from potential licensing partners. Technical due diligence will determine whether the invention is being practised, and provide proof that the invention is being used (see Figure 5).

Technical due diligence can range from a quick and basic patent review through online literature reviews to full infringement analysis that helps to identify and map claim elements to applicable products/devices. More rigorous investigation usually results in higher impact evidence, albeit at a higher initial cost. In all cases, if a true market value is being sought for your patents, the potential buyer/licensee will require that the value of the patents to its own company be demonstrated. More evidence and more patents equal more coverage and higher value. A licence or sale value will be related to the size of the market that the technology covers and the breadth and significance of the technology on offer.

Table 3. Privateer examples

Privateer	Company
Sisvel	Philips
Sisvel	Nokia
IPCom	Bosch
Oasis, Picture Frame	Intellectual Ventures
Mobile Media Ideas (MPEGLA)	Sony, Nokia
Round Rock Research	Micron
Acacia Research	Renesas, Elpida
Mosaid (Core Wireless)	Nokia, Microsoft
Altitude	Apple
Rockstar (Nortel patents)	Ericsson, Microsoft, Apple, BlackBerry, Sony
Vringo	Nokia, Lycos

Source: Chipworks, 2013

Monetisation tactics

The patent catalogue can guide strategy development and decisions on various patent monetisation options.

Buying or selling patents

Patent acquisitions are generally made based on the patent’s ability to strengthen an offensive or defensive patent strategy. As offence, newly acquired patent assets can help a company to generate cross-complaints or counterclaims, and create licensing royalty revenue to support operating income. As defence, patent acquisition helps companies to establish and strengthen their position in the market. New market entrants need patents as a countermeasure should a competitor target them for patent infringement allegations. Market pioneers can build a dominant patent position to maintain market monopolies and prevent competitors from attempting to enter their market space.

A legal review of the claims in a patent will play a pivotal role in the decision to proceed with the acquisition. In the course of due diligence, all documents and information relating to any past and present litigation, or claims of infringement, invalidity and/or ownership involving the patent, should be acquired and analysed. However, a legal review alone is not enough. When purchasing or selling any patent asset, technical, market and legal due diligence is required. When buying patents, the level of due diligence performed is typically predicated on the deal value and purpose of the transaction. For example, minimal due diligence would be performed on patents being purchased for defensive reasons at a low-deal value. Due diligence in this scenario might involve a basic review to look at claim scope, initial validity and

Table 4. Each tactic has its advantages and disadvantages

	Cost	Reward	Risk	Time to money	Other considerations
Internal licensing group	High	High	High	3-5 years	Requires long-term commitment of company resources
Agent	Medium	Medium	Medium to high	3-5 years	Expands bandwidth – allows for parallel programmes
Privateer	Low	Medium	Medium	Some upfront and some 3-5 years	Your own private troll! Lose control of patents
Pools	Low	Low	Low	Follows adoption of technology	Supports business groups
Sale	Low	Low	Medium	6 months – 1 year	Could lose good patents for 10% or less of licensing value
Abandon	Low	None	Medium	None	‘Oops’ factor

Source: Chipworks, 2013

infringement impressions. As the deal value goes up and/or the patents are required for more immediate and specific purposes – such as strengthening a licensing programme or litigation – so too does the level of due diligence, which at this level often requires evidence of use analysis and advanced legal research and review. Usually, the level of due diligence required is driven by a combination of deal value and purpose.

Technical due diligence is also performed by companies looking to sell patents. Traditionally, there has been minimal need for due diligence on the sell side. However, the economic climate has changed, creating a buyer’s market. The supply of patents exceeds demand, but patents with a demonstrable value are still in short supply. To separate the 3% to 5% of valuable patents from the rest, buyers ask sellers to provide evidence of a patent’s value, with expectations rising in lockstep with price.

Licensing and litigation

Licensing promises the highest total return on monetising an IP portfolio. The calculation is simple: the rights holder can license the same asset (eg, the IP portfolio) to a number of different licensees, which can generate higher revenues than selling the asset once to one purchaser. Licensing takes longer (between three and five years) to generate revenue and comes with many risks (eg, litigation or invalidity arguments). Selling can provide revenue now (between six and 12 months), with less risk but much lower potential returns.

A licensing programme can be run internally, with the advantage of retaining ownership and control of the patents and strategy, and leveraging internal knowledge of the portfolio. Licensing programmes can also be run externally through a contract licensing organisation. While it may appear to be more expensive, this option can be done in combination with an internal programme to ramp royalty streams more quickly. Patents are a wasting asset – they expire 20 years after first filing. In a mature market, a faster ramp for a licensing campaign will maximise revenue, justifying the cost of additional licensing bandwidth.

To litigate or not to litigate?

Patents have no value if the holder is not willing to enforce its patent rights. Ultimately, the threat of a court decision forcing an infringer to cease practising the invention or acquire a licence engenders value in a patent. Whether you decide to settle or to litigate, you should do so in 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.

Privateering

As noted elsewhere, privateering is not a new concept in the patent world (see Table 3). It has gained in popularity recently, with companies such as Ericsson, Microsoft and Nokia engaging privateers to help to optimise the monetisation of their patents.

When evaluating your patent catalogue, you may well identify orphan portfolios and surplus patents. Orphan portfolios are patents that are no longer required in support of business objectives. They may cover technologies for markets that the company has either exited or never entered. Spending scarce resources to monetise these patents may not be the best use and a monetisation programme may expose the company to unwanted litigation risk.

Surplus patents are found in technology areas where your company has been very active in generating patents. When a critical mass of patents is exceeded, the company has more than enough to assert against any challenger or licensing partner. Excess patents add no additional value to a negotiation. Technology companies with tens of thousands of patents are often in this position. If you can identify enough proud patents to cover the company's needs, then some portion of the surplus patents can be considered for sale.

Privateering can be considered as a way of optimising monetary returns with a deferred payment. Often, a privateering organisation will pay little or no money upfront and will share a portion of the gross revenue as a delayed contingent payment for the patents. Risk is assumed by the privateer. The main disadvantage is that a company must lose control of its patents and any decisions regarding licensing strategies.

Patent pools

Patent pools such as MPEGLA or LTE may offer a faster route to revenue and also help to reduce administrative costs. They are formed around industry standards organisations and are intended as one-stop licensing shops for all patents essential for practising a standard. Participation in a pool is important for business groups in your organisation. Their future business is built around participating in standard setting, and your company's future product revenue stream may depend on their negotiating a standard that incorporates your company's technology.

However, royalty streams are limited by fair, reasonable and non-discriminatory licensing commitments. The patents essentially become encumbered and are of limited use elsewhere. A key concern is to consider what patents are really essential in standards. There has been an explosion of self-declarations of standards-essential patents. There are an estimated 400,000 self-declared essential patents for the LTE telecommunications standard. While this may perhaps be good for increasing your

company's patent pool revenue and good for inventors' egos, it is almost certainly bad for patent strategies. Patents that cover market-essential but non-standardised features or best-mode implementations are much more valuable in today's environment. They lose tremendous value and utility to strategic patent programmes when they are mistakenly declared to be essential.

Mergers and acquisitions

Wall Street has become enamoured with intellectual property. M&A deal value was up 10% in Q1 2013 compared to Q1 2012, even though the number of deals was down 16% for the same period, according to Thomson Reuters Deals Intelligence. Telecommunications, high-tech goods and consumer staples are all sectors driving growth and all major filers of patents. In many instances, patents and intellectual property have become drivers of deal value. Google's US\$12.5 billion acquisition of Motorola Mobility is widely considered to have been driven by the search giant's strategic need for mobile handset and LTE patents. The 1,500 patents covering Lexmark's inkjet printer business were announced as a feature of its purchase by Funai Electric for US\$100 million. The knowledge derived from a patent catalogue can be leveraged to help drive deals in similar, if usually less spectacular, ways (see Table 4).

Investing in portfolio knowledge

Executives in innovation-driven industries are increasingly pressured to leverage the value of their intellectual property and their patent portfolios. In some cases, companies are looking to sell patent assets quickly as a way to raise cash, streamline their businesses and reduce maintenance fees. In other cases, companies are looking at targeted patent acquisitions to accelerate licensing programmes, ease entry into new markets or support litigation. With the volume and value of deals rising, the risk of making a wrong decision has never been higher. Investment in portfolio knowledge reduces this risk and enables a better evaluation of patent value.

Developing a patent catalogue is not a single event. Catalogues must be constantly maintained and evolve to ensure that a valid and complete picture of a company's patent assets is quickly available to decision makers.

Knowing and understanding the practical value of your patent portfolio will help you to make these difficult calls when they come, because you will know more precisely what your patents can

Action plan

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A practical definition of 'patent portfolio value' is the degree to which it can support the corporate business strategy. One way to ensure that you maximise the value of your portfolio is to develop a patent catalogue:

- A patent catalogue incorporates tools that help IP practitioners to define and support a solid patent and licensing strategy that is based on strategic business value.
- A well-documented patent catalogue – ranging from details of patent families to enforceability and use of invention by your own company/competition – helps to drive invention development, licensing programmes and monetisation

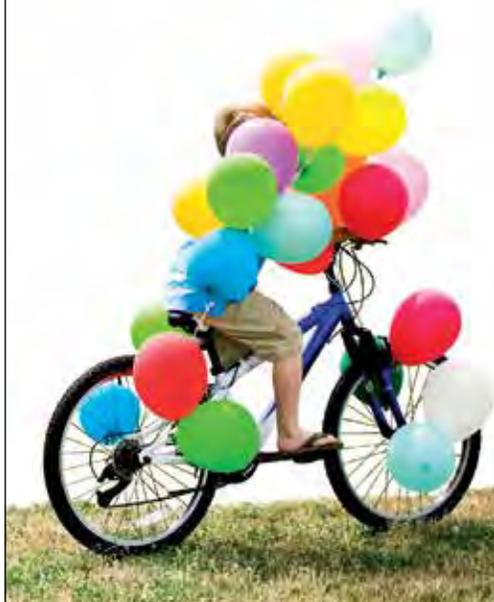
strategies, from buying and selling to establishing a privateer.

- Technical analysis ensures that a patent has value in the industry – enabling it to protect markets or leverage value from potential licensing partners. It can range from standards-based literature reviews to full infringement analysis that helps to identify and map claim elements to applicable products/devices.
- Developing a patent catalogue is not a single event. It must be constantly maintained and evolve to ensure that a valid and complete picture of a company's patent assets is quickly available to decision makers.

contribute to your company's bottom line. The companies with the most vigorous enforcement programmes have a better understanding of the value of their portfolio. Patent portfolio knowledge is essential, first to generate executive buy-in and to align the corporate will. It then becomes a crucial part of designing effective patent strategies that optimise the portfolio's contribution to achieving your company's strategic objectives. **iam**

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