Measuring and conveying IP value the HP way

Hewlett-Packard has devoted significant time and resources to ensuring that its IP portfolio is aligned to the company's overall strategic goals. An extract from a recently published book* about IP business models explains how

By **Joe Beyers** and **Bruce Berman**

The most innovative companies are accepting challenges to their IP strategy as an opportunity to strengthen their business model. Many companies make patent licensing an intrinsic part of their revenue generation mix without identifying whether strategic applications would ultimately have been more meaningful. The strong motivation to out-license is due in no small part to high-profile patent cases and the huge damages awards reported in the media, as well as the high apparent profit margins associated with royalties. Indeed, it is easier to count licensing dollars (and euros and yen) than to understand the subtleties of how best to leverage patent assets. It takes a strong marriage of IP and senior management to survive challenges to a business's IP assumptions.

Vice-president of licensing at Hewlett-Packard Joe Beyers acknowledges that there is opportunity in out-licensing, but he also believes there is significant need for better management and performance measurement. "Given the risk inherent in such a [strategic IP] venture," says the former engineer and HP researcher, "it is critical that the board or executive team establish an appropriate set of performance metrics to ensure that a company's licensing activity provides true enterprise value and supports its business objectives."

In the following article, Beyers contends that performance measures that transcend simple cash generation are necessary for an effective corporate intellectual property licensing programme. He presents a set of guidelines that both IP and businesses executives can share, and shareholders can follow. For Beyers, IP return is only fractionally about licensing. ***Bruce Berman***

Setting the scene

In today's fiercely competitive environment, a company must maximise the value it receives on its innovation investment. Typically this happens through the profits garnered on product sales or services revenue; but increasingly, companies are creating intellectual property licensing programmes in an attempt to gain additional income beyond traditional revenue sources. Given the risk inherent in doing this, it is critical that the board or executive team establish an appropriate set of performance metrics to ensure that a company's licensing activity provides true enterprise value and supports its business objectives.

This article outlines performance measures for a corporate intellectual property licensing programme and presents a set of guidelines for what would constitute a successful programme. Examples will show the true complexity of measuring the benefit of a patent licensing programme and why a set of metrics, not just an analysis of cash flow or incremental profit, is required.

Strategic intent of IP – a changing role

The first-level decision that a company's board or executive team faces is to determine the role of intellectual property in the company's business model. A service-oriented company will view the role of IP quite differently from a company that

* *From Assets to Profits*, © John Wiley & Sons, edited by Bruce Berman, published in November 2008

is investing large amounts in research and innovation. It is also important to realise that this role may change over time based on industry dynamics.

Exhibit 1 shows an example of how this role has evolved in HP. The main focus by Bill Hewlett and David Packard was to develop and distribute innovative products that provided significant, unique value to HP customers. The belief was that as long as the company kept providing this value, the company would be successful and others would be unable to innovate fast enough to catch up. Many innovations that were years ahead of the competition were not even patented.

The HP IP model shifted in the 1970s and 1980s. HP broadened into other product areas and soon realised that it needed to have IP licences from other major companies to have operational freedom. This strategic model for HP changed again in the 1990s. HP was starting to become challenged by copycats in several key product areas in which it held major investments. Printing technology was one such area. HP became more aggressive at defending its IP position in these few areas and also started a major ramp-up of patenting its inventions. This increase in the patenting process resulted in HP becoming one of the top recipients of US-issued patents; HP has ranked between number three and number five in recent years.

For many companies, this focus on defence against copycats is the current strategic intent for their IP. At HP, this model changed significantly at a critical meeting of the HP board in January 2003. At that time, HP was a newly merged combination of four previous companies, all with a long history of innovation: HP (less Agilent), Compaq, Digital and Tandem. With a research and development budget of US$3.6 billion and a strong innovation customer value proposition characterising the HP products, the HP board decided to create a more focused programme around protection and monetisation of its IP assets. The majority of HP's IP was moved into a wholly owned affiliate (Hewlett-Packard Development Company) to enable more top-level management of these assets and the HP intellectual property licensing function was created. In the five-year period that followed, the IP income for HP increased tenfold; HP's IP enforcement actions have broadened; HP's IP has become the core of many new ventures; and the overall understanding of the value and importance of IP has materially increased throughout the company.

Exhibit 1. **Evolution of HP's IP strategy**

Strategic importance of IP	Timeframe	IP actions by HP
IP creation to develop and ship products	50s & 60s	Main focus on shipping products
Use of IP to enable greater freedom of action	70s & 80s	Cross-licences with major companies
Use of IP to protect core product categories	90s	Enforcement of IP in selected product regiments. Rapid increase in patent filings
ADDED: Leverage of IP for increased revenue/value	January 2003	Launch of IP licensing function

Structuring for success – it sounds good, but how do you get everyone on board?

A mandate from the board and the creation of an IP licensing function are necessary steps in launching an effective IP licensing programme within a large enterprise, but they are not the only actions required. For companies with little or no history in the process, the launch of this activity also requires a cultural transformation. IP now becomes a corporate asset, to be used to maximise overall enterprise value. Engineers, managers and business unit leads can no longer think that they own their own IP and can independently manage and control it.

In HP, new review processes had to be established for business-related transactions that might encumber any form of the company's IP. In particular, a process was established (and also mandated by the board) in which every deal in the company that provided any form of an IP licence or an agreement not to enforce an IP right had to be reviewed by the head of IP licensing and that executive's legal counterpart. Over time, standard templates were created for classes of transactions so that the reviews focused more on exceptions or issues. In the past five years nearly 5,000 such transactions have been reviewed and in nearly 50% of these deals the IP or business terms were significantly changed – to HP's benefit – as a direct result of this review process.

For a subset of the deals the head of IP licensing also had to review these proposals with the chief technology and strategy officer, and for the first few years with the CEO, on roughly two-week cycles. There were also occasional reviews with the technology committee of the HP board of directors. These top-executive reviews helped to establish a common baseline agreement on HP's true strategic intent regarding IP, as well as on the licensing of this IP. The heavy top-level engagement greatly enabled broader cooperation across the company. Elements of these concepts

were then put into a company-wide training class that has so far been attended by over 40,000 HP employees worldwide.

Leveraging IP for increased value – but what kind of value?

Once a corporate executive team or board decides to drive an initiative to obtain additional value for its IP beyond product/service revenue, the next challenge is to determine the goals of the initiative and to measure its success or impact on the company. Exhibits 2 and 3 provide a model of a three-level set of metrics.

The first and probably the easiest to measure is the cash-income metric, which I call IP cash. This is the metric that one usually thinks of in an IP licensing function. This cash income is often from upfront IP payments, unit/revenue royalty payments or ongoing milestone payments. In this model, other forms of cash payment should also be measured. These include equity cash payouts when equity in an entity had originally been in the form of an IP payment, as well as other payments that might hit the cost of sales or operating expense lines instead of a normal royalty income line. The key criterion is that cash payments have a financial treatment that truly affects the company's bottom line in that particular financial period.

The second key metric is what I call IP value. Quite often it is possible to obtain truly incremental profit for the company from IP in ways that do not directly involve the transfer of cash. This might be in the form of specific purchase discounts/rebates, elimination of current liabilities (eg, current royalty payments) or the gross margin on incremental product purchase commitments. While this can be controversial, it is important that performance credit be given to a licensing function for this type of financial benefit – particularly if it can be demonstrated that this value is tied to an IP transaction, is truly incremental and has a profit impact in the current financial period. The critical factor for real value is the impact of the activity on the company' s bottom-line profit, rather than what other forms this impact might take. In HP, we measure these first two metrics separately. More emphasis is placed on the IP cash metric, yet the IP value result can often be as large or larger.

The third type of metric, which I call IP strategic value, is harder to measure. This involves the use of IP assets as an element of a broader negotiation or a negotiation that has a highly uncertain or very wide dynamic range of an outcome. In other words, the IP and the resources and processes behind it provide significant value to the company's bottom line, but there is too much uncertainty to pinpoint the exact amount. Rather than declare a value and credit it towards the performance measure of the licensing function, it is typically better to attribute general value to strategic performance and acknowledge its benefit broadly. Otherwise a firestorm of controversy might be created that could potentially undermine the integrity of the two other more quantifiable forms of value (IP cash and IP value).

An example of an IP strategic value deal might be the following: Your company is in litigation and you believe that it is likely to lose the case and be subjected to a US$100 million payout. Your IP licensing team ramps up its assertion engine and finds or acquires IP to launch a strong counterattack. The result is a settlement in which your company pays only US$10 million. One can argue that this IP action was worth US$90 million in savings to the company; but it is very difficult to predict accurately the outcome of a jury trial, a set of appeals and the size of the legal fees that would have really been spent to achieve a final adjudicated outcome.

Exhibit 2. **Giving credit where credit is due**
Types of enterprise value created by an IP licensing function

Primary performance measure	Secondary performance measure	"Atta-boy" measure
IP cash	**IP value**	**IP strategic value**
Cash income that: • is tied directly to an IP transaction • is truly incremental • is recognised in the P&L	Other forms of value that: • are tied directly to an IP transaction • are truly incremental • are measurable • directly affect some aspect of the P&L	Value that is likely to be beneficial to the company's operating profit but may be difficult: • to quantify accurately or • to prove that it was the sole/direct contributor

IP cash/value – who gets the benefit?

When the company's executive team/board has decided to initiate an IP licensing function and use the IP cash and IP value metrics to measure the function's performance, the next question is: who gets the cash/value? Some companies have created completely separate entities with independent profit and loss centres to drive this type of effort. In a global enterprise, and in most normal operating companies, that is a mistake.

The model in HP is that the IP cash flows to the relevant business unit – or in other words, the business or businesses

that have the strongest tie(s) to the relevant IP. This structure is absolutely critical in securing strong business unit support for the IP licensing activities. A pseudo P&L is still maintained for the licensing function to track its total profit impact (including all related costs) on the company, but the actual financial benefit flows directly to the business unit's profit and loss statements. The gauging of licensing-related costs will be discussed later on.

While this financial flow model may be appropriate for a global enterprise such as HP, there are situations where the reverse may be more appropriate. In a global enterprise, it should be possible to have approximately 5% to 8% of the company's operating profit derive from IP licensing. At the other extreme, there are companies whose sole business model is IP licensing. Many other companies are more of a hybrid with a moderate product revenue stream and a relatively significant IP licensing function. Once the IP-related profit reaches about 25% or more of the total, an independent and separate profit and loss function should be considered.

Revenue recognition — so you get the cash, but can you count it?

One of the more frustrating elements of running an IP licensing function is to close a transaction, receive a significant amount of cash and then be unable to recognise the cash as income (and credit against your performance measures) for years into the future. Elements of a specific IP transaction that may not have originally seemed to be core to a deal can potentially result in substantial delays in when the revenue for the transaction is recognised. In general, the head of an IP licensing function would usually prefer that the revenue for a transaction be recognised before retirement.

The final determination of the revenue recognition for a particular IP transaction is, of course, decided by a company's financial function, often working in collaboration with the company's auditors. I do not intend to offer any specific financial advice on this matter, but the following are some issues that should be considered for several different types of IP transaction. Any one of these six factors can have a major impact on when the IP-related profit benefit receives recognition, whether of the IP cash or IP value type.

- Patent licences. Can past usage be separately valued and recognised? The effect of a term versus life of patent licence. The effect of future captured patents or future wild cards. The effect of the first few licences on a standards-based licence programme.
- Technology licences. The recognition of NRE payments. The impact of service and warranty provisions.
- Contingency fees. Recognised as an operating expense or revenue reduction?
- Blended deals. IP deals with customers of the company's other products or services.
- Patent acquisition costs. Expensed or amortised?
- Accounting method. Cash received or accrual-based?

Exhibit 3. **Specific examples of enterprise value created by an IP licensing function**

Primary performance measure	Secondary performance measure	"Atta-boy" measure
IP cash	**IP value**	**IP strategic value**
• Upfront cash payments • Royalty payments • Other cash payments, which may appear as a cost of sales or operating expense reduction	• Purchasing discounts/rebates • Elimination of current cash liabilities • Gross margin on incremental product purchases	• Reduction/elimination of litigation liabilities • Reduction/elimination of an assertation liability • Reduction/elimination of the potential cost of an IP licence

Understanding the timing of recognised benefit is very important to measure properly the value that an IP licensing activity brings to a company. While a set of goals and performance evaluation metrics needs to be the base for the current financial period, the future value created should also be a performance metric. The challenge is that for a particular IP transaction, the licensing function may be only able to recognise, for example, US$50,000 in the first year, but the deal may have an expected case income stream of US$100 million cumulative over the next five years.

At HP we measure this via two separate goals. There is an IP cash metric for the current fiscal year and there is also a metric for what I call the tail. This tail is the expected case of the revenue to be generated over the first five years of a particular IP transaction (including the first year). Thus, for each IP transaction, we measure the actual results in the current year and the expected case projection in the first five years. These two numbers are measured against a current-year financial objective in total and against a total tail-value creation for all newly closed deals in a given year.

One additional point: I strongly believe that the financial goals for a particular fiscal year should be annual rather than quarterly. Of course, the financial function wants strong quarterly smoothness and

predictability. However, most IP licensing activity is lumpy, dynamically changing and highly uncertain. Sub-optimal results are obtained if a function has to scramble each quarter to meet a quarterly boundary.

Specific business models – what are reasonable financial goals?

In establishing goals for an IP licensing function, one needs to look not only at the revenue target, but also at the cost structure. While it may be widely believed that IP income is merely found money and is nearly all profit, this is definitely not the case. In general, companies do not want to pay for IP; or if they do pay, they may not want to pay its actual value to the IP owner. Every IP licensing revenue dollar is a hard-fought battle that needs a significant amount of preparation, analysis, packaging and negotiation. In addition, the different forms of IP licensing feature different investment and execution models. Exhibit 4 lists five such licensing models. Each one has a different cost model, revenue recognition timeframe and degree of engagement aggressiveness (which often relates to the risk in doing or attempting the transaction).

A hypothetical financial model for an IP licensing function in a typical global enterprise could be the following: The company has US$20 billion in revenue, US$2.4 billion in operating profit, US$1 billion in research and development, and US$200 million in IP income (cash plus value). Securing US$200 million in IP income requires US$40 million in annual expenses – about half expended in the corporate IP licensing function and the other half to cover business unit and litigation costs. The operating profit from the IP licensing function is US$160 million or 6.7% of the company's total profit. My belief is that global enterprises that are thinking about the potential to start an IP licensing function should consider this type of financial model as a benchmark set of objectives. There is a ramp-up time for the resources and infrastructure for such a function that could take two to three years. In addition, a complex IP transaction typically has an 18 to 24-month time-to-money lifecycle.

Exhibit 4. **Cost structure of the IP licensing business segments**

	Business segment	Average cost	Cost drivers (top 3)	Revenue recognition
Friendly	Technology licensing	10-20%	Technology nurturing Technology analysis Business development	Long tail
Friendly	Brand licensing	15-20%	Quality assurance Partner management Business measurement	Flat with some growth
Friendly	Patent sales	5-20%	Sales agent fees Patent analysis and maintenance	Upfront
Less friendly	Standard licensing	10-20%	Pool fees Patent analysis and maintenance Business development	Long tail
Less friendly	IP assertations	25-35%	Litigation costs Legal claim charting Counter-assertion analysis	Lumpy

Blended average cost is 20% of revenue

Trade-offs – setting the goals and measures of success

The old adage "be careful what you ask for as you just might get it" is very applicable in setting goals for a corporate licensing programme. The true measure of the success or failure of such a function is not just whether the financial metrics are achieved, but also the methods or actions used in achieving these objectives.

A licensing programme that realises US$X million in licensing income can negatively impact on the future operating profit of the company by many times this amount if prudent steps are not taken in the licensing actions. Such a scenario could emerge if, for example, critical IP is licensed to a competitor, resulting in the company losing its competitive advantage in a major product line. Another example would be a case in which a brand licence action was taken that damaged the image or value of the brand.

In addition to establishing a set of metrics for a corporate licensing programme, the board or executive team needs to establish a set of governance processes to ensure that the total enterprise value is optimised in the IP licensing actions, not just the value of the IP income. The governance process needs to provide for an appropriate set of checks and balances, but not be so cumbersome as to slow significantly the effective execution of the licensing programme.

A critical element of an effective governance process is to define the critical IP stakeholders – functions that can be materially affected by an IP licensing action. There are three general categories of such stakeholder. The first consists of the major business units (BUs) of a company. A particular BU becomes a stakeholder in a proposed licensing transaction if the transaction:

- Affects the IP created by or utilised by the BU.

- Affects a major supplier or customer of the BU.
- Affects a major partner of the BU.
- Affects a major competitor of the BU.
- Creates a potential IP counter-assertion risk for the BU.

The key BU individuals that get most engaged in these discussions are usually the chief technologist, the business general manager and the IP or patent attorney that supports the BU. Quite often, the chief technologist is the primary driver of the IP strategic issues for the BU.

A second stakeholder is the corporate marketing function, which usually is accountable for the integrity of the brand or brands of a company. It is a critical stakeholder in any transaction that involves the licensing of a brand of the company.

The third stakeholder category is the broader legal function. Most IP licensing projects involve a triad of resources – business (licensing), technical and legal. The legal resources that are directly part of a licensing project play a critical role in the project strategy and execution process. In some projects, other functions within the legal organisation become additional critical stakeholders. For example, the litigation section plays a key role in a patent assertion action. It may need to assess the analysis that was performed of the potential counter-assertion risk to the company, or to assess the relative strength of the assertion case should the project ultimately lead to litigation. Patent sales is another area that involves a broader legal engagement. In that scenario, a cross-company analysis of licensing encumbrances on patents may be necessary for a patent sale.

Another critical element of an effective governance process is the method for resolving disagreements between the IP licensing function and the relevant stakeholders on the direction or desirability of an IP licensing transaction. Disagreements still are likely to occur. It is extremely important that a well-defined disagreement resolution process exists to address these issues quickly and effectively.

There are three important steps in the issue resolution process:

- In Step 1, a discussion is held between the stakeholders and the head of the IP licensing function. My experience has been that in the vast majority of cases (estimated to be over 90%), the improved understanding by the relevant stakeholders and the IP licensing function has resulted in agreement on a course of action. This resolution has ranged from agreeing to the original proposal, to an agreement on not to proceed, to an agreement on a new approach. If agreement is not reached in this discussion, then you move to step two.
- Step 2 is a discussion with the stakeholders, the head of IP licensing and the company's chief technology and strategy officer. If the disagreement arose from the legal function stakeholder, the company's general counsel is also involved. In the five years of the existence of the HP IP licensing function, all disagreements have been resolved by this step of the process. If such an agreement is not reached you move on.
- Step 3 is a review by the CEO.

The result of this governance process is that there is clarity on the decision-making process and a shared understanding of the relative benefits and risks of an IP transaction.

IP's value contribution

A successful intellectual property licensing programme is vital to the success of innovation-based companies such as HP. Licensing a company's IP can provide significant value and thus enable a greater return on the company's innovation investment. Execution must be consistent with the company's overall strategic objectives and have the discipline to make the proper trade-offs to maximise the total enterprise value, not just maximise the cash stream for licensing the company's IP. The company's board and executive staff also need to define carefully a set of performance metrics and approval processes to drive the right focus and speed of execution, while assuring the right holistic behaviour and actions. In addition, the company must have the foresight and patience to realise that this return can be unpredictable in both size and timing. iam

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