

# Filling the information gap

Company market value is often tied to intellectual assets, yet most managers still cannot simply turn to their computer and generate a report on what those assets are and how they are performing. Some companies, however, are wising up

By **Paul DiGiammarino**

Why do so few companies produce the information needed to answer basic questions about intellectual assets? For example, how are those assets distributed across business units; which products are they are used by; what licence revenue have they generated this year? Why have intellectual asset managers allowed themselves to be left out of the wave of enterprise resource management productivity enhancements? Why aren't the business intelligence tools used in finance, production, HR, sales and other departments deployed in IAM? Simply put, it is because most IP managers do not have the data they need in a useable format.

Getting that data is difficult on several levels: it is a new challenge and it has an impact on processes across multiple organisations within the company. Until recently, IP teams have not felt empowered to drive that level of change. These are cultural and political decisions within a company, as well as financial. What is the relevant data needed? Who needs to see it? What questions will they want answered? We talked to a number of IAM leaders to learn from their experiences.

Terry Adams is assistant vice president, technology IP management, for Nestlé in Vevey, Switzerland. "Large global IP-owning companies must radically rethink how they use accurate, timely and accessible IA information to define and manage development of innovation and disruptive technologies," he says. "Everyone knows where they want to go with IAM, but very few know how to get there." IAM managers, he says, agree on the importance of knowing

what IP a company owns to support its IA strategy, but few have the information and tools needed to do this. Adams truly believes in the old adage that what gets measured gets done. To execute an IA strategy effectively, IA managers must be able to measure the quantity and quality of their existing assets, and those being produced by their IAM processes. "For example," Adams asks, "how many can give an up-to-date and accurate answer to the question of how many patents there are of a certain technology classification, business need and legal strength? Also, how many have established goals at this level and are measuring progress toward those goals across the IAM process, including ideas, invention disclosures and filings? If you are competing against companies who have this ability, aren't you disadvantaged?"

## The IP estate planning challenge

Adams believes few companies have developed the people, processes and technology needed to perform this level of portfolio analysis on a routine basis. Traditionally, it has been a cumbersome procedure requiring extensive manual gathering and manipulation of data from multiple sources. Disparate processes and tools are used by different business sectors, so there is no consistent way to report on and manage any asset category. The lack of clarity and consistency in the available data makes it harder to reach consensus and decisions take longer. The results end up in people's heads, notebooks and spreadsheets – there is no adequate record of the decisions and the reasoning behind the decisions. For smaller organisations with smaller patent portfolios

## Do you know your IP? One company's self-test questions:

- What are the company's IP assets and liabilities?
- What are our 100 most valuable inventions and how much are they worth?
- What IA coverage (patents, trademarks, trade secrets, publications, agreements) do we have for specific businesses?
- What IP supports our 10 highest margin products?
- What IP supports the products comprising 80% of our revenue?
- What licences exist for our IP and can we put our finger on each licence immediately?
- What revenue has each licence generated and what are the forecasts for next year?
- How can I get copies of all the documentation relating to a piece of IP if we have, or want to investigate, a licensing opportunity?
- When cross-charging IP management costs, how do I allocate cost and hence cross-charge to IP owners?

this might be adequate, but for larger organisations managing sizeable IA portfolios sophisticated data management systems are absolutely essential.

As with any portfolio management process, the assets need to be categorised and valued to support analysis and decision making. Intellectual assets should be ranked by a number of business, technical and legal factors, for example:

- Business: where does the asset fit in the business?
  1. Use in current products (product category, customer type).
  2. Organisation (business unit, geography).
  3. Supports future business plans (timeframe, business area).
  4. Blocking competitors.
  5. Legacy – abandoned.
- Technical: what technology is covered?
  1. Technology taxonomies.
  2. Classifications.
  3. Problem areas (eg, therapeutic condition).
  4. Technical value – breakthrough or minor enhancement?
- Legal strength
  1. How broad are the claims?
  2. How easy would it be to enforce the patent?
  3. How easy or difficult is it to detect infringement?

To capture this level of information, a company can use an invention evaluation matrix similar to that shown in Figure 1, but with its own choice of business, technical and legal axis headings and sub-headings. This captures the judgement of a patent review committee as each invention is examined to determine the degree of fit across various business and legal dimensions. For example, the invention shown in Figure 1 has the following profile:

- Claim coverage: specific claims with narrow application.
- Ease of detection: easy to detect.
- Internal value: drives key feature.
- External value: high value.

These scores are stored in the IP database. This data makes initial filing decisions and subsequent filing plans much easier.

Once categorised, the information can help in developing the IA strategy. One approach is to use a portfolio evaluation matrix like that shown in Figure 2 to summarise all or part of a portfolio across

the business and legal categories. Assets appearing in the quadrants with the lowest numbers deserve more consideration for inclusion in the value creation strategy, while assets in the higher number quadrants should be considered for abandonment.

A chief innovation officer at a consumer goods company says that by implementing a portfolio categorisation and reporting process, the company was able to identify non-contributing IP and implement a plan to shed it. Since these represented 15% of the overall portfolio, this enabled the company to apply increased capacity to achieving its intellectual asset strategic goals.

Additionally, a properly categorised portfolio enables them to make better and faster priority decisions across all IAM functions.

An IP database containing this level of information can also solve one of the key challenges of IAM – maintaining institutional knowledge about the portfolio. You can see what you have in a particular product or technology area. You can see the values assigned to it in the past. It also helps solve the “what were we thinking problem”, where you cannot understand the actions taken on some IP matter. You know how you got to where you are and, in most cases, why.

Now the process of aligning the portfolio with the business can be carried out with accurate, accessible asset data. Some refer to this process as estate planning. Other inputs include existing business strategies, new product or market initiatives, competitive intelligence and market and financial analyses. The process should identify:

- IP which is no longer aligned with the business to be lapsed, sold, licensed or donated.
- IP gaps which need to be filled to support the business better from internal or external sources.
- In some cases, there is an attempt to look over the horizon and identify potentially disruptive technologies for research focus.

Casey Hill is senior director of IP strategy at Motorola, another company that has a structured approach to IAM. “We’ve established Strategic and Key Technology Areas – STARS and KTAs – to help prioritise assets and focus innovation in the portfolio. We line up our IP investments with the strategies of our three business units and our labs by setting targets for each in the strategic and key technology areas and allocating budgets accordingly”.

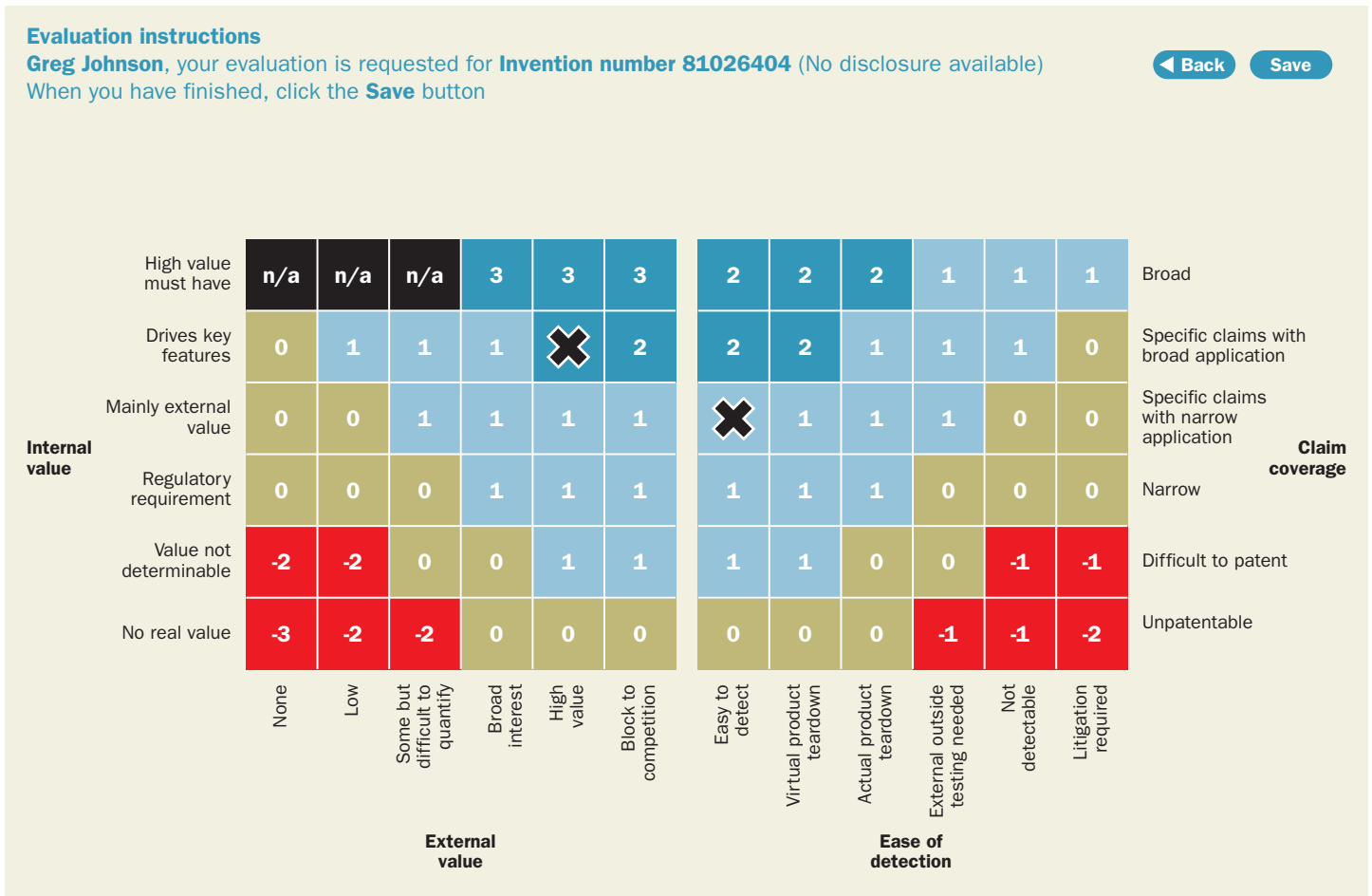
**Focusing IP production**

Once gaps and opportunities have been identified in the portfolio, it is then possible to start taking action. Driving research priorities requires IAM procedures that are embedded in the innovation processes of the company on a global basis. Mechanisms are needed for setting IP production goals, monitoring the activity and reporting results. Research and development managers at appropriate levels can be given goals for invention disclosures and patent filings in target product and/or technology areas. The IAM system should report the status of actuals versus goals over time and the usual management incentives can be applied.

Exhortation and evangelism will always be an element of improving IP productivity, but it is far from sufficient in large organisations. Steve Fox is now with Foley & Lardner's Palo Alto office, after serving half of his 38 years at HP as vice president and

deputy general counsel, intellectual property. Fox recalls a number of approaches he found valuable. "When we needed to focus on a key area, say a new product idea or a competitor product move, we'd run an innovation workshop – a two-day offsite meeting with eight to ten key participants from marketing, engineering, management, even customer support," he explains. The workshop would be planned well in advance, with time for the attendees to think about the problem area and come to the meeting with initial ideas. "We'd drill down as a group with a facilitator and capture every idea that came up. Typically we would end up with a dozen or so really good-quality inventions we could move through the process," Fox says. The ability to slice and dice categorised company and competitor IP assets prior to a session like this can help uncover market opportunities and IP strategies for competitive advantage.

Figure 1: Invention evaluation matrix



Fox says that another way to generate ideas for inventions is to look ahead and extrapolate technology or market trends. An obvious example is the impact of Moore's Law on semiconductor chip density. If the amount of logic on a chip is going to double every 18 months, what do the engineers think they could be designing on a chip five years from now? Some companies look at competitors' technical papers, identify technologies of interest and patent ahead of them. One goal is to accumulate IP that can be cross-licensed or form the basis of a counter suit if necessary.

Casey Hill drives Motorola's IP strategy to address both volume and focus for the company's innovation and IP assets. "We set volume goals when filing IP in our technology focus areas and we measure them, but patent quality is hard to predict early on. That is why we also file in specific technology focus areas to improve the likelihood of the patents being valuable," he explains. "A patent typically takes four years to come through the process and a lot can change over its lifetime. It's amazing how some 10-year-old patent, unknown to have much value early in the process, can turn out to have a very high value".

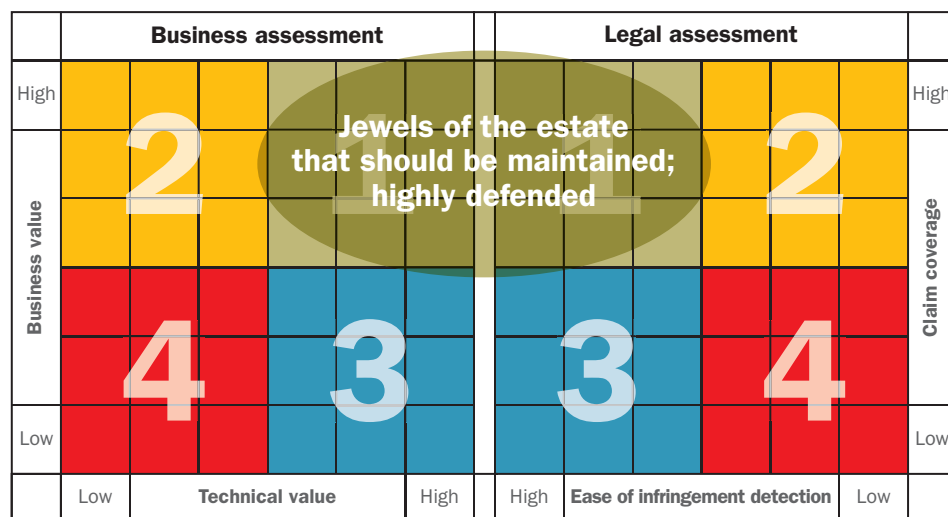
Fox emphasises the importance of staying in touch with what the business unit executives think is important. "At HP we'd ask them to fill out a one-page form to list their top 10 technologies and rank them as either strategic to support current efforts or futuristic – blue sky, gap filling, trend intersecting technologies. We'd use the US\$100 test – how would they invest

US\$100 across the 10 areas? This was an important input into the IP planning process."

For healthcare companies, where IP budgets can range from 1% to as high as 5% of R&D expenditures, the lifetime patent costs for a major global product line can easily exceed US\$1 million. This puts a premium on keeping the portfolio investment aligned with the product pipeline – continually checking with the business unit at every stage of the patent process. Are clinical trial results justifying the next level of international protection? Does the latest assessment of market opportunity warrant the level of IP protection we are targeting?

When upgrading IAM data and processes, cultural and regulatory aspects must be considered. Companies need to develop a culture where turning innovation into intellectual assets is respected and rewarded at all levels. Of course, it did not hurt the priority of IP at HP when the CEO re-branded the company with the word 'invent' or that now its chief IP strategist and business executive, Joe Beyers, is reporting directly to CEO Hurd. Inventor award programmes are an important aspect of this culture and another element in the IAM process and infrastructure. In countries like Germany, inventor remuneration is laid down by law and if the correct procedures and deadlines are not strictly followed, the company can lose rights to the IP in question. At a minimum, a fully categorised IAM estate, combined with the appropriate processes, will go a long way to satisfying Sarbanes-Oxley's mandate for enhanced controls and procedures. Also, it may

Figure 2: Portfolio evaluation matrix



mitigate the risk of shareholder suits associated with IP mismanagement that high-stakes patent assertion and damages awards have made all too real.

**Licensing IP**

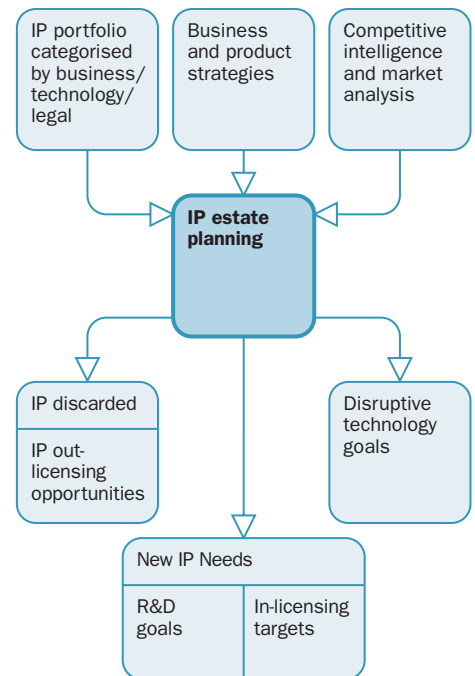
Another approach to sourcing IP in support of new product development is in-licensing. Patent landscape analyses can identify candidates from which key IP can be licensed or acquired. It can identify patents that clearly must be licensed in order to play in a space. Sometimes it is obvious that a patent has been designed to play this gate-keeper role. “Stick licensing is simply another approach to enforcement,” says Damian Porcari, director of licensing and enforcement for Ford Global Technologies. “You’ll see a patent that has had special treatment to establish broad claims and withstand attacks. Its specification is 50 columns, it has 50 drawings and 200 claims. It is translated into five languages and filed in key countries. You’ve got to have it – you’ve got to pay to play.”

The level of in-licensing activity in biotechnology today drives new levels of scrutiny for IP assets. A rigorous patent and literature search in a therapeutic area can produce a map of research activity and identify competitor portfolios. The search can highlight acquisition candidates for due diligence of their IP portfolio: level of meaningful protection; length of time for exclusivity; and so on. It can be helpful to keep portfolios of competitors or potential partners in an IP database and categorise them using the same business/technical/legal values used for your own company. This allows you to make apples-to-apples comparisons and can be helpful for executive presentation and decision making.

One thing is clear – improving how IA information is gathered and used to define and achieve IA goals will yield increased competitive advantage, innovation and compliance. Many managers in organisations dispersed throughout the world require information about their company’s portfolio and that of competitors. Whether it is categorising and prioritising patents, trademarks and other IP rights, measuring their performance or making certain IA investments are aligned with business objectives, obtaining and understanding a company’s IP-related information is critical to its success. Implementing this across the enterprise starts with knowing the right questions to be asked and defining the people, processes and technology needed to keep the answers coming.

To make this level of change happen, it is almost always necessary to have an executive sponsor within an organisation. He or she needs the vision, authority, budget and commitment to lead an enterprise-wide initiative and to secure alignment of all necessary parties – a challenging but ultimately rewarding objective, as early adopters in this space have proven. ■

Figure 3: Getting your IP house in order



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