

Life and money beyond patents

Companies that produce software for internal purposes may find that they are sitting on a potentially lucrative new revenue stream

By **Andrew Allemann**

Intellectual property organisations are typically chartered with protecting and monetising a company's intellectual assets. Most of these organisations think of intellectual assets as patents and therefore focus their efforts on patent disclosures, filings, enforcement and licensing.

But patented assets make up a relatively small percentage of a company's intellectual property portfolio. The bulk of a company's intangible value is tied up in other forms of intellectual property, including know-how, trademarks and software applications developed for internal use. If an IP department is chartered with protecting and monetising the company's intellectual assets, then it is not meeting its objective if it ignores these non-patent forms of IP.

One of the more measurable components of non-patent IP is software developed for internal use. US companies spend US\$75 billion annually on such software for internal use based on figures from Forrester and the US government. Approximately US\$50 billion of this is built by internal information technology departments while US\$25 billion is spent with service integrators (eg, Accenture) and outsourced development companies to create software on a company's behalf. A portion of this investment can be monetised through software commercialisation.

Examples of internally built software with commercial potential include applications to manage human resources and finance, architect supply chain processes, manage customer databases and integrate off-the-shelf systems.

This article will explore the models for commercialising internal software investments, the benefits of doing so, how to find software within the company, the types of pushback IP organisations face internally when commercialising technologies and how to market software technologies for commercialisation.

Models for software commercialisation

The ultimate decision for which model to pursue depends on the particular software technology and the inventing company's structure. There are three typical models for commercialising software intellectual property, each with its own benefits and drawbacks.

End-user licensing

Licensing internal software directly to other companies is the most basic model of software IP licensing. For example, Ford Motor Company might license its internally built finance software to General Motors. With this option, the inventing company maintains complete control over pricing and has a say in which companies can license the software. This is ideal if a company does not want its software IP licensed to a potential competitor. However, the inventing company will be responsible for sales, support and maintenance. This is a large burden that most companies are not willing to undertake. After all, Ford is not a software company.

Spin-out/joint venture

This model involves creating a new company to commercialise the IP. The investing company and/or outside investors finance the spin-out. For companies with a long-term view, this can result in a large payout if the joint venture or newly created company is

later sold or goes public. The inventing company is also able to separate its operations from the new company and is not responsible for sales, support and maintenance. Unfortunately, this model involves a large upfront expenditure of money, time and personnel. If the new company doesn't succeed, it could potentially be a very public failure.

Distribution agreement

This third model is preferred by many companies. In a distribution agreement, the inventing company licenses the software IP to one or more software vendors. These vendors then bear the responsibility for commercialising the software and selling it to end users. The vendors also manage all support and maintenance. Vendors typically pay an upfront fee and ongoing royalties to the inventing company. This model also leverages the existing customer base of the vendors and creates a one-to-one-to-many sales channel. Vendors are often able to integrate the software IP into existing product suites and begin generating revenue immediately. Under distribution agreements the inventing company usually gives up some pricing control and control over which end users can purchase the software.

As a company considers licensing strategies for software IP, it should consider the company's risk profile and time horizon as well as the nuances of the particular software before deciding on an approach. Our experience is that the bulk of software commercialisation agreements use the distribution model. Therefore, this article's examples assume distribution licences (for more information on IP spinouts, please see "Another arrow in the IP quiver", by Jim Huston in the February/March 2007 issue of *IAM*).

Benefits of software commercialisation

There are many benefits to including software IP commercialisation as part of a company's overall IP strategy:

- Generate revenue from licences. Typical

software commercialisation agreements under the distribution model include an upfront fee to be paid to the inventing organisation, plus ongoing royalties of 20% to 50%.

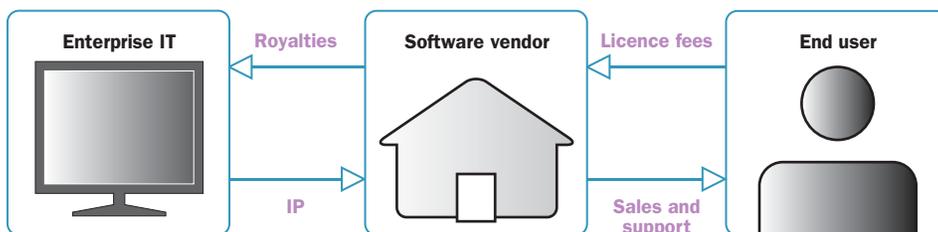
- Cut costs. When companies develop software for internal use they usually continue to spend money upgrading and debugging the software. It is not unusual for these expenses to exceed US\$1 million a year for a mid-sized effort. Commercialisation agreements frequently include arrangements where a distribution licensee takes over day-to-day system management and upgrades for the inventing company. This allows the licensor to reallocate personnel currently dedicated to maintaining the software.
- Better software. The licensee will undoubtedly make improvements to the technology as it brings it to market. Inventors typically receive a free licence to these improvements.
- Psychological benefit to the information technology (IT) organisation. IT employees may be difficult to satisfy. They often cite non-monetary awards as the motivation for their work. Seeing a technology they developed brought to market can be a powerful motivator. Furthermore, it allows the chief information officer to show the value of her organisation – it's no longer only a cost centre.

Finding the best opportunities

Commercialising software built for internal use is beneficial, but discovering the company's internal software assets and determining which have commercial value can be difficult.

The first step to creating a software commercialisation practice is to discover what the company has developed. Unlike patents, few companies have a catalogue of all of their internal IT projects and technologies. Even if a company tracks its official IT projects many

Software distribution model



Case study of the distribution agreement model

Lockheed Martin Aeronautics Company, an US\$11 billion division of defence contractor Lockheed Martin, builds a range of military aircraft including the F-16, F-22 Raptor, F-117 Nighthawk and the Super Hercules. One of the critical components of the company's operations is the distribution of up-to-date technical manuals to maintenance crews around the world. Lockheed engineers created a publisher/viewer to allow technical manuals for the F-16 to be distributed electronically, allowing updates and additions to be instantly incorporated. In 2006 the company made a decision to streamline its operations and help identify opportunities to transform its publisher/viewer into a commercial product that would not only allow its engineers to focus on core activities, but also generate revenue for Lockheed.

Lockheed Martin licensed the software technology to Jouve Aviation Solutions, an LA-based aerospace software company. Lockheed Martin experienced many of the benefits common to software commercialisation agreements, including reduced expenses and the potential for royalty income. Jouve Aviation Solutions gained a new product with a use case and an entry into the public aviation sector.

valuable projects begin as unauthorised employee initiatives or skunkworks.

Companies that have a process for patent disclosure can adapt this process for software technology disclosures. The IP department can offer a form for IT employees to identify technologies they have developed. However, the questions for software disclosures are different from patent disclosures.

Collecting software disclosures may be time consuming, but the more difficult task is determining which technologies have value. Few IP organisations have the internal skill set to determine the commercial potential of software. However, IP organisations can do an initial screen of software disclosures by answering two questions:

- Why was the software developed? There are two key reasons companies build software internally. The first is if the company can save money by developing internally rather than buying an existing package. The second is that the company has a business problem that can be solved with software, but the company cannot find a vendor product that solves the problem. The latter reason is ideal for software commercialisation. It shows there's a need for the software, but no supply. The cost of the software development was justified based on the return to only one company. If one company is experiencing a problem then its peers are likely to be facing similar problems and will have a need for the software. For example, a Fortune 500 was overspending for contract workers and using an outdated paper-based process for managing these workers. It created a software solution to handle the problem. The company found that other large companies had the same difficulty managing contract workers. Since that time, a number of software companies have entered the market to sell solutions for contract worker management.
- How much did the software save the company (or generate in revenue)? The answer to this question will determine the magnitude of value to other end users and, therefore, the value to licensees.

If a software technology was developed because it was cheaper than buying an available product, or if the cost savings/revenue generation was low, the likelihood of successful commercialisation is low.

IP organisations sometimes focus on aspects of software that are not critical to

the outcome of commercialisation. Although these questions are good to ask, IP organisations should not exclude a technology from commercialisation efforts solely based on these aspects:

- Platform – many internal technologies are developed on antiquated or costly platforms, such as Cold Fusion. Most licensees prefer newer technologies, such as .Net. However, this is unlikely to be a deal breaker for a licensing transaction. The value of the underlying code is not critical. Once a technology is built in one platform it is relatively easy to port to another one.
- Quality of code – similar to the technology platform, the quality of software code is not typically a deal breaker for software vendors. Software vendors intend to invest in code changes, such as making hard-coded applications more flexible for use by other companies.
- Documentation – few applications built for internal use have extensive end user and developer documentation. Most licensees will want to create their own documentation using approved formats and protocols, so this isn't a major issue.

Overcoming pushback

IT departments may not be familiar with software commercialisation. As is typical with new ideas, IP organisations should expect to receive pushback about their efforts. Three topics that are often raised are open source, competitive advantage and resource requirements.

Open source

One concern of software commercialisation is licensing software that includes open source code. A software disclosure form should ask developers if the application includes open source code and to what extent.

If the technology is built on an open source platform then there is little to worry about. But applications that include significant integrated open source code can cause difficulties due to the various open source licences. Companies such as Black Duck and Palamida Inc offer products and services to screen software for open source components.

In our experience, software commercialisation efforts rarely run into open source issues. Fortune 500 companies are just beginning to embrace open source for development of internal applications. This issue may become more prevalent in the future.

Too important to license?

The question of whether a piece of IP is too critical to license to competitors is not new to IP organisations. Companies struggle with this question daily. Many progressive companies advertise that anything is licensable, whereas more conservative companies hold back IP that gives them a significant competitive advantage.

When it comes to software, it usually makes sense to license a technology even if it provides the company with competitive advantage. If a company has a truly great technology built for internal use, then its competitors are likely to be already aware of it and trying to replicate it (or paying an outside vendor to do so). In doing this, the competitor may invent a technology that is better than the original version. The original inventor can make sure competitors don't trump its technology, while extracting money from them at the same time, by commercialising its software.

IP organisations that frequently face this pushback from IT management on particular applications should just move on to other technologies that aren't as controversial. Non-industry specific applications, such as human resources and finance systems, will not face the same pushback.

Resource requirements

IT organisations frequently cite 100% utilisation of their employees and argue they don't have time to support software commercialisation efforts. In practice, IT staff will probably spend less than five hours on initial discussions with the IP organisation about the technology. If the IP organisation proceeds to market the technology for licensing, then IT staff can expect to spend 10 to 20 hours providing web demos and answering questions from potential licensees. Licensees understand these constraints and are often willing to view recorded demos of the technology.

If the technology is ultimately licensed, the licence agreement should include the amount of time the licensor will provide for the technology transfer. This is usually under 100 hours. The upfront licensing fee negotiated by the licensor can be used to offset the costs experienced by the IT organisation for the technology transfer.

Marketing efforts

Once an IP organisation determines technologies that appear to have commercial value and decides to license these to software vendors, the process becomes, by definition, a sales effort. Sales has a

somewhat negative connotation within many IP circles. But good IP organisations look at all licensing activity as a sales operation.

In this case the IP organisation is selling a number of benefits to a software company. The key is to offer a solution for the pain points software vendors face when trying to grow. Software companies have a few ways to grow revenue:

- Sell new products to existing customers (also known as selling to the installed base).
- Sell existing products to new customers.
- Acquire or partner with another company.

A software commercialisation opportunity is yet another way a software company can grow. Many strategic software companies will understand the inherent value of licensing proven software technologies as opposed to the other three growth options:

- Low risk. Building new products is inherently risky. Licensing proven products reduces risk and capital outlays. Licensees typically pay a small upfront fee and a percentage of revenue. If the product is unsuccessful, they pay little out of pocket.
- Faster time to market. Developing new products also takes time. It is not unusual for a medium-size software product to take a year from conception until launch.
- Proven ROI and reference customers. The hardest part of selling software is getting the first customer for the product. By licensing an existing solution, software companies can reference an existing use case and return on investment model as well as refer to a company that is already using the technology.

To that end, IP organisations must understand that lending their names as a reference to the software is extremely valuable to the licensee. This does not mean relinquishing control of the brand name, but setting boundaries and expectations around use of the reference. Keep in mind that the more rights you extend to the licensee the better their results and, naturally, the more revenue for the inventing company.

A component of success

If an IP organisation is to meet its charter, it must pay attention to non-patented intellectual property. Increasingly, they have an opportunity to exploit and commercialise existing intellectual property that otherwise would lie dormant. Commercialising software IP should be an important component of a successful IP strategy. ■

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