

## The Growth Of Open Source

A Look At How Companies Are Utilizing Open Source Software In Their Business Models

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The world has seen an explosion of open source software in recent years. Its combination of little to no cost, rapid feature development, and open philosophy has led to the creation of huge user communities. More and more users are turning to free software as an alternative to commercial software, but the fact that it is free has prompted a very important question: How can the open source software model be utilized to sustain economic growth? Craig Mundie, a Senior Vice President at Microsoft, does not think it can. He writes:

“When comparing the commercial software model to the open-source software model, look carefully at the business plans and licensing structures that form their foundations. This comparison leads to the conclusion that the commercial software model *alone* has the capacity for sustaining real economic growth” (as cited in Van den Bergh, 2009).

There is no denying the fact that it is difficult to generate revenue from open source software. However, a look at the software market reveals the fact that many companies are finding ways to incorporate aspects of both open source and commercial software into their business models, while some companies are even finding ways to profit from open source software alone.

### **Commercial Exploitation of Open Source Software**

Gardler (2009) explains that there are essentially four broad types of company who can use open source software to generate revenue. The first type is the service company, which makes its software open source in order to spread their software as widely as possible. This creates a larger market for their paid, service products, such as support,

training, customization, search engines, ecommerce operations, and more. Service companies do not rely on making a profit from selling the software itself.

The second type of company is the hardware company. Like service companies, they make their software open source in order to create as large a market as possible for their paid products. However, instead of selling services, they are selling hardware such as database servers, printers, and cell phones. Hardware companies may also make their software open source to allow other manufacturers to develop the software, which ultimately leads to lower product development costs that are shared between multiple companies.

The third and fourth types of companies are software companies. One type of software company utilizes open source software and embeds it within their proprietary products, which helps to reduce costs. This is often referred to as open-core licensing. The other type of software company uses a dual licensing model that allows them to release an open source version of their product while selling another version of their product with a proprietary license. Unlike service and hardware companies, software companies rely more directly on open source software for profit.

Overall, it seems like there are only four business models for companies who use open source, but the reality is much more complex. Each of the business models for the company types consist of different development models, vendor licensing strategies (e.g. open-core licensing, dual licensing), and primary revenue triggers (e.g. commercial licensing, subscription, support services, other products). The 451 Group, an independent technology-industry analyst company, analyzed the business strategies of 114 open source-related vendors in an attempt to find out just how vendors generate revenue from open

source software. In their study, they found that the 114 vendors they analyzed are utilizing over 80 different business models that combine the development models, vendor licensing strategies, and primary revenue triggers in different ways (Aslett, 2008). There is certainly no shortage of methods by which open source is being used to help generate revenue. The ways in which vendors are doing this will be explored in the following sections.

### **Open Source is not a Business Model**

Stuart Cohen (2008), CEO of Collaborative Software Initiative, blatantly declared in BusinessWeek that the open source business model is broken. This, however, is a bit misleading because open source is *not* a business model. “Open source is a business tactic, not a business model. Open source is not a market in and of itself, nor is it a vertical segment of the market. Open source is a software development and/or distribution model that is enabled by a licensing tactic” (as cited in Aslett, 2008). What Cohen is actually talking about is the strategy of many companies to distribute their software for free and then charge customers for support. It would be nice if this strategy actually generated enough revenue, but the sad reality is that it does not. While some organizations will invest in support for open source software, many will choose not to, or they will pay for it only until they become self-sufficient, at which point they no longer need it (Asay, 2009a).

The 451 Group also looked into how the vendors they analyzed are using ad hoc support services. It is commonly thought that open source vendors are reliant on support services for revenue, but this is not in fact the case. The study found that while nearly 70% of the vendors assessed provide ad hoc support services, less than 8% of them rely on the support services as their primary source of revenue (Aslett, 2008).

## **It's About the Value**

It becomes apparent that open source companies must provide something of more substantial value than support services in order to survive. Red Hat, an open source company that distributes the Linux operating system, is a primary example of how this strategy can be successful. They now pull in more than \$100 million per year in revenues. What makes this even more impressive is that they are a “pure” open source software company; that is, they do not include proprietary add-on value (Asay, 2009a). Jim Whitehurst, the CEO of Red Hat, believes that “it’s critical that open-source companies figure out what value they can provide the enterprise, value beyond simply support” (as cited in Asay, 2008).

So what kind of non-proprietary value is Red Hat adding? One of the things they are doing is investing in Linux development to ensure that advances are being made and that it remains competitive and secure. However, they do not own any of the code, so they cannot sell the actual software. Instead, they sell a subscription to Red Hat Enterprise Linux (RHEL). This subscription goes beyond simple support. According to Red Hat’s “Value of a Red Hat Subscription” fact sheet (2005), a subscription includes:

- Thoroughly tested and quality-controlled technology.
- A large and growing ecosystem of certified software applications and system hardware.
- Red Hat Network for fast and easy deployment of software and updates.
- New releases as they become available over the life of the subscription.

- The latest features, bug fixes, security errata, and new hardware and software support.
- Flexibility—subscriptions are transferable, allowing you to upgrade your system hardware with no penalty.
- A library of tips, best practices, troubleshooting advice, and the latest technical information about Red Hat Enterprise Linux, updated daily by Red Hat Certified Engineers.

Subscribers are paying for more than just support. They are paying for the value that comes with enhanced performance and security, streamlined systems management and maintenance, unlimited access to service and support, and lower deployment risk. This leads to stability, simplicity, and peace of mind for the consumer, exactly what they want.

### **The Need for Proprietary Add-On Value**

Red Hat's business model seems like a simple one: figure out what is valuable to the consumer and deliver it. However, the reality is that this much easier said than done. There are not many open source companies that can replicate the success of Red Hat's business model. "The fact is there are few vendors generating revenue from open source software that are following a pure open source approach when it comes to developing all of their code in the open and licensing all of their software under open source licenses" (Aslett, 2008).

Open source is practically everywhere nowadays, and it is a highly useful development and distribution model, but in the end, it is simply not big business. It is free after all. But the fact that it is not big business is not necessarily a bad thing. Open source

does not have to *directly* generate money for companies in order for it to be valuable. Rather, companies are increasingly finding new ways to generate revenue with the *help* of open source software (Asay, 2009b).

One of the ways they are doing this is by including proprietary add-on value. This can include both software and hardware. A great example of this is MySQL, an open source relational database management system that has achieved extreme popularity around the world. MySQL AB, the Swedish-based organization that developed MySQL, utilized a dual licensing model in order to generate revenue. A Community Edition of MySQL is available for free under the open source GPL license, but there is also a version of MySQL that is sold under a commercial license, allowing customers to use the product without being covered by GPL. This can have a number of advantages for them. For example, customers can include MySQL in their own products for resale while keeping their source code closed. The commercial license, combined with some support services, is one of the primary ways that MySQL AB created revenue (Chang et al.).

In 2008, Sun Microsystems purchased MySQL for a whopping \$1 billion. Prior to the acquisition, MySQL was able to generate \$94 million in yearly revenue with its dual licensing model (Asay, 2009a). That is a lot of money for a product that can essentially be downloaded for free! There is, however, a notable difference between MySQL's yearly revenue and the price that Sun Microsystems paid, which suggests that in order for Sun to make the purchase worthwhile, they will have to add some additional value.

This is where the need for proprietary hardware comes in. "As the number of open source installations expands, so will the demand for hardware on which it can run. [...] Companies are pioneering a new business model, one where revenue does not comes

directly from software, but rather from hardware purpose built for the application” (Van den Bergh, 2009). This business model is one that Sun Microsystems is using to add proprietary value. MySQL boasts over 12 million active installations, and this in turn requires billions of dollars of hardware to run. Thus, while Sun Microsystems can continue to make money from the dual licensing model, it has also created a very large market for hardware and services (Van den Bergh, 2009).

Google is another example of an open source company—one of the world’s largest—that must include proprietary add-on value in order to generate revenue. They know that it is tough to monetize open source software directly, so they use open source to direct prospective customers to its other proprietary services, like Google Search or Google Apps. Google makes the bulk of its money off advertising. They are able to incorporate advertisements and other behind-the-scenes advertising methods into their proprietary services, ensuring that as many users as possible encounter them, which in-turn increases their profit (Asay, 2009a).

Because Google is a company that specializes in data, they do not necessarily have to invest directly into their own open source products. They are also reaching out to other open source software products. One of the most blatant examples of this is with Firefox. Firefox is an open source web browser whose popularity has exploded in recent years. Known for its usability, speed, high level of customization, and rapid development, more and more users are flocking to this open source browser and abandoning their defaults (Internet Explorer in the case of Windows, and Safari in the case of Mac OS X). Recognizing this popularity, Google actually pays Mozilla, the organization behind Firefox, a substantial amount of money to set Google as the default search engine in Firefox’s search bar. In 2006,



Google paid around \$57 million, which was 85% of Mozilla's total revenue for the year. This may seem like an absurdly high amount, but the fact is that Google is generating more money than it pays as a result of all the searches that Firefox users are performing (Kincaid, 2008).

### **Proprietary and Open Source Software are not Mutually Exclusive**

The need to add proprietary value to open source software has become obvious. Most vendors simply cannot generate substantial revenue with a purely open source approach, Red Hat being one of the obvious exceptions here. Aslett (2008) reports that the study by the 451 Group provides some very interesting findings as to what open source vendors are doing in an effort to generate a profit:

- The majority of open source vendors utilize some form of commercial licensing to distribute, or generate revenue from, open source software.
- Half of the vendors assessed are using hybrid development models – combining code developed via open source projects with software developed out-of-sight of open source project members.
- Vendors using hybrid development and licensing models are balancing higher development and marketing costs with the ability to increase revenue-generation opportunities from commercially licensed software.
- The license used for an open source project (reciprocal or permissive) has a strong influence on development, vendor licensing and revenue-generation strategies.

Sun Microsystem's, as previously discussed, falls into the category of vendors utilizing a hybrid development and licensing model, with the dual licensing of MySQL and the need for proprietary hardware.

Another interesting example of a vendor that uses a hybrid development and licensing model is XandrOS, which was created in 2001 with the goal of adding value to Desktop Linux by making an easy-to-use version of it. Originally, XandrOS used a dual licensing model like MySQL, generating the bulk of its revenues by selling its commercially licensed product to businesses and educational customers while still releasing a free, open source version. However, in 2006 XandrOS stopped releasing the open source version and has become a closed source project, distributing only the commercial product. The commercial version contains both proprietary software mixed with some GPL software, a great example of hybrid development and how a company can take advantage of open source to help develop a product (Chang et al.).

A move like this—from open source and dual licensing to closed source—is likely to anger many people because the end result is capitalizing on the free work that was contributed to the once open source project. Nevertheless, it is a prime example of how the open source software model is helping companies develop their product into something that allows them to sustain economic growth.

### **Monster Acquisitions Showing the Value of Open Source Projects**

The economic value of open source projects has really been showcased by the major acquisitions that have taken place in recent years. MySQL, which was originally released in 1995, became so popular and had so much value added to it through open source

development that it was purchased by Sun Microsystems in 2008 for a gargantuan \$1 billion. A similar example is XenSource, which developed an open source hypervisor called Xen. This product “allows a single machine, typically a server, to simultaneously host multiple different operating systems and to share resources between them, providing resource guarantees to each virtual server – a process known as virtualization” (Chang et al.). Originally released in 2003, it was purchased by Citrix only four years later for a massive \$500 million (Kerner, 2007). A third example is Zimbra, an open source enterprise vendor that develops the Zimbra Collaboration Suite. In 2007, Yahoo! acquired Zimbra for an impressive \$350 million (Kirkpatrick, 2007).

These companies realized huge returns on their investment, and they were able to do this mainly because they are open source. Incredible value can be created through the power of the open source development model. It is made obvious through these acquisitions that purchasing companies see the value in these open source projects and recognize the opportunity they present to generate more revenue.

### **Some More Numbers**

Despite still being relatively new to the enterprise world, open source software shows signs of rapid revenue growth. One example is in the area of Database Management Systems. Open source vendor revenue grew 36.3 percent to \$140 million from 2005 to 2006. In comparison, overall market growth was at 12.2 percent. Additionally, the growth in open source vendor revenue is expected to continue at more than 40 percent during the next five years, exceeding \$1 billion by 2012. Overall revenue from open source software is

small compared to that of commercial software, but its growth rate is much faster. This holds positive implications for the future (Van den Bergh, 2009).

### **Open Source is Accelerating**

It has hopefully become clear that open source plays an important role in the business model of many companies around the world. In some cases, namely Red Hat, a pure open source approach is generating huge revenues. Unfortunately, this is difficult approach to take for many companies. The 451 Group finds that “there is very little money being made out of open source software that doesn’t involve proprietary software and services” (as cited in Aslett, 2008). So does this mean that Mundie is right in saying that the commercial software model alone has the capacity to sustain real economic growth?

Not necessarily. The key to generating revenue with open source software is to add value to the software. Red Hat may have devised an ingenious way to do this while remaining completely open, but this is a rare exception. In most cases, value must be added through proprietary software and services, a strategy that is being used by an increasing number of software companies through the combination of different development models, vendor licensing strategies, and primary revenue triggers.

As a result, the line between open source software and proprietary software is starting to blur, with more and more open source software being released alongside proprietary software, or being embedded in broader proprietary hardware and software products. Some may dislike the fact that so much open source software is being used to generate revenue through commercially licensed products. However, others will view this in a more positive light, appreciating the fact that the principles of open source

development and distribution are being more widely adopted (Aslett, 2008). In fact, Brian Prentice, a Research Vice President with Gartner Technology Business Research Insight, claims that eventually, “all software companies will, to some extent, be an open source company” (as cited in Van den Bergh, 2009).

The closed source software model undoubtedly plays an important role when it comes to sustaining economic growth, but it is certainly not alone. With its widespread adoption and rapid growth, the future is bright for open source.

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