OPEN SOURCE SOFTWARE BUSINESS STRATEGY

Products such as Linux and the Apache Web Server have shown that open source software can be technically equal or superior to proprietary software. These products have also been successful in competing for market share against proprietary solutions. Companies like Red Hat have coupled open source software with commercially viable business strategies. This paper examines ways you can make a business out of open-source software.

Open source software has joined the mainstream. According to Forrester Research, as of early 2001, 56% of the IT managers of the Global 2500 companies are using open source software and 6% more planned to use it in the future. In several categories, open source software is now a major player. For example, the Apache Web Server is the #1 web server (Microsoft's IIS is a distant second). The Linux operating system is the #2 most popular operating system (after Microsoft Windows) and may become the most popular operating system for servers in the next several years.

What Is Open Source Software

Technically, "open source" means software that is supplied with the original code in which it was written allowing others to view, modify, adapt, and improve this code. This can include software that cannot be redistributed without explicit permission (and often a payment) to the software owner. Most people now define "open source" more narrowly to as software with the following further characteristics:

- It is protected by copyright, but not patents.

- It has a "copy-left" license (GNU license or similar), which states that it can be redistributed for no charge, but the source code and modifications must be licensed out under the same terms that it was licensed in. Sample licenses are available at http://www.opensource.org. Please note, that it is acceptable to sell commercial software in a bundle with this "open source" software.

Open source software is not the same as "shareware" or "freeware" which often does not come with source code and has zero cost as its defining characteristic. Open source software, may or may not be zero cost.

The benefit of open source software, is that when people are allowed to read, distribute, and modify the source code for a piece of software, the software evolves and gets better.

The Origins of the Open Source Revolution

The concept of open source software evolved during the late 1980s and early 1990s. Richard Stallman, founder of the Free Software Foundation, was one pioneer (see http://www.gnu.org). Stallman asserted that software should be treated the way academic research is treated--the source code (knowledge) should be available to others just like academic papers circulate freely. Science advances because knowledge is shared, subject to peer review, and built on by others. The concept is that source code should be equally free (as in freedom not necessarily as in free beer). Among Stallman's early successes were the GNU Emacs editor and the GNU C compiler, which continue to be popular in their categories. Stallman created the GNU license and the concept of "copy left" to ensure these products were open to others to improve. The GNU license is the basis for most open source licenses.

Another major development was Linux, which was developed by a large, geographically dispersed team of unpaid programmers sharing code over the internet, coordinated by Linus Torvalds. This group created a an operating system that was more robust, elegant and error-free than Unix or Microsoft Windows and they created it in much less time and cost. This further proved the power of this software development model. *The Cathedral and the Bazaar* (see conclusion) gives an excellent account of how and why this development model works

Around the same time, a group of web administrators took some freely-available code for a web server and patched it to create a "patchy web server" that it became named "Apache" Web Server, and this became the best web server available on the internet. Although Microsoft has tried to displace this by distributing its IIS Web Server at no cost as part of the Windows operating system, Apache continues to be more popular, helping to substantiate the benefits of the open cooperative software development.

Since in English, "free" also means zero cost (free as in beer), the movement adopted the term "open source" to help clarify that this category of software can be sold, as long as programmers have the "freedom" to view, modify, and redistribute the product along with its source code.

Making Money From Open Source Software

In the late 1990s companies started working out how to turn the superior reliability and development speed of shared open software development into a business

proposition. The following are some of the most popular business ways companies are doing this:

- **Sell service and support of open source software that your company does not control**. This is what companies like Red Hat and Suse (Novell) do with Linux, which is controlled by Linus Torvalds and his followers. See http://www.redhat.com and http://www.suse.com.

- Create **open source software your firm controls, and sell service, support, and commercial versions** related to this software. Examples are: JBoss, the #3 Java-based Web Application Server (http://www.jboss.com); OpenOffice (StarOffice), Sun Microsystems' alternative to Microsoft Office (http://www.openoffice.org); Sendmail, the #1 F500 email system (http://www.sendmail.com); and mySQL, a database that competes against Oracle and IBM's DB2 (http://www.mysql.com).

- **Sell a product or service that uses open source software as an element of a total offering**. This is what companies do when they make commercial web applications that use PHP, run on Linux, are written in Perl or provide web services running on the Apache Web Server.

- Provide **open source software for hardware you sell**. For example, companies that make computer printers sometimes provide the source code for their printer drivers so that experienced programmers can adapt these printer drivers to fit operating systems or perform functions that the company is not interested in writing themselves. As a result of having the drivers available as open source, the company sells more printers.

- **Open source a software product to reduce support costs at the end of life**. This is often what companies do to improve their reputation and reduce their support costs for products where they can no longer make revenues.

- Provide **dual licensing** for a software product. This is actually how mySQL is marketed (see above). Companies can either use the version based on an open source license for free or can pay to have a license that allows them to sell a modified version of the database as part of their total product offering.

- **Build an ecosystem**. For example Palm has successfully shared the source code of their PDAs to make it easier for other companies to write software that works with this product, making the overall offering more attractive.

Resources Available with Open Source

It is worth pointing out that there are a lot of development and marketing opportunities available when a company chooses to go down the open source route that are not available if you keep your software proprietary. These can improve product quality, reduce development cost or reduce marketing cost. Examples are:

- Quality control and improvement. By providing your source code, others can review this and suggest improvements and give these back to you.

- New applications. By providing your source code, others can adapt this to applications you never thought of.

- Easy distribution. There are many websites (such as http://www.freshmeat.net, http://www.sourceforge.org, etc) that will freely publicize your open source product.

An Example

I currently have Surftree (http://www.surftree.com), which is a proprietary program that is available for free (with advertising) or for a nominal fee without advertising. To make it easier for people to develop applications for this product, I am building a community to share code. These code samples and full applications will be available as open source under a GNU license or equivalent.

Conclusion

This paper is an overview. Feel free to give me comments to help improve this. Here are three references to let you further explore this topic:

- DiBona, Chris, et al. *Open Sources: Voices From the Open Source Revolution.* O'Reilly. ©1999.

- Fink, Martin. *The Business and Economics of Linux and Open Source.* Prentice Hall. ©2003.

- Raymond, Eric S. *The Cathedral and the Bazaar.* O'Reilly. ©1998-2001. http://www.catb.org/~esr/

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About the Author

Bert Vermeulen owns Corp21, a company that supports, incubates and advises businesses, entrepreneurs, and inventors around the world. For more information, see http://www.corp21.com.