OPEN vs. *CLOSED SOURCE*

Is Open-Source software a trend or a fad? Let's first define what is meant by *open source* and *closed source* and how they differ.

There are several models or approaches for developing software applications. The most common model is *closed source*, better known as commercial software.

Closed-Source Models

Closed-source programs are owned by someone (or some organization) and distributed through a variety of retail channels including the owner's website. If the program is in the form of shareware, a fully functional version of the program can be installed and run. There may be a limited period of time after which the software will disable itself.

The concept of shareware started out as a way for independent software developers to distribute their programs and make some money off of their efforts. As the concept gained acceptance and as some of these developers became successful, some **software development companies adopted the idea**.

Another approach is to create a demonstration (demo) version of the software. Demo versions are usually designed to expire after some period of time and/or may have limited features to prevent full use of the software. Demos are usually distributed by commercial enterprises.

In either case, **the source code is not usually included**. The buyer pays for the right to use the program but does not own it. In some cases the software is actually free, ie. freeware, which means the author is not seeking compensation for his/her efforts but retains exclusive rights to the source code.

Open-Source Models

True-open-source development requires that a community of software engineers band together to work on the software. The idea is that more minds create better software. Open-source programs always include source code for those interested in peering into how the program does what it does and possibly contributing to the development effort.

The software and source code are available without cost or obligation (yes, really!). Open-source models vary by source-code-license terms. Source-code licensing only matters if you intend to modify or reuse the source code in any way. These issues are not relevant to most of us.

The topic of source-code licensing is fairly detailed and complex. There are several widely used licenses placing restrictions on how the source code may be used. These restrictions are not pertinent to this article but if you're interested in learning more there is an in-depth article at the Free Software Foundation.

There has been increasing focus on the issue of open source over the last few years largely due to the lawsuits involving Microsoft products. Microsoft Windows, a closed-source, operating system, has come under pressure from Linux, an open source one. Similarly, Microsoft Office, a closed-source, office productivity suite, has been under fire from OpenOffice, an open source one (which is the foundation for Sun's StarOffice).

Do open-source developers innovate?

An interesting question is whether or not open source provides innovative ideas. If open source is to have staying power, it must generate new ideas that improve software programs not just copy someone else's work. Historically, **the open-source communities have improved and extended existing concepts**.

For example, The Apache Foundation was the first to implement the concept of virtual web hosts (multiple websites hosted on a single computer). Linux was the first operating system to run on everything from a wrist watch to a mainframe. StarOffice was the first office suite to run on any desktop platform (PC, Mac, Unix workstation, etc.). How can open communities of software developers achieve such feats? It's simple, they aren't burdened by the need to generate revenue or protect market share. And, many minds can solve difficult problems with relative ease.

What about quality, reliability and security?

The characteristics of software vary widely whether developed using an open or closed model. Many open-source packages are rock solid and better than their closed-source counterparts. Examples include the Apache web server, Linux operating system , SendMail email server, and MySQL database. At the opposite extreme, there are open-source projects that were abandoned before reaching maturity.

Any enterprise-wide software selection needs to be carried out using discipline and research. With closed source, the watch words are "buyer beware". With open source, they are "user beware".

So what drives these open-source communities and how does anyone make money?

Many open-source contributors conduct a labor of love though some receive compensation through companies that advocate open-source tools such as Sun, IBM, HP, Red Hat, etc. For many software developers, contributing to open source software is a personally rewarding experience and an opportunity to learn new techniques and tools. Such projects can be found at SourceForge, The Mozilla Foundation or The Apache Foundation.

This leaves open the question of how major firms like IBM, Sun and Red Hat can "sell" open-source software. You can buy Linux, StarOffice and other open-source programs from such firms. Well, not really. You are buying the **packaging, documentation, technical support, convenience and, perhaps some value-added features** but the open-source software is free and can always be downloaded from the project website. If anyone tries to sell you open-source software and claims it cannot be downloaded for free, they're not being completely honest.

Back to the original question, trend or fad? Microsoft is sending it's lawyers after open source. A sure sign that it's worried. IBM and Sun are pouring millions of dollars into open source. A sure sign that they find it easier to switch than fight. Open source is here to stay.

We're not suggesting that you sell all your software-company stocks. There are many ways that software companies can make money by leveraging open source. Take a look at Apple Computer. They tossed their operating system, embraced the FreeBSD open-source project, added many valuable features and, created Mac OS X. It's worth every penny they charge for it!