

Open Source – Who Cares and Why?

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<http://lily.garden.et-test.psu.edu/~alw/whyopen.pdf>

Agenda

- What is Open Source?
- What is it being used for?
- Who is using Open Source?
- Open Source Myths?
- What does this mean?

What is Open Source?

Open Source Is

- Application, program, or utility where
 - The computer instructions (code, source) are provided with the program
 - Licensed in such a way that it can be improved, enhanced, or localized freely
 - Isn't necessarily zero cost
- Popular revolution - some good work being done
- More lengthy definition at
 - <http://www.opensource.org>

Open Source Initiative

- The Open Source Initiative is now a California public benefit (not-for-profit) corporation
- Prompted by Netscape source code availability press release:
 - <http://wp.netscape.com/newsref/pr/newsrelease558.html>
- <http://www.opensource.org/>

It's Free, Right?

- Lots of software is free to download
- Not necessarily cost-free
 - Need to have programmers to support yourself
 - Need to have infrastructure to participate in development
- Can be resold by vendors who add value
- May need to pay for support from a vendor
- Some free software isn't open source

If You Want Free Software

- Free Software Foundation
 - Open Source and Free
 - <http://www.fsf.org>

New Idea?

- No, our operating systems used to be source maintained
 - HASP
 - CMS
- We were familiar with source management
- SHARE has a history of sharing improvements in this area (mods)
- Perhaps Open Source is a new opportunity for us

Circle of Life?

- Twenty-four years ago our favorite vendor
 - extolled the value of Object Code Only
 - control your system programmers
 - reduce maintenance cost
 - improve security and reliability
- Now Open Source is in (again)
 - control your destiny
 - share development effort
 - match your business needs
 - support “Open Standards”

How is it Developed?

- Several formal projects (Foundries)
- What's a Foundry?
 - Foundries provide a place for end-users, developers and other interested parties to communicate, discuss new ideas, and learn about new software and technologies which may benefit them.
 - Formalizes code development
 - Use source management system
 - Current Versions System (and others)
 - <http://www.gnu.org/software/cvs/>

Another View on Open

- Jonathan Schwartz's Blog (an interesting view from Sun)

- Only the customer can define "open"

- http://blogs.sun.com/roller/page/jonathan/20040808#rewriting_history_and_vocabulary

What Is It Used For?

- Operating Systems
- Web Servers
- Office Suites
- Course Management
- Web Content Management
- Languages
- Applications
- Database
- . . .

Open Source Examples

- Sendmail and kPOP for email
- Apache for most web services
- Open Office and Mozilla
- Linux is back end server for
 - HPC Clusters <http://gears.aset.psu.edu/lionxlpress.shtml>
 - Shibboleth <http://et.aset.psu.edu/initiatives/shibboleth/>
(Shibboleth itself is an open source project)
 - <http://shibboleth.internet2.edu/>
 - Napster cache servers <http://live.psu.edu/story/4584>
 - WebEvent used for calendaring <http://www.sa.psu.edu/webevent/>
- PSU Open Source Mirror
 - <http://carroll.aset.psu.edu>

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LINUX DISTRIBUTIONS

Aurora SPARC Linux
Debian GNU/Linux
Fedora Project
Gentoo Linux
Knoppix
Mandrake Linux
RedHat Linux
Slackware Linux
Sorcerer
SUSE Linux
Yellow Dog Linux

BSD DISTRIBUTIONS

FreeBSD
NetBSD
OpenBSD

SOFTWARE ARCHIVES

CPAN - The Comprehensive Perl Archive Network
CTAN - The Comprehensive TeX Archive Network
SGIfreeware
Sunfreeware



SOFTWARE PROJECTS

Apache
Cygwin
Fink
GNOME Project
GNU Project
KDE
Mozilla
OpenOffice
XFree86

Open Source Products

- Mozilla (also Firefox & Thunderbird)

- <http://www.mozilla.org/>

- The Gimp

- <http://www.gimp.org/>

- OpenOffice

- <http://www.openoffice.org/>

- Apache

- <http://www.apache.org/>

More Open Source



Python



<http://www.python.org>



Rexx



<http://sourceforge.net/projects/regina-rexx/>



Fortran (look at “Free Software - The F Compiler”)



<http://www.fortran.com/>



Not exactly open source, but it is free



Perl



<http://www.perl.com/>

How to Find Open Source

- Open Source Development: SourceForge
 - <http://sourceforge.net>
- UNIX and cross platform: FreshMeat
 - <http://freshmeat.net>
- For Mac: Apple Darwin Developer
 - <http://developer.apple.com/darwin/>
- For Mac: Open Source Directory
 - http://www.macdevcenter.com/pub/q/mac_os_directory
- Find UNIX open source for Mac: The Fink Project (will need Xcode Tools)
 - <http://fink.sourceforge.net/>
 - GUI for Fink: <http://sourceforge.net/projects/finkcommander/>
- Free Software: <http://www.fsf.org/>

Who Uses Open
Source?

- You probably already do (without knowing it)
- PSU ITS does in many enterprise applications
- Software distributed on free student software CD-ROM
- Linux Labs for students and faculty

University Initiatives

- Sakai Project - develop open source course management system
- Chandler - develop open source personal information management
- LionShare - open source peer to peer authenticated sharing of assets
 - <http://lionshare.its.psu.edu/main/>
- Open Source Portfolio Initiative (OSPI)
 - <http://www.theospi.org/>

Countries Favoring Open Source

- Korea, China and Japan form open source collaboration (ZDnet, April 2004)
 - <http://news.zdnet.co.uk/software/linuxunix/0,39020390,39150645,00.htm>
- Brazil favors open source (Wired News, November 2003)
 - <http://www.wired.com/news/infostructure/0,1377,61257,00.html>
- France looking at open source (Computerworld, April 2004)
 - <http://www.computerworld.com/softwaretopics/software/story/0,10801,93946,00.html>
- Asian Open Source Center
 - <http://www.asiaosc.org/index.php>

Companies Whose Only Business is Open Source

- 📌 JBoss - federation dedicated to open source support

- 📌 <http://www.jboss.org/index.html>

- 📌 Compiere: ERP software

- 📌 <http://www.compiere.org>

- 📌 The Apache Software Foundation

- 📌 <http://www.apache.org/>

- 📌 Support Services for Open Source?

- 📌 <http://www.findopensourceupport.com/>

Products / Companies

- Zope (content management product)
 - <http://www.zope.com>
- Chandler: Personal Information Manager (PIM), integrating calendar, email, contact management, task management, notes, and instant messaging functions
 - <http://www.osafoundation.org/>
- Sakai Project: Course Management
 - <http://www.sakaiproject.org/>

IBM

- AIX toolbox for Linux Applications

- <http://www-1.ibm.com/servers/aix/products/aixos/linux/>

- Open AFS

- <http://www.openafs.org>

- Mod_Rexx brings the full power of the REXX language processor of your choice to the Apache Web page developer

- <http://www-124.ibm.com/developerworks/projects/modrexx>

- Explicit Multicast (XCAST) is a new form of IP multicast

- <http://www-124.ibm.com/developerworks/projects/xcast>

- Use the ExcelAccessor bean suite to access and modify the contents of a worksheet

- <http://www.alphaworks.ibm.com/alphabeans/excelaccessor/>

- <http://www-136.ibm.com/developerworks/opensource/index.html>

Sun

- <http://SunSource.net>
- Open Source Solaris SOD
- Open Office
- Java Desktop Integration Components
- Grid Engine

HP

- HP is hosting a number of open source software projects using SourceForge.
 - <http://opensource.hp.com/>
- DSpace is a groundbreaking digital library system to capture, store, index, preserve, and redistribute the intellectual output .
 - <http://www.dspace.org/>
- Handheld and wearable computers.
 - <http://www.handhelds.org/geeklog/index.php>
- Solutions for printing with hp inkjet printers in Linux
 - <http://hpinkjet.sourceforge.net/>

Intel

Open Source Projects

 <http://www.intel.com/cd/ids/developer/asmo-na/eng/52779.htm>

Open Source Computer Vision Library


 <http://www.intel.com/research/mrl/research/opencv/index.htm>

Novell

- Bought Suse Linux
- Now have caught the Open Source bug
 - MySQL for Netware
 - Apache for Netware
 - Perl for Netware
 - Tomcat for Netware
 - ...
- <http://developer.novell.com/ndk/qstart/opensource.htm>

Apple

Open source strategy

 <http://www.apple.com/opensource/>

Higher education initiatives

 <http://www.apple.com/education/hed/opensource/>

OS X new features

 <http://www.apple.com/macosx/newfeatures/opensourceandunix.html>

OS X Server features

 <http://www.apple.com/macosx/newfeatures/opensourceandunix.html>

Open Source Myths?

📌 CIO Magazine, March 1, 2004

- 📌 <http://www.cio.com/archive/030104/open.html>
- 📌 The Attraction is the Price Tag
- 📌 The Savings Aren't Real
- 📌 There's No Support
- 📌 It's A Legal Minefield
- 📌 Not Suitable for Mission Critical Applications
- 📌 Linux Not Ready for Desktop

Attraction is Price Tag

- Not!
 - companies willing to pay
- Real reasons
 - improved performance
 - software does what it claims
 - fewer failures
- Would not use Open Source if more expensive
- Would not use Open Source if not equal to or better

Savings Aren't Real

- In spite of additional costs of training, support and maintenance
 - avoid “vendor churn” (required to upgrade)
 - most report net savings
- Sabre Holdings example
 - use commodity hardware for shopping applications
 - “zero marginal cost of scale because open source doesn't require additional licenses as an installation grows”

No Support

- Free support can be confusing
 - who to call
 - no one source
 - multiple answers
- Even so it can be better
 - not tied to one vendor
 - examples of bad support
 - no support for not-current
 - like access to developer
 - turn-around tends to be quick

Legal Minefield

- Problem: In spite of open licenses, do I really have legal right to this program?
- Some vendors will indemnify (JBoss, RedHat, HP, Novell, ...)
- Worth the risk - not show stopper
- Some truth here (or at least in the EU - problems with EU patent law and Munich Linux plans)
 - <http://www.theinquirer.net/?article=17548>
 - http://www.theregister.co.uk/2003/06/29/open_source_prepares_to_kiss/
 - <http://www.techweb.com/wire/story/TWB20040730S0001>
- Are we too worried about patent threats?
 - <http://trends.newsforge.com/trends/04/07/22/201217.shtml>

Not Mission Critical

- Banking example: Banca Popolare de Milano
 - critical legacy Cobol application (90 million lines)
 - used Websphere on mainframe Linux to interface
 - resulted in common browser interface to all services

Not Ready for Desktop






- “Linux Desktop” gaining acceptance
 - thin client accessing servers
 - provides common set of office tools built in
 - less expensive than a full blown PC with OS
 - easier to manage

Bottom Line

- “It’s not a technology issue; it’s a business issue to do with externalization”
 - not just about cost savings
 - avoid escalating license fees
 - avoid single vendor dependence
 - work with many to achieve open standards based standardization

More Myths



Article by Neil Gunton

-  http://www.neilgunton.com/open_source_myths/
-  If you're not willing to help fix it don't complain.
-  Open source allows you to get under the hood and fix problems.
-  All software should be free.
-  Open source software is always better than proprietary.

- Criticism is a valid way of participating in the process; we don't all have time to "fix it ourselves".
- Tinkering with the code is something that hardly anyone actually does, except for the core developers.
- Saying that all software should be free ignores the hidden price - including your own ability to make a living from writing software.
- Closed source software can be just as good, sometimes even better, than Open Source.

How to Evaluate Open Source

Capgemini Expert Letter

-  Provides business approach for evaluating open source in your environment
-  http://www.asiaosc.org/article_212.html

Capgemini Expert Letter – Open Source Maturity Model

	Commercial	Open Source
Supplier	A company	A community
Product development	Driven by corporate economics	Driven by product functionality
Developers	Limited numbers with product knowledge, all paid for the supplier	Varies from a small to very large group of developers. Often permanently employed, sponsored or volunteers.
Stability	New trends are incorporated quickly if there is a commercial incentive.	New ICT developments are incorporated into the product if this benefits the users.
Users	Commonly not organised, every user maintains contact with the supplier independently.	Users participate in virtual communities and discuss among themselves and with the developers about the product and future developments.

What Does This Mean?

My Opinion

- If IT is to be relevant, must make prudent technology decisions that match our needs
- Open Source can be a good option
- Avoid path of least resistance
- Freedom of choice
 - Doesn't necessarily mean free
- Need to focus on business needs
 - Make technology decisions that support our business strategies
 - Control our own destiny

Is Open Source THE Answer?

- Not Necessarily
- There are costs (even when it's free)
- Need to look at it as a real option
- Open Source can be excellent choice
- There are good products available

Is COTS Dead?

- Commercial Off The Shelf Solutions (COTS)
 - Wisdom was to use proven products
 - Combine them to build solutions
 - Open Source could be those products, too (IMHO)

Should We?

- Form SHARE development efforts?
- Adopt Open Source?
- Promote Open Source vendor products?
- Insist on “Open Standards”?
- Define our own “standards”?

Opportunity for SHARE?

- 📌 Get involved with development?
- 📌 Share our improvements?
- 📌 Influence our vendors?
- 📌 Improve our businesses!

What do you think about...?

- Open Source?
- Enterprise licensing ?
- Threat of monopoly?
- Vendor Influence?
 - by us?
 - on us?
- Standards? focused strategies?
- Other thoughts?