Open Source Software

What is Open Source Software?

- Open Source Software (OSS) is distributed with its source code. The Open Source Definition has three essential features:

-It allows free re-distribution of the software without royalties or licensing fees to the author

-It requires that source code be distributed with the software or otherwise made available for no more than the cost of distribution

-It allows anyone to modify the software or derive other software from it, and to redistribute the modified software under the same terms.

Examples of Open Source Software

Operating Systems

-Linux

-FreeBSD, OpenBSD, and NetBSD: The BSDsare all based on the Berkeley Systems Distribution of Unix, developed at the University of California, Berkeley. Another BSD based open source project is Darwin, which is the base of Apple's Mac OS X.

Examples of Open Source Software

nternet

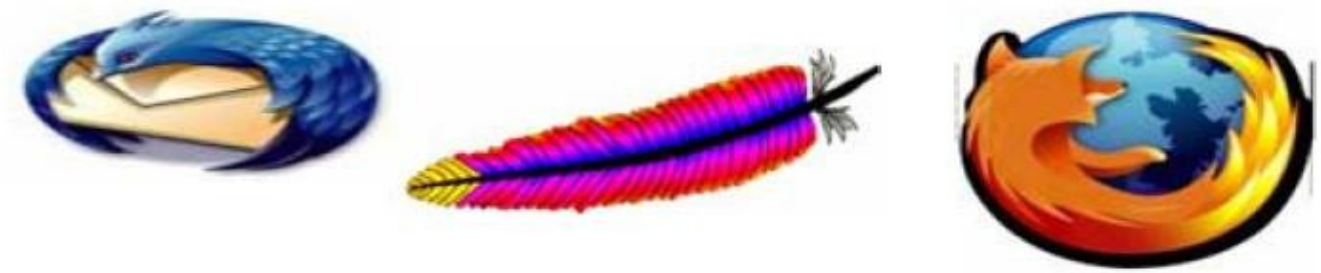
Apache, which runs over 50% of the world's web servers.

BIND, the software that provides the DNS (domain name service) for the entire Internet.

sendmail, the most important and widely used email transport software on the Internet.

Mozilla, the open source redesign of the Netscape Browser

Open SSL is the standard for secure communication (strong encryption) over the nternet.categories.



Examples of Open Source Software

Programming Tools
-Zope, and PHP, are popular engines behind the "live content" on the World Wide Web.

- Languages:
  - –Perl
  - –Python
  - –Ruby
  - –Tcl/Tk
- GNU compilers and tools
  - –GCC
  - –Make
  - –Autoconf
  - –Automake,etc..

Open Source Software sites

- Free Software Foundation www.fsf.org
- Open Source Initiative www.opensource.org
- Freshmeat.net
- SourceForge.net
- OSDir.com
- developer.BerliOS.de
- Bioinformatics.org
- see also individual project sites; e.g., www.apache.org; www.cpan.org; etc.

History of OSS

1984 –The Free Software Foundation (FSF) is Formed -Goal: to develop a free version of a UNIX-like OS, this was called the GNU project

1989 –FSF releases the GPL v1.0

1991 –the first code for Linux is released

1994 –Linux 1.0 is released

1994 –RedHatand Slackwareversions released (C++, TCP/IP, Server)

1995 –Work starts on Apache

1996 –Work starts on KDE

1997 –“The Cathedral and the Bazaar”is published

1998 –the term “Open Source”is coined

2001 –Linux 2.4 is released

Main characteristics of F/OSS

- Free Software -Open Source Software: used interchangeably [F/OSS]
- Software development paradigm: collaborative and distributed development
- Licensing models: proliferation of “open source licenses (GPL, LGPL, BSD, etc..)
- F/OSS: potential benefits for interoperability and standards

SSUES RELATING TO THE USE OF OSS

- Competition: adding competition to the market
- Lock-in: strong customer dependence on vendor
- Cost: total cost of ownership
- Reliability: software errors
- Maintenance: update cycle
- Sustainability: F/OSS as a lasting mechanism
- Capacity building: more S/W producers, small market segments better
erved

SSUES RELATING TO THE USE OF OSS

- Innovation: large base of developers
- Product liability: a general problem; “good governance”
- Security and trust: unwanted functions; branding
- Education: educational tools
- Empowerment: customer has more decisive power and access to tool
- Equity: wider access to software