Edos Glossary

Project Title	Edos
Project Number	IST-004312
Contact Authors	Ciarán Bryce, Michel Deriaz, Michel Pawlak
Author List	Ciarán Bryce, Michel Deriaz, Michel Pawlak, ...
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Foreword

The aim of this glossary is to clarify terms that are often used within the Edos consortium in relation to Free and Open Source Software (F/OSS). Nonetheless, the glossary should be understandable to anyone outside of the consortium by providing a common language and understanding of the field.

The glossary is (currently) divided into two parts. Section 1 presents **general terms** used in Edos. These are common terms that must be clearly understood in order to understand F/OSS. Section 2 defines **proper terms** from the F/OSS field, such as the names of software tools, systems, or software projects.

Notation Terms used in definitions that have their own definition in the glossary are written in the Small Caps style.

Contents

1 General Terms

Academic Free License or **AFL**. An open source software LICENSE that contains a clause revoking the license if a third party asserts a patent against any package of the software. Like the BSD LICENSE, the AFL does not prohibit the use of licensed material in products for resale.

AFL See ACADEMIC FREE LICENSE.

Alpha Release The first RELEASE of software made by a F/OSS PROJECT.

Archive A single large file that packs together multiple files. The contents of an archive are usually compressed in order to save space. Common archival formats are TAR, GZIP and ZIP.

Benevolent Dictatorship Development-control structure of FREE AND OPEN SOURCE SOFTWARE. When a PROJECT starts attracting enough voluntary contributors, an individual PROGRAMMER or a team of programmers takes on the role of gatekeeper, and makes the final decision about what contributions are added to the CODE BASE. The particularity of this structure is that anyone in the community can take the code base and start adding his own modifications if the benevolent dictator is no longer seen to act in the interests of the community. This results in a PROJECT FORK under the control of a different benevolent dictator.

Beta Release The second RELEASE of software made by a F/OSS PROJECT.

Binary Code A program that has been compiled into machine executable form; also known as OBJECT CODE.

Binary Package A PACKAGE whose contents, once installed on an end-user machine, can be directly used without any pre-processing. Opposite of SOURCE PACKAGE.

BSD License An OSS software LICENSE that does not prohibit the use of licensed material in products for resale. It allows redistribution and modification of SOURCE CODE and redistribution of BINARY CODE as long as the license contains a copyright notice and a no-endorsement clause.

CLI See COMMAND LINE INTERFACE.

Closed Source Software Opposite of OPEN SOURCE SOFTWARE. This refers to any program distributed in BINARY CODE only form, i.e. there is no distribution of the program's SOURCE CODE as this could be a company's trade secret. As such, people who desire access to the source code are requested to sign a non-disclosure agreement in order to gain access.

Code Base Reference SOURCE CODE for a PROJECT. Contains different project RELEASES. Modifications to the source code are examined by the committers of the project, whose role is to decide if the modifications are worthy of being added to the code base.

Code Repository Central place where one or more CODE BASES are kept and maintained in an organized way.

Command Line Interface Method of interacting with a computer by sending lines of textual commands, either from a keyboard or from a SCRIPT. Contrasted with GRAPHICAL USER INTERFACE.

Committer A project participant who has the right to modify the CODE BASE of a project.

Compilation The action of translating program source code into a usable software, executable on a computer.

Compiler A computer program used to compile source code. See COMPILATION.

Copyleft The legal obligation on any person who obtains or uses F/OSS not to distribute the software for a fee – if this contradicts the LICENSE of the software – or to remove a reference to the original AUTHOR from the program.

Copyright The legal right granted to the author of a program to exclusive publication, production, sale, or distribution of the given program. (In contrast, a PATENT protects the ideas, e.g., algorithms behind the program.)

Dependency A relationship between a package and a set of packages that prevent the correct INSTALLATION, COMPILATION or running of the former package without the presence of the latter packages.

Desktop Environment A Graphical User Interface (GUI) environment to operate an end-user machine. It provides multiple features like icons,

toolbars, applications, etc. Examples of Desktop Environments include GNOME and KDE.

Developer A project participant who proposes changes to a project's SOURCE CODE. He does not have the right to make changes to the project's CODE REPOSITORY; see COMMITTER.

Disk Image An ISO Image of a CD-ROM that respects the ISO 9660 standard.

Distribution A packaging of a software project's SOURCE CODE, BINARY CODE and documentation with various user interfaces, utilities, and other software into a user deliverable. The term is often used in relation to the Unix and Linux operating systems.

Editor A group or organisation that undertakes the task of packaging software components into a DISTRIBUTION and issuing a RELEASE.

Feed A Web site that acts as a source of PACKAGES, PATCHES or documentation for a PROJECT.

F/OSS See FREE AND OPEN SOURCE SOFTWARE.

F/OSS Process A series of operations performed by a number of individuals in the production of F/OSS. The operations can be automatic, like the delivery of packages to end-user machines, or manual, like the election of developers to the status of committers.

Free Software License Type of LICENSE describing software distributed in a BINARY CODE form only, that can be used at no cost. PROPRIETARY software can be free software. The SOFTWARE AUTHOR can specify usage restrictions in the license.

Free and Open Source Software or **F/OSS**. Software that is free or distributed with an OPEN SOURCE license. This is the class of software that the EDOS project deals with.

Freeware See FREE SOFTWARE LICENSE.

GNU General Public License See GPL LICENSE.

GNU Lesser General Public License See LGPL LICENSE.

GPL License or **Gnu General Public License**. A software LICENSE often associated with OPEN SOURCE SOFTWARE. This license stipulates that any user may read and make changes to the software, and that resulting software must be licensed under the GPL too. The goal is to force people willing to develop CLOSED SOURCE SOFTWARE to reinvent the wheel, and prevent them from taking advantage of the community's effort.

Graphical User Interface Method of interacting with a computer through manipulation of graphical components. Examples of components are buttons and windows that can be clicked with a cursor. Contrasted with COMMAND LINE INTERFACE.

GUI See GRAPHICAL USER INTERFACE.

Intellectual Property Rights or **IPR**. The broad issue of defining who may specify conditions on the use and distribution of a SOFTWARE.

IPR See INTELLECTUAL PROPERTY RIGHTS.

Installation The process of transforming a set of packages into source code, binary code and documentation files on an end-user machine that can be, respectively, modified, run and browsed by the end-user.

Issue Tracking The process of communicating user satisfaction, bug reports, new program requirements from end-users to the PROJECT DEVELOPERS.

ISO 9660 A standard that defines a file system for CD-ROM media and that is currently supported by the major OS producers. See DISK IMAGE.

ISO Image A file containing the complete content and structure of a CD-ROM. Often used to let people burn remotely a copy of an original CD-ROM.

Kernel The core of an operating system, the part whose presence is mandatory for core programs to run. Common examples include HURD and the LINUX KERNEL.

License A formal agreement between a software producer and end-user that stipulates the conditions the end-user must respect to gain access to the software, as well as the restrictions imposed on the copy of the software to third parties.

LGPL License or GNU **Lesser General Public License** (formerly GNU Library General Public License). A LICENSE that places a COPYLEFT restriction on SOURCE CODE files but not on the computer program as a whole, provided the computer program in which the LGPLed source code is included follows some guidelines. The LGPL license is a compromise between the GNU GENERAL PUBLIC LICENSE and simple permissive licenses such as the BSD LICENSE. As a result, the key difference between the GPL LICENSE and the LGPL LICENSE is that LGPLed source code can be linked to non GPL or non LGPLed software such as free or proprietary software.

Meritocracy A social system in which power is proportional to merit. As a developer acquires merit through the value of his contributions, he obtains new rights like committing code, and more weight is attributed to his opinion in project votes. This 'the more you do the more you are allowed to do' system is used by some open source projects, like Apache.

Object Code See BINARY CODE.

Open Source Software or **OSS**. A collective name for all kinds of software under a LICENSE defining that their SOURCE CODE is accessible. Anyone may extend, improve and distribute Open Source Software as long as thisrespects the clauses of the licence. Opposite of CLOSED SOURCE SOFTWARE.

OSS See OPEN SOURCE SOFTWARE.

Package A single file that contains source code files, machine binary files or documentation files. It may also contain scripts that, when run, install the files on the user's machine. Package meta-data include version numbers, date of creation and a signed checksum to verify package integrity.

Patch An update or bug fix for SOFTWARE. It is either a program that modifies the original BINARY CODE, or a list of instructions to be followed by a tool to modify the original SOURCE CODE.

Patent A certification made by a government authority that confers upon the creator of an invention, or idea, the exclusive right to make, use, and sell that invention for a set period of time.

Port A collection of files along with automated tools for installing, compiling and updating these files. The ports system was originally developed for FreeBSD, and is an alternative to PACKAGES.

Progressive Open Source The application of F/OSS principles within the confines of a closed community, like that of a university or enterprise.

Project An undertaking by one or more individuals to develop and maintain F/OSS with specific software requirements.

Project Fork The birth of a new PROJECT from an existing project. The new project may be motivated by a schism between the individuals of the parent project, or simply to accommodate a new set of software requirements.

Public Domain Software Software that can be distributed free of charge, without contradicting any LICENSE, COPYRIGHT or PATENT.

RC See RELEASE CANDIDATE.

Release A frozen state of the project's software and documentation that is made available to end-users.

Release Candidate or **RC**. A state of the project's software and documentation that is considered by the project's management for release.

Release Management An aspect of the F/OSS process that covers the delivery of software to end users. Issues include versioning, level of accepted stability and deadline setting.

Revision Control or VERSION CONTROL. Content control system whose mission is to keep track of all information concerning the evolution of a PROJECT and especially its SOURCE CODE. The files are kept in a repository and each modification applied to them increments the REVISION LEVEL. Key features provided by revision control systems are the ability to recover an old revision of the contents, create different branches for different evolutions of the project or the ability to freeze branches (for instance to prepare a RELEASE).

Revision Level VERSION number associated with a file stored in a REVISION CONTROL system.

Script A sequence of command line instructions that can be invoked and run as a unit, rather than having to invoke one instruction after another.

Shareware Proprietary software that is distributed on a free basis for a trial period or with restricted functionalities. Paying for it allows the use of the software beyond the trial period and give access to all functionalities.

Software A computer program, or group of programs, in SOURCE CODE or BINARY CODE form.

Software Author A person or group of people who create a program and then distribute it under a chosen LICENSE.

Source Code Computer program code in "human readable" form written by DEVELOPERS. Opposite to BINARY or OBJECT code. Source code is subject to CODE VERSIONING.

Source Package A PACKAGE whose contents, once installed on an end-user machine, require processing prior to use. Examples of processing include source code compilation, or the generation of man pages from contained documentation files.

Version Software unique identifying number. Versions of SOURCE CODE can be maintained using a REVISION CONTROL system. Once the development team considers a software version as being sufficiently mature, the software version can be turned into a software RELEASE.

Version Control see REVISION CONTROL.

2 Proper Terms

Apache A short form for *Apache Software Foundation*. This foundation has a number of open-source projects in the area of Web services, and has its own software LICENSE. The foundation was formed in 1999 from the group who developed the Apache HTTP server.

BitKeeper A distributed software development tool that runs on all major OS platforms. It includes CODE BASE management tools such as REVISION CONTROL.

BitTorrent A peer-to-peer based content distribution system that is adapted to very large files. Its distinguishing characteristic is that it downloads different chunks of a file to different users; these users can then exchange chunks in a peer-to-peer fashion. This approach allows the content distribution network load to be distributed across the network.

BSD for *Berkeley Software Distribution*. This is a UNIX distribution from the University of California at Berkeley. The first version appeared in 1975.

Bugzilla This is a Mozilla project whose aim is the development and maintenance of a ISSUE TRACKING system. Its features include a MySQL back-end for the bug repository, a white board to which one can post attachments and a bug definition language.

Concurrent Versions System or **CVS**. A file repository REVISION CONTROL system with optimistic concurrency control. Older verisons of files are maintained so that rollbacks may be effected.

Cooker See MANDRAKE COOKER

CVS See CONCURRENT VERSIONS SYSTEM.

Debian A community project whose goal is to furnish a complete operating system based on the Linux kernel initially, though efforts are underway to use the HURD kernel. The project was formed in 1993.

Dpkg or *Debian Package Manager*. A packaging and installation tool for Internet downloads, included with Debian Linux but compatible with other Linux distributions. It produces files with a .DEB extension. Similar to RPM.

Eclipse An open-source project managed by the Eclipse Foundation that deals with tools for development. Several programming languages are supported and developments mainly centre around the popular Eclipse development environment.

Fedora A Linux project that stemmed from Red Hat in 2003. Fedora is a complete operating system built exclusively from free software.

Free Software Foundation or **FSF**. An organisation founded in 1983 by Richard Stallman. The foundation advocates that software source code should be accessible to anyone, who may then propose and make improvements to the code, and even redistribute it.

FreeBSD A project based on the Berkeley Software Distribution version of Unix. Related projects are OpenBSD and NetBSD.

FSF See free software foundation.

Gentoo A free Linux-based operating system that allows end-users a large degree of control over the installation process. This is achieved using a ports system similar to that used by the BSD operating systems OpenBSD and FreeBSD.

GNATS GNATS is a GNU project toolset for tracking bugs reported by users to a central site. The client front-end can be based on a command line, Emacs or a Web interface.

GNOME This is the GNU Network Object Model Environment. It is a GUI for desktop applications originally intended for the Linux operating system, but which also runs on any Unix platform.

GNU An acronym for *Gnu is Not Unix*. This is a free software project created in 1984 whose goal is to develop and maintain a free version of the Unix operating system.

Hurd A Gnu project whose aim is to develop a replacement for the Unix kernel. The system is structured as a set of servers running over the Mach micro-kernel.

Issuezilla This is a fork from the Bugzilla project that is managed by collab.net. It is based on Java Servlet technology and has a more elaborate bug description language than Bugzilla.

KDE The **K** Desktop Environment is an open source graphical desktop environment for Unix workstations. The project was launched by Matthias Ettrich in 1996; his aim was to make Unix computing more easy to use.

Knoppix A bootable CD-ROM containing a complete Debian distribution. This ISO image can also be downloaded from the Knoppix Web site. The aim of the project is to automate the installation of the system on an end-user machine.

Linux A Unix-like operating system developed especially for the Personal Computer market. It is composed of the Linux Kernel and systems programs from the Gnu project.

Linux Kernel An operating system kernel based on Unix that was developed by Linus Torvalds. The kernel is an open source software project with Torvalds as benevolent dictator. Several distributions based on this kernel exist.

Mandrake Cooker The development version of the next Mandrakelinux release. It allows both users and developers to improve the current code by signaling bugs, correcting them, or adding new features. This version is up-dated all the time and is therefore not stable.

Mandrakelinux A Linux distribution produced by Mandrakesoft that specialises in easy-to-use front-ends for both home and office users.

Mozilla An open source software project that specialises in Internet tools, e.g., Web and mail clients, bug reporting (Bugzilla), issue tracking and project testing (Tinderbox).

OOo See OpenOffice.org.

OpenBSD A variant of the Unix BSD operating system. This variant supports binary compatibility with programs from Solaris, FreeBSD, and Linux.

OpenOffice.org An open source project whose goal is to develop and maintain a suite of Office applications that are compatible with the Microsoft Office suite. OpenOffice is an off-shoot of StarOffice; the latter is a product that was bought by Sun Microsystems in 1999.

Red Hat A former Linux distribution that split into forked to Fedora and Red Hat Enterprise in 2001. Red Hat is actually a company

and its distribution was one of the first for Linux. The distribution is also famous for its packaging technology RPM.

Red Hat Enterprise A proprietary system for the managed distribution of Red Hat Linux. Customers pay for the distribution network which is tailored to the needs of its clients. A client can be an end-user, a developer, beta-tester or any combination of these.

Request Tracker A ticketing system for a community project that supports project management, ISSUE TRACKING, help desk, CRM and software development. The system is platform independent and open-source.

Rsync A tool used for incremental file transfer between machines. It is an open-source tool that is distributed with a GNU license. The tool is used by many F/OSS projects to copy RELEASES between mirror servers.

Slackware A Linux distribution that seeks to be as close to Unix as possible.