

## **Future & applications of Open Source Software's**

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### **ABSTRACT**

Open source software is becoming the most interesting 'new' phenomenon of the entire information technology landscape, generating a level of interest similar to that of the first moment of the Internet. The impact of open source technology is expected to be quite noticeable in the software industry, and in society as a whole. It also enables completely new models, which are shaping a network of groups and companies based on open source software development. And it has, in general, a very positive impact as an enabler for the creation of new markets and business opportunities. Despite these facts, many people think that the open source movement is merely another temporary fashion in the software industry. In this paper we study about open source software, applications of it and its future.

### **1. INTRODUCTION**

Open source means making a product's sources publicly available allowing others to modify and evolve the product and contribute towards its development. The concept does not apply to software alone rather a broad collection of fields associate with it. Simply the idea is that given enough eyes so the most collusive bugs can be easily removed. Open source allows a project to be continuously nurtured by many different people, binging varying thoughts into the mix. One person may add a feature that other had over looked. The end result is a product that appeals to a wide audience, simply because it was created by a wide developer base, and is born of a much broader viewpoint than what could have been possible with a single corporate entity, that jealously guards the secrets. The matter on this presentation has been divided into various sections. The first section deals with definition of open source. The second section deals with the history open source software. The third section deals with the comparison between open source and freeware. The fourth section deals with future of open source software. The fifth section deals with references.

### **2. DEFINITION**

Open source software is software for which the underlying codes have been made available for users. Users are able to read it or change to as they wish. Linux is example of open source software or we can say "the future is open source everything". A method of software distribution where a programmer creates a program and makes it available for others to use without cost as well as modify the source code and redistribute the modifications to the software user/developer community.

### 3. HISTORY

Although all the stories related to software are obviously short, that of open source software is one of the longest among them. In fact, it could be said that in the beginning there was only free software. Later on, proprietary software was born, and it quickly dominated the software landscape, to the point that it is today considered as the only possible model by many (knowledgeable) people. Only recently has the software as an opinion again. When IBM and others sold the first large scale commercial computers, in the 1960s, they came with some software which was free (libre) in the sense that it could be freely shared among users, it came with source code, and it could be improved and modified. In the late 1960s, the situation after the unbundling of IBM software, and in mid-1970 it was usual to find proprietary software, in the sense that users were not allowed to redistribute it, that source code was not available and that users could not modified the programs. In late 1970s and early 1980s, two different groups were establishing the roots of the current open source software movement.

On the US East Coast, Richard Stallman, formerly a programmer at the MIT AI Lab resigned and launched the GNU Project and the Free Software Foundation. The ultimate goal of GNU project was to build a free operating system, and Richard started by coding some programming tools (a compiler, an editor etc.). As a legal tool, the GNU General Public License (GPL) was designed not only to ensure that the software produced by GNU will remain free, but to promote the production of more and more free software. On the US West Coast, the Computer Science Research Group (CSRG) of the University of California at Berkeley was improving the UNIX system, and building lots of applications which quickly become BSD Unix. These efforts were funded mainly by DARPA contracts and a dense network of UNIX hackers around the world helped to debug, maintain and improve the system. During many time that software was not redistributed outside the community of holders of a Unix AT&T license. But in the late 1980s, it was finally distributed under the BSD license, since some parts of the kernel and several important utilities, which were needed for a usable system, were still proprietary. [1]

Open source doesn't just mean access to the source code. The distribution terms of open source software must comply with the following criteria:

#### I. Free Distribution

The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.

## II. Source Code

The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program.

## III. Derived Works

The Licence must allow modification and derive works and must allow them to be distributed under the same terms as the licence of the original software's

IV. Licence must not be specific to a product the rights to attach to the program must not depend on the program's being part of particular software's distribution. If the program is extracted from that distributions and used or distributed with in the terms of the programs licence's all parties to whom the program is redistributed should have the same wright as those that are granted in conjunction with the original software's distribution.

## V. No Discrimination against Fields of Endeavour

The license must not restrict anyone from making use of the program in a specific field of endeavour. For example, it may not restrict the program from being used in a business, or from being used for genetic research. [2]

## 4. FUTURE OF OPEN SOURCE

Android is a software stack for mobile devices that includes an operating system, middleware and key applications. Google Inc. purchased the initial developer of the software, Android Inc., in 2005. Android's mobile operating system is based on the Linux kernel. Google and other members of the Open Handset Alliance collaborated on Android's development and release. The Android Open Source Project (AOSP) is tasked with the maintenance and further development of Android.

## VERSION HISTORY

Main article: [Android history](#)

Android has seen a number of updates since its original release. These updates to the base operating system typically focus on fixing bugs as well as adding new features. Generally each new version of the Android operating system is developed under a code name based on a dessert item. Past updates included Cupcake and Donut. It must also be noted the version names are in alphabetical order (e.g., Cupcake, Donut, Éclair, and Froyo)

The most recent released versions of Android are:

**2.1 (Éclair)**, which revamped the user interface and introduced HTML5 and Exchange Active Sync 2.5 support.

**2.2 (Froyo)**, which introduced speed improvements with JIT optimization and the Chrome V8 JavaScript engine, and added Wi-Fi hotspot tethering and Adobe Flash support.

**2.3 (Gingerbread)**, which refined the user interface, improved the soft keyboard and copy/paste features, and added support for Near Field Communication

**3.0 (honeycomb)**, a tablet-oriented release which supports larger screen devices and introduces many new user interface features, and supports multicore processors and hardware acceleration for graphics. The Honeycomb SDK has been released and the first device featuring this version, the Motorola Xoom tablet, went on sale in February 2011. Google has chosen to withhold the development source code, which calls into question the “open-ness” of this Android release. Rubin however has stated that the source code will be released for Honeycomb in the near future. The reason for delay, according to Rubin in an official android blog post, was because Honeycomb was rushed for production of the Motorola Xoom and that when Honeycomb is suitable for developer use is when it will be released. The upcoming Version of Android is: Ice Cream Sandwich, a combination of Gingerbread and Honeycomb into a “cohesive whole, with a possible release in mid-2011. [3]

Figure 1 Architecture Diagram



#### 4. Comparison of freeware,

Free software and open source

**Freeware:** Freeware software's are available to use with no cost. Proprietary software's can also be freeware software. Freeware software's are generally used by companies to help

developers, students and communities to develop software skills while using this freeware software, but not too loose their business potential software companies don't give the source code of the software's.

Freeware software is different from shareware software.

**Shareware:** Shareware software's are used for marketing purpose. Computer users can download and use a limited version of software or full version of software for a limited period of time. We can say that Shareware software is just like "Try before you buy".

**Free Software:** Free software can be used, modified and studied without any restriction. Free software can be copied and distributed with or without any modifications. A software is free when the end user get's full software with the human readable form of the program called as source code with above permissions. Free software Foundation maintains the definition of free software.

**Open Source:** Open source software can be defined as computer software for which the source code of the software is available under a copyright that must meet the open source definition.

There can be different open source copyright laws enforce by different software vendors.

## 5. CONCLUSION

Using open source software offers various advantages, such as the ability to reduce costs and development time, or to avoid being dependent on a single vendor. It is therefore to be expected that more and more companies and institutions will start using open source software. There is however some risks associated with doing so. Being forced to release some or all of the software of a commercial product as open source software may greatly reduce its value. It is therefore recommended to carefully study the license agreement and to make an assessment of the risks associated with these conditions. One should always check whether the own application is clearly separated from software under the GPL and of course compliance with the license conditions need to be checked. With a careful application of the license conditions, it is possible to benefit most from using open source software while minimizing the risk.

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