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Free As In Freedom

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Introduction

Free Software Free Society



Figure: GNU Project Logo [1]

How It Started

Before and After

Since 1998, the open source software movement has become a revolution in software development. However, the “revolution” in this rapidly changing field can actually trace its roots back at least 50 years.[2]



Figure: Richard M. Stallman. as a programmer at MIT AI Lab.[1]

How It Started

GNU's Not UNIX

Stallman decided to create an operating system complete with all necessary software tools, such as editors, compilers, and utilities.[2]

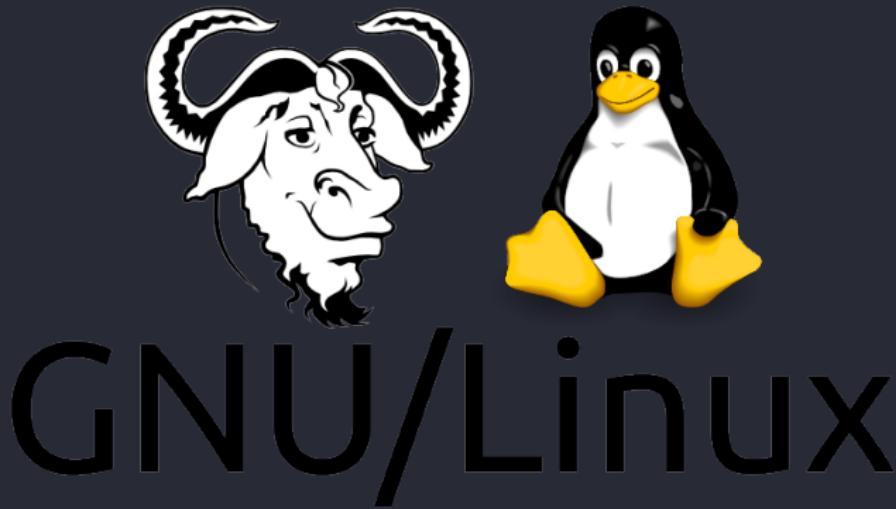


Figure: GNU/Linux [3]

How It Started

GNU Emacs



Figure: GNU Emacs[1]

He made it available for free by anonymous FTP, but at that time access to the Internet was not very common. As an alternate means of distributing the software, he offered to send people the package on tape for \$150. Within a few months he was receiving 8-10 orders per month, which allowed him to pay his living expenses.[2]

Definition

The four essential freedoms

A program is free software if the program's users have the four essential freedoms[4]:

- The freedom to run the program as you wish, for any purpose (freedom 0).
- The freedom to study how the program works, and change it so it does your computing as you wish (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help others (freedom 2).
- The freedom to distribute copies of your modified versions to others (freedom 3). By doing this you can give the whole community a chance to benefit from your changes. Access to the source code is a precondition for this.

Definition

Libre Software

you should think of “free” as in “free speech,” not as in “free beer.” We sometimes call it “libre software,” borrowing the French or Spanish word for “free” as in freedom, to show we do not mean the software is gratis.[4]



Figure: libre sofware[5]

How It Started

Open Source

The “open source” label was created on 1998 shortly after the announcement of the release of the Netscape source code. the Netscape announcement had created an opportunity to educate and advocate for the superiority of an open development process.[6]



Figure: Bruce Perens, Co-founder of OSI[7]



Figure: Eric S. Raymond, Co-founder of OSI[8]

Open Source Initiative

Mission

Mission of OSI:

Open source enables a development method for software that harnesses the power of distributed peer review and transparency of process. The promise of open source is **higher quality, better reliability, greater flexibility, lower cost, and an end to predatory vendor lock-in.**[9]



Figure: OSI Logo[10]

Definition

Open Source

Open source doesn't just mean access to the source code. The distribution terms of open-source software must comply with the following criteria[11]:

- ① Free Redistribution
- ② Source Code
- ③ Derived Works
- ④ Integrity of The Author's Source Code
- ⑤ No Discrimination Against Persons or Groups
- ⑥ No Discrimination Against Fields of Endeavor
- ⑦ Distribution of License
- ⑧ License Must Not Be Specific to a Product
- ⑨ License Must Not Restrict Other Software
- ⑩ License Must Be Technology-Neutral

OSS Vs FS

Technics Vs Ethics

OSI believes that software freedom was primarily a practical issue rather than an ideological one.[12]

For the free software movement, however, non-free software is a social problem, and moving to free software is the solution.[13] Open source is a development methodology; free software is a social movement.[13]

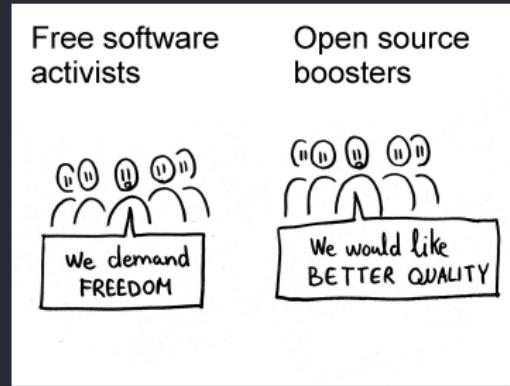


Figure: Slide from Richard Stallman's TEDx video[14]

OSS Vs FS

Practical Differences

- First, some open source licenses are too restrictive, so they do not qualify as free licenses. Open Watcom IDE is nonfree because its license does not allow making a modified version and using it privately.[15]
- Second, the criteria for open source are concerned solely with the licensing of the source code.[15]



Figure: TiVo Recorder[16]



Figure: Android Logo[17]

Why?

As a Normal User

- Ethical reasons.
- Make a better and more efficient society by supporting FOSS.
- Privacy reasons.
- Be the owner of your device.



“ Arguing that you don't care about the right to privacy because you have nothing to hide is no different than saying you don't care about free speech because you have nothing to say. ”

~ Edward Snowden

QuotesCosmos

Figure: Edward Snowden's quote about digital privacy[18]

Why?

Quotes

"Value your freedom or you will lose it, teaches history. "Don't bother us with politics," respond those who don't want to learn." -Richard Stallman[19]



Proprietary software tends to have malicious features. The point is with a proprietary program, when the users dont have the source code, we can never tell. So you must consider every proprietary program as potential malware.

— *Richard Stallman* —

AZ QUOTES

Figure: Richard Stallman Quotes[20]

Why?

Quotes

"When a program is proprietary, you can't even tell what it really does. . . it might have a backdoor to let the developer get into your machine. It might snoop on what you do and send information back. This is not unusual." -Richard Stallman[2]

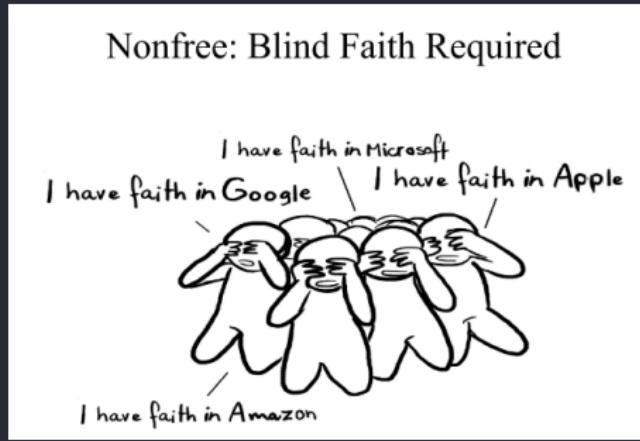


Figure: A slide from RMS TEDx Talk[14]

Why?

As a Developer

Some Motives For Writing Free Software:[21]

- Fun
- Political idealism
- To be admired
- Professional reputation
- Community
- Education
- Gratitude
- Money
- Wanting a better program to use

Open Source Development Model

Linus's Law



Figure: Linus Torvalds, Creator of Linux Kernel[22]

“The power of Linux is as much about the community of cooperation behind it as the code itself. If Linux were hijacked—if someone attempted to make and distribute a proprietary version—the appeal of Linux, which is essentially the open-source development model, would be lost for that proprietary version.” - Linus Torvalds[2]

“given enough eyeballs, all bugs are shallow”.

Examples And Alternatives



Figure: GNU/Linux OS[3]



Figure: Brave Web Browser[3]



Figure: GIMP Image Editor[3]



Figure: LibreOffice Office Suite[3]



Figure: Inkscape Vector Graphics Editor[3]



Figure: Blender 3D Computer Graphics Software[3]

Examples And Alternatives



Figure: Android Open Source Project[3]



Figure: WordPress Content Management System[3]



Figure: Python Programming Language[3]



Figure: Kdenlive Video Editor[3]



Figure: Audacity Audio Editor[3]



Figure: Scribus Desktop Publishing Software[3]

Where is Money?

Open Source Business Models

"you make money in free software exactly the same way you do it in proprietary software: by building a great product, marketing it with skill and imagination, looking after your customers, and thereby building a brand that stands for quality and customer service." - Richard Stallman[2]

- Offering Complementary Products and Services[23]
- Donations[24]
- Licensing[24]
- Providing Support in Open Source Software[24]

OSI-approved licenses[25]

Popular Licenses

- Apache-2.0
- BSD-3-Clause & BSD-2-Clause
- GPL-2.0 & GPL-3.0
- LGPL-2.0 & LGPL-2.1 & LGPL-3.0
- MIT
- MPL-2.0
- CDDL-1.0
- EPL-2.0



Figure: [25]

Copyleft Vs. Permissive

Non-copyleft/Permissive License

A "permissive" license is simply a non-copyleft open source license — one that guarantees the freedoms to use, modify, and redistribute, but that permits proprietary derivative works.[12]



Figure: Permissive Licenses[26]

Copyleft Vs. Permissive

Copyleft License

Copyleft is a general method for making a program (or other work) free (in the sense of freedom, not “zero price”), and requiring all modified and extended versions of the program to be free as well.[27]



Figure: Copyleft Symbol[28]



Figure: GPLv3 Logo[29]

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