

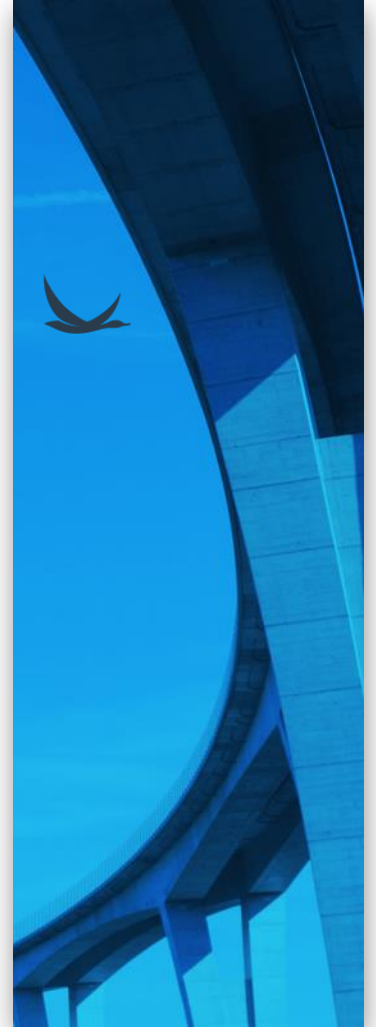


An Introduction to Open Source Software and Licensing

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Agenda

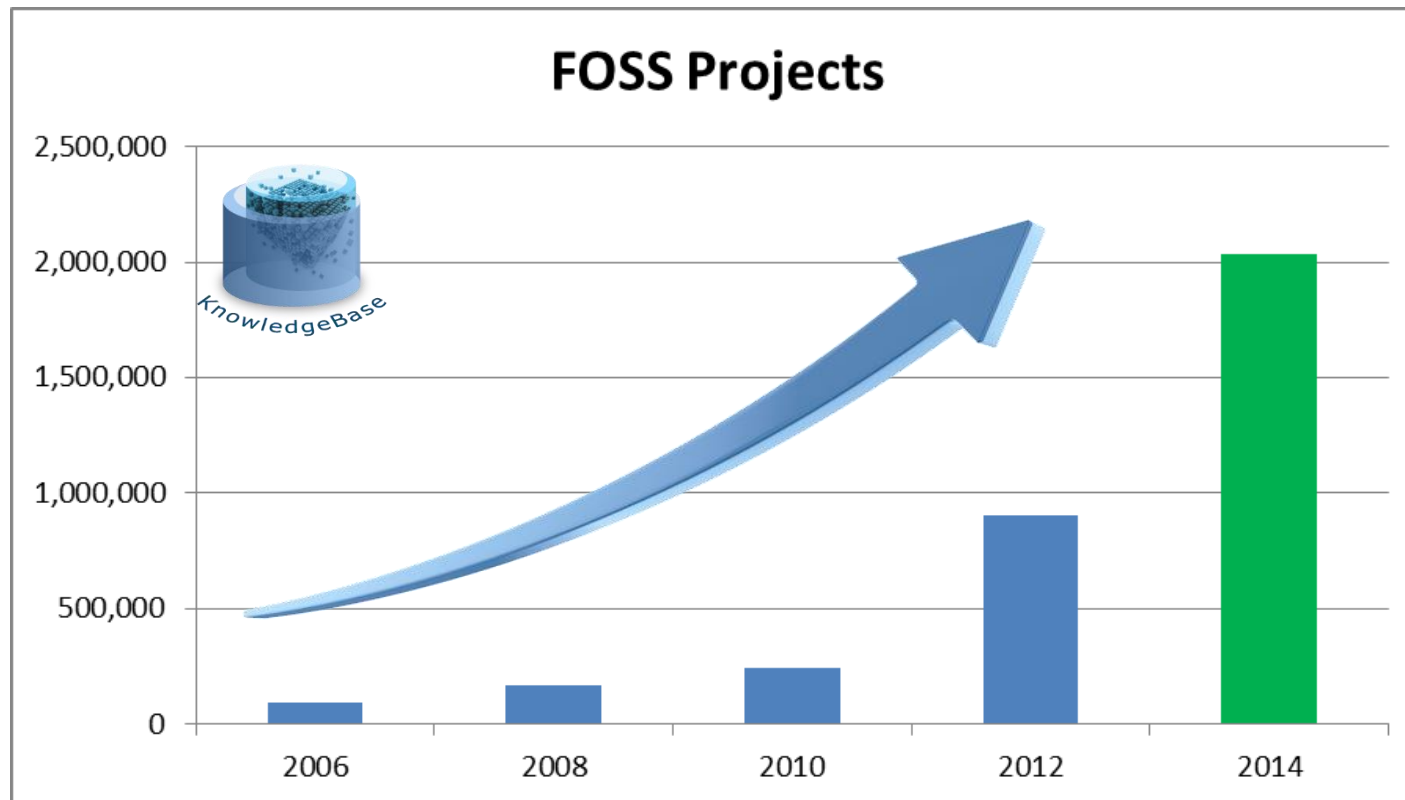
- Background and history of open source
 - Why use open source?
 - History of the open source movement
 - Definition of open source
- Legal framework:
 - Intellectual property and licensing
- Most popular open source licenses
 - Permissive licenses vs. Restrictive licenses
- Summary
- Q & A

The Global State of Open Source

"Software is Eating the World"

Marc Andreessen

"And Open Source is Driving the Software World"



Why is FOSS Important?

2013
THE FUTURE OF
**OPEN
SOURCE**

#4 DEVELOPER TALENTS



#3 DEVELOPMENT METHODS



#1 INNOVATION



#2 COLLABORATIVE PARTNERSHIPS



Open Source: the Foundation for Game Changers

Google™



Linked in™



amazon®

NETFLIX



ebay®

History of the Open Source Movement

- 1984 - The GNU Linux operating system at MIT, Richard Stallman, and the Free Software Foundation
- 1989 – GPL 1.0 released
- 1991 - GPL and LGPL v. 2 released; Linus Torvalds releases first Unix-like kernel; combines it with GNU software to form first release of Linux operating system
- 1994 – Red Hat is founded to distribute and support Linux commercially
- 1995 - A community of developers start work on the Apache Web Server
- 1997 - The Cathedral and the Bazaar is published by Eric Raymond
- 1998 - The term "Open Source" is coined and the Open Source Initiative (a non-profit organization) is formed
- 1999 – LGPL v2.1 released
- 2002 – AGPL v1 released
- 2007 – GPL v3, LGPL v3 and AGPL v3 were released (and later approved by OSI)

Collaborative Projects

Financial Services

THE LODESTONE FOUNDATION

Open Source for Capital Markets and Beyond



Healthcare



Mobile



Aerospace

Polarsys

Automotive



Infrastructure



The Apache Foundation



Collaborative Open Source Projects

- Companies coming together to develop infrastructure and solutions
- Linux Foundation – 2007
 - 7800 contributors from 800 companies
 - 6 patches per hour
 - Collaboration Workgroups: SPDX; Yocto; Tizen; Automotive; Carrier etc.
- OpenStack - 2010
 - Started as NASA/Rackspace project
 - 10,418 individual members in 125 countries
 - 237 organizations
 - 1278 contributors
 - 1.3M lines of code
- Open Daylight - 2013
 - Accelerate development of common Software-Defined Networking platform
- GENIVI Alliance



Fantec Case - June 2013

Fantec, a European company, distributed a media player based on Linux. The firmware of the media player included the iptables software which is licensed under the GPLv2. Fantec provided a version of the source code of the firmware for download that they had received from their Chinese manufacturer. Harald Welte is one of the authors of the iptables software and has brought suit a number of times to enforce the GPLv2 for this software.

- Claims

- Fantec provided “complete corresponding source code” that was incomplete
- Fantec provided older version of “complete corresponding source code”

- Decision

- Fantec violated GPLv2 by providing incomplete version of the “complete corresponding source code”
- Fantec cannot rely upon its manufacturer for complying with GPLv2 and is responsible for compliance

<http://osdelivers.blackducksoftware.com/2013/07/12/fantec-critical-lessons-for-foss-compliance/>

“Free Software” is a matter of liberty, not price. (Free Speech, not Free Beer)

- The freedom to run the program for any purpose.
- The freedom to study how the program works, and to adapt it to your needs (requires access to source).
- The freedom to redistribute copies so you can help your neighbor.
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (also requires access to source).

Open Source Definition

1. Free Redistribution
2. Program must include Source Code and must allow distribution in source code as well as compiled form
3. Must Allow Modifications and 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 – no additional license can be required of others who redistribute the program
8. License Must Not Be Specific to a Product
9. License Must Not Restrict Other Software
10. License Must Be Technology-Neutral – not predicated on any individual technology



What is a License?

- Permission by the owner of property to take some act that the owner has the ability to control due to their ownership of intellectual property rights
- What intellectual property rights do you license for software:
 - Copyright
 - Patent
 - Trademarks (not licensed in OSS licenses)
 - Trade secrets (not relevant to OSS licenses)

What is a Copyright?

- Original works of authorship
 - Fixed in any tangible medium of expression
 - Capable of being discerned by someone directly or through use of a machine
- Gives the owner the right to prevent others taking the following actions:
 - Copying
 - Creation of a derivative work (modification)
 - Distributing
 - Plus Publication and Performance rights that we won't discuss today
- Protects expression (not the idea)
- Federal protection – U.S. Copyright Act of 1976
- For a limited term (at least 70 years)

Who Owns a Copyright?

- The author, unless the author is a full time employee working within the scope of employment (the scope of this transfer depends on the country, but most countries have similar provisions)
 - The ownership of an employee's works is automatically vested in the employer
 - Can be altered by contract
- Why does ownership matter?
 - Only the owner can enforce a copyright
 - Only the owner can transfer ownership of the copyright to another
 - Assignment of a copyright must be in writing
 - Only the owner can license others (directly or indirectly)
 - A license can be granted orally or in writing, expressly or by implication

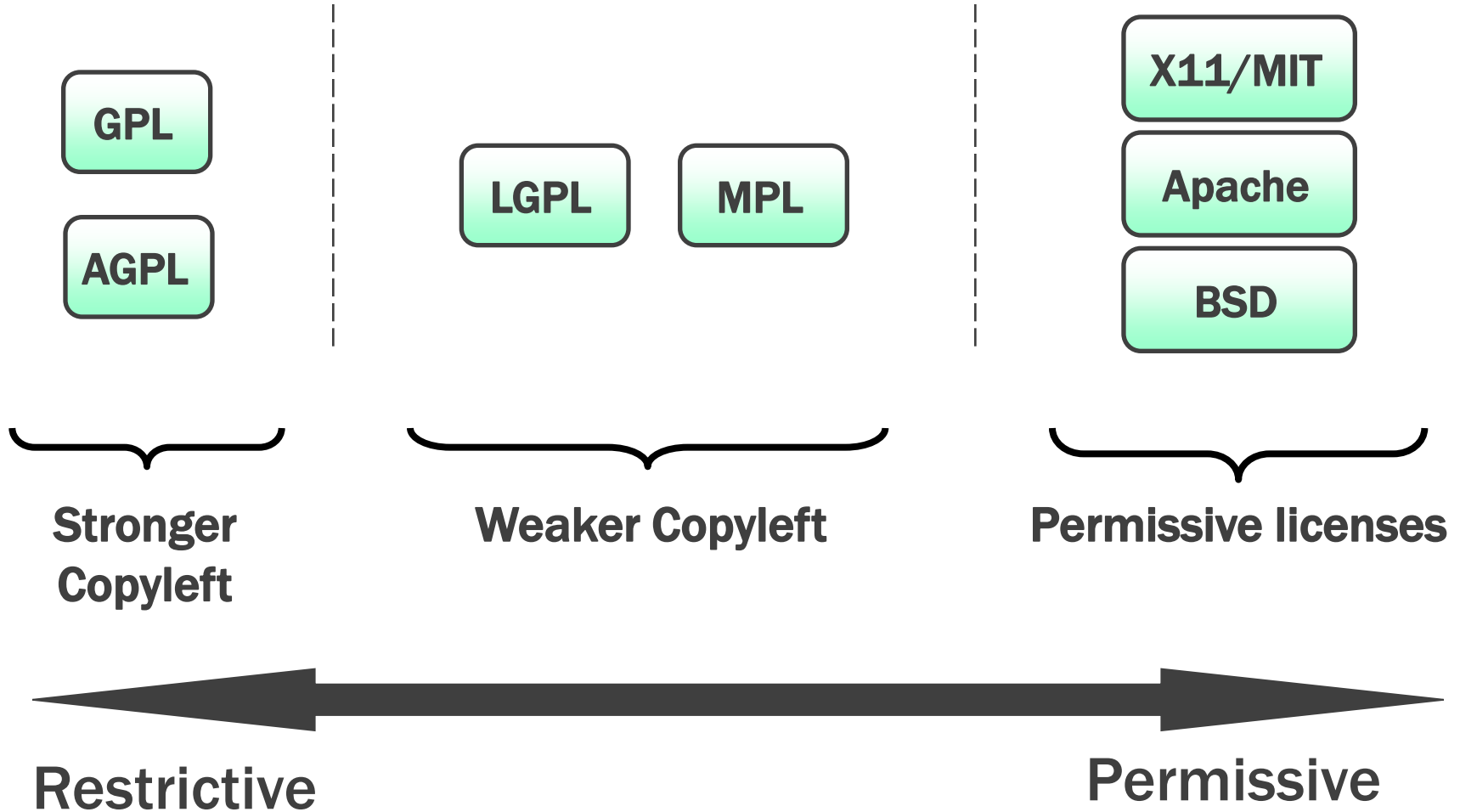
What is a Patent?

- An exclusive right to exclude
 - Making
 - Using
 - Selling
 - Importing
- Invention must be useful, novel and non obvious
- Granted by the federal government (Title 35, U.S.C.)
 - 20 years after filing (after June 8, 1995 (some extensions for drugs))
- Examples: drugs, computer software, diapers

Types of Open Source Licenses: Restrictive, Permissive, Other

- Restrictive (aka Copyleft, reciprocal)
 - Requires licensor to make improvements or enhancements available under similar terms
 - Licenses establish a specific trigger for sharing obligation
 - Example is the GPLv2: Licensee must distribute “work based on the program” and cause such works to be licensed at no charge under the terms of the GPL
- Permissive
 - Modifications/enhancements may remain proprietary
 - Distribution in source code or object code permitted provided copyright notice & liability disclaimer are included and contributors’ names are not used to endorse products
 - Examples: Berkeley Software Distribution (BSD), Apache Software License

The OSS License Continuum



What is the same between commercial (aka “closed source”) and open source licenses?

- Both are based on ownership of intellectual property
- Both grant certain rights and retain others
- Both are governed by the same laws, such as copyright, patents and Article II of the Uniform Commercial Code
- Both may include provisions which may be incompatible with the obligations of other licenses
- License obligations can be incompatible, but the issue is whether the obligations are triggered

Parts of an Open Source License Agreement

- License Grant
- License Obligations
 - Attribution
 - Conditions on distribution under certain terms for certain licenses
 - Conditions on “sharing over network” under certain terms for certain licenses
- Commercial Terms

Commercial Terms: Article II/UCITA

- Software is “goods” under Article II of the Uniform Commercial Code
- UCITA – Uniform Computer Information Transaction Act (Maryland/Virginia)
- Other warranty laws apply to some “consumer” software such as Magnusson-Moss Warrant Act (Federal) and Song Beverly Warrant Act (California)
- UCC approach: “default” provisions apply if not addressed in contract. For example:
 - Consequential damages will be awarded if not disclaimed, i.e., lost profits
 - Infringement indemnity under warranty of “non-infringement”
 - Warranty of merchantability (Average quality in the trade: what does it mean for software?)

Common Myths About Open Source

"Open source is in the public domain."

"If I don't distribute software, I don't need to worry about licensing."

"All open source licenses require the release of source code for everything."

"All open source licenses are reciprocal/copyleft..."

"None of these agreements are enforceable so it doesn't really matter anyway."

"No one will ever know."

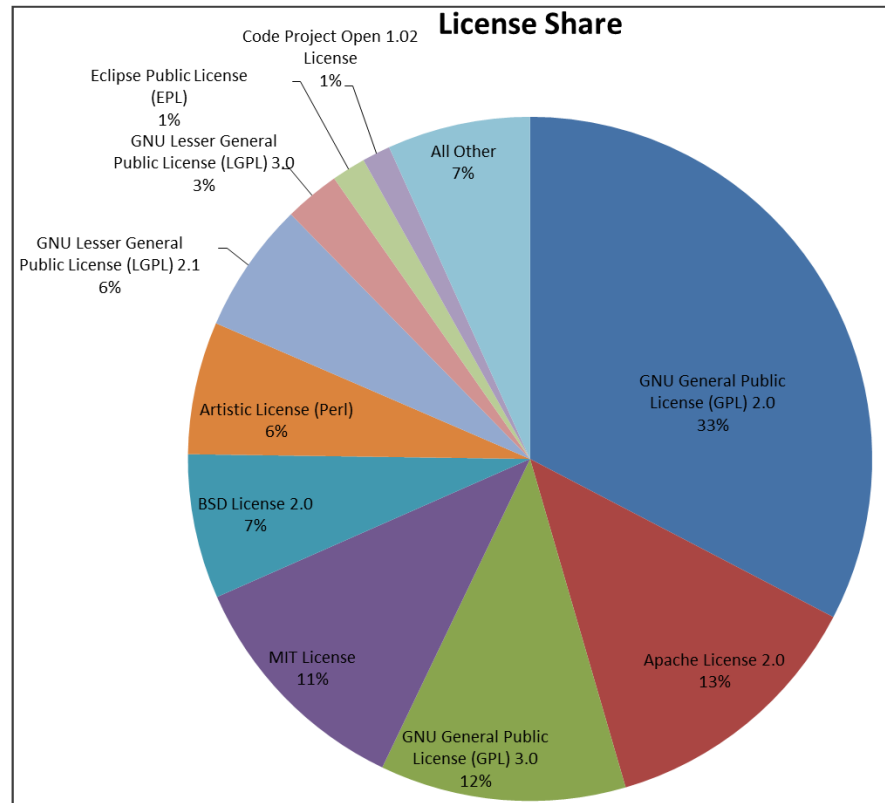
Top 20 Open Source Licenses

Rank	License
1	GNU General Public License (GPL) 2.0
2	Apache License 2.0
3	GNU General Public License (GPL) 3.0
4	MIT License
5	BSD License 2.0
6	Artistic License (Perl)
7	GNU Lesser General Public License (LGPL) 2.1
8	GNU Lesser General Public License (LGPL) 3.0
9	Eclipse Public License (EPL)
10	Code Project Open 1.02 License
11	Microsoft Public License
12	Mozilla Public License (MPL) 1.1
13	Common Development and Distribution License (CDDL)
14	BSD 2-clause "Simplified" or "FreeBSD" License
15	Common Public License (CPL)
16	zlib/libpng License
17	Academic Free License
18	GNU Affero GPL v3
19	Microsoft Reciprocal License (Ms-RL)
20	Open Software License (OSL)

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July 2013

Ranked according to number of open source projects using the license:

- Top 10 licenses account for 93%
- Top 20 licenses account for 97%
- GPL family of licenses account for 53%
- Apache+BSD+MIT licenses account for 31%



General Public License Version 2

- Contains a great deal of political dialogue
- Scope of “based on” work
 - Ambiguity of “derivative work”
 - Use of “collective work”
 - Linking issues
- Disclaimer of all warranties
- Disclaimer of liability
- Patent license: not express (according to FSF, implied)

- Potential problems
 - Scope of “based on” (definition of derivative work/collective work)
 - Many potential enforcers for some projects with different potential views of the terms, like Linux
 - Ambiguity of treatment of patents
 - Lack of choice of law
 - Legal effect of FAQs
 - Automatic termination
- Courts have enforced when requested

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will announce the code here



Conclusion

- Software development has changed
 - Componentization and re-use
 - Open source is ubiquitous and an important element of software strategy
 - Companies are more comfortable with shared development: OpenStack Foundation, OpenDaylight, GENIVI, Linux
- Not every “open source” license is truly open source
- Must understand the obligations imposed by the license
- Effective governance is essential and requires an explicit statement of strategy combined with the right tools and automation technology

Questions?



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