An Introduction to the Legal Issues Surrounding Open Source Software

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Open Source Software

- Open Source Software (OSS) describes software released under numerous different open source licenses
- The availability of the source code for OSS and the right to modify and improve the code is an important distinction between OSS and commercial software
Software Copyright 101

• 17 U.S.C § 101 et. seq. outlines the bundle of rights given to copyright owners, including:
  ▫ Reproduce the work
  ▫ Create derivative works
  ▫ Distribute of copies of the work
  ▫ Publicly display the work
The Licenses

- OSS can be licensed under a multitude of different licenses. Each license carries with it a different set of requirements for using the software and outlines a different set of requirements for modifying the source code.
Approved vs. Unapproved Licenses

- The Open Source Initiative (OSI) maintains a list of open source licenses - http://www.opensource.org/licenses
- Licenses have to go through an approval process to insure they conform to the Open Source Definitions
- In order to be approved by OSI, an open source license must adhere to the 10 open source definitions
Open Source Definitions

1. Free Redistribution
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.

2. 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. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a preprocessor or translator are not allowed.

3. Derived Works
The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

4. Integrity of The Author's Source Code
The license may restrict source-code from being distributed in modified form only if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.
5. No Discrimination Against Persons or Groups
   The license must not discriminate against any person or group of persons.

6. No Discrimination Against Fields of Endeavor
   The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.

7. Distribution of License
   The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.

8. License Must Not Be Specific to a Product
   The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.

9. License Must Not Restrict Other Software
   The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.

10. License Must Be Technology-Neutral
    No provision of the license may be predicated on any individual technology or style of interface.
The Different Licenses

• While each license follows the open source definitions, they are each different. Licenses range from widely used popular licenses, to licenses used for singles projects, to highly specialized “special purpose” licenses.
The Widely Used Licenses

- The major open source licenses that are the most widely used and have the largest communities support them are:
  - Apache License, 2.0
  - New and Simplified BSD licenses
  - GNU General Public License (GPL)
  - GNU Library or "Lesser" General Public License (LGPL)
  - MIT license
  - Mozilla Public License 1.1 (MPL)
  - Common Development and Distribution License
  - Common Public License 1.0
  - Eclipse Public License
Copyleft vs. Non-Copyleft

• A major difference between Open Source licenses is whether the license is considered “copyleft” or not
• Where copyright law allows the copyright owner to withhold permission to copy, modify, or distribute software, Copyleft licenses require that permission to be granted
Copyleft Cont.

• Copyleft licenses are conditional licenses. In order to use or distribute software licensed under a copyleft license any changes you make to the software must be released under the same license.

• A copyleft license makes sure that all modified versions of the software remain free and open in the same way the original software was

• The GPL is considered the most popular Copyleft License
The GPL (Gnu Public License) requires that works derived from a work licensed under the GPL also be licensed under the GPL.

- Must make source code available
- Author gives up right to control actions of others that receive the software but do not distribute it.
- Third parties have unilateral right to use, copy, and modify the software.
- Once released under GPL, party cannot get it back or stop its use or modification without distribution.
BSD-Style aka Permissive Licenses

• Permissive Licenses, like the BSD License, are non-copyleft licenses
• Permissive Licenses do not place many restrictions on later development or modification of the original software
• Since Permissive Licenses do not place heavy restrictions on subsequent use, they do not preserve software rights in downstream versions
• If your software is licensed under a permissive license, subsequent developers can use your permissively licensed code in closed source proprietary software.
Weak Copyleft - the LGPL

- The Lesser-General Public License (LGPL) is like the GPL, but it allows works licensed under it to be linked to by closed-sourced proprietary software; which would not be allowed under the GPL.
- The LGPL was originally used for libraries. The LGPL would allow a developer to use a library of code licensed under the LGPL, without requiring the developer to release their software as open source. If the library itself is changed though, the copyleft provisions apply to the new version of the library.
Important Questions to Ask

- When trying to figure out what license to use for your source code, there are a few basic questions you should ask
  - If the program is modified, can the results be distributed under a different license?
  - What are the risks of combining the program with proprietary software?
  - What other requirements are imposed by the license?
Modifying the Program

- Copyleft licenses require any distribution of a modification to be distributed under the same license. Some copyleft licenses will allow distribution under a similar license.
- The copyleft provisions do not kick in until distribution though. So you can modify a program and use the modified version internally without revealing the changes. Once the modified version is distributed, the changes must be revealed.
- Non-Copyleft Licenses allow you to make modifications and keep them private, or distribute them under a different license.
Combining OSS with Proprietary Software

- Copyleft software cannot be combined with proprietary software
- Non-copyleft software and some weak copyleft software (LGPL) can be combined with proprietary software
Other Requirements

• Every license has additional requirements that must be complied with, some examples are a requirement to:
  ▫ Include warranty disclaimers
  ▫ Include copyright and attribution notices
  ▫ provide a copy of the license to a downstream licensee
  ▫ include a description of any changes made to the code by the licensee prior to redistribution
  ▫ include an offer to provide the source code to the software upon request
  ▫ include source code to non-standard software that is required in order for the program to run properly
  ▫ include a file listing any known intellectual property disputes involving the software
# An Overview of the various licenses

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<th>Apache</th>
<th>GPLv2</th>
<th>LGPL</th>
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<td>Weak</td>
<td>Strong</td>
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<td>No</td>
<td>No</td>
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<td>without providing source</td>
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<td>code?</td>
<td></td>
<td></td>
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<tr>
<td>Distribute Derivatives</td>
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</table>
Consequences of Breaking a License

• In recent years there has been more litigation surrounding OSS. The consequences of breaking an open source license can be dire. Care must be taken both when using OSS, when distributing modifications of OSS, and when basing new software on OSS.
BusyBox Litigation

- A series of lawsuits have been filed against companies for violating the GPL in relation to BusyBox software (released under GPL v.2)
- Multiple companies had been accused of using the BusyBox software without complying to the GPL requirements.
- Every case was settled out of court
- None of these suits involved modifications to the BusyBox source code. All suits were brought for violating requirements of the GPL, such as the requirement to include the source code, or the requirement to include attribution.
- Even if you don’t change the program you can still get into trouble!
Jacobsen v. Katzer, 535 F.3d 1373

- The most important case to date on OSS is the Jacobsen Case
- The court found that failing to adhere to the requirements of the open source license (The Artistic License in this case) revoked the defendant’s license to use the software caused the defendant to be liable for Copyright Infringement
Jacobsen, Cont.

- Generally, “a copyright owner who grants a non-exclusive license to use his copyrighted material waives his right to sue the licensee for copyright infringement” and can only sue for breach of contract.
- But, if a license is limited in scope and the licensee acts outside the scope, the licensor can bring an action for copyright infringement.
- The Jacobsen decision found that if an open source license is limited in scope, then a licensee acting outside the scope would constitute a breach of the license, and would allow a copyright infringement suit to be brought.
Jacobsen, Cont.

- As stated in the *Jacobsen* decision, the test for “whether breach of license is actionable as copyright infringement or breach of contract turns on *whether provision breached is condition of the license, or mere covenant*”

- The court used factors such as the express language of the license (“The intent of this document is to state the *conditions*”) and the traditional language used (“provided that”) in its analysis.
• The Artistic License attached to Jacobsen’s software used the traditional language of conditions by noting that the rights to copy, modify, and distribute are granted "provided that" the conditions are met.

• The conditions referenced included “that the user insert a prominent notice in each changed file stating how and when the user changed that file,” in conjunction with one of four other listed requirements.
Jacobsen, Cont.

- The court found that “the restrictions were both clear and necessary to accomplish the objectives of the open source licensing collaboration, *including economic benefit,*” and were “vital to enable the copyright holder to retain the ability to benefit from the work of downstream users.”
- The right of a copyright owner to benefit economically from her work is a basic right, which the law is designed to protect.
Jacobsen, Cont.

- Notably, the court found that Jacobsen’s economic right was being violated even though he did not directly profit from the licensing of the works in question.
- The court explained: “The attribution and modification [notice] requirements directly serve to drive traffic to the open source incubation page and to inform downstream users of the project, which is a significant economic goal of the copyright holder that the law will enforce.”
The Effect of Jacobsen on New OSS Licensing Litigation

• That the court went so far “downstream” to find a right protectable by copyright, opens the door for other OSS licensors who are not directly profiting from the licensing of the copyrighted work to seek protection for their open source software.
FSF v. Cisco

- In 2008, the Free Software Foundation (FSF) filed a complaint against Cisco alleging that Cisco violated both the GPL and LGPL licenses accompanying various GNU programs for which FSF owns copyrights, and that, as a result, Cisco has infringed on FSF-owned copyrights.

- In 2009, the FSF settled the GPL compliance license with Cisco. Under the settlement, Cisco will make a monetary donation to the FSF and appoint a Free Software Director to conduct continuous reviews of the company's license compliance practices.
Your License Under the *Jacobsen* Standard

- Does your license use scope-limiting terms?
  - Does the license employ natural conditional language?
  - Does your license include a portion explicitly stating its purpose in conditioning the use of the OSS?
  - What language creates a condition under each party’s state’s property law?
Your License Under the Jacobsen Standard, Cont.

• Limiting Terms, Cont.
  ▫ What language creates *only a covenant* in each party’s state?
  ▫ Does the license explain the effect of a licensee acting outside of the scope of the license?

• Can the licensor demonstrate an economic benefit, even indirectly, in the copyrighted OSS software?
Copyright Infringement

• Since failing to adhere to an open source license can be considered a copyright violation, the party breaching the license can be subject to multiple punishments
  ▫ An injunction to stop the distribution and use of their software
  ▫ Statutory Damages
  ▫ Monetary Damages
Things to remember

- The multitude of open source licenses available to developers creates a problem that must be handled with care.
- You have to ensure that the license you choose will have the results you want.
- You have to be sure that if you are using someone else’s OSS that you follow the license that their software is released under.
- Making the wrong choice of licenses can result in someone using your software in a way you don’t want, and leave you without the power to stop it.
- Failing to adhere to a license chosen by someone else can leave you liable for copyright infringement.
- OSS is a complex problem which is made easier to understand with the help of a knowledgeable lawyer.