

# Open Source Licensing 101

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# Overview

We'll cover a high-level overview of:

- Why you should care about and understand open source licenses
- Spectrum of licenses
- OSS license compatibility
- What is distribution?
- What are notices?
- Resources

**Important note: This is not legal advice. I am not a lawyer.**

**Why even care about open source licenses?**

# OSS comes with obligations, which vary by the license

- Open Source Licenses are non-negotiable
- If not careful, you could be out of compliance with the obligations and not even realize it
- May subject proprietary code to OSS obligations
- Open source license disputes can result in damages (payment) or injunction (halting usage), on top of negative PR
  - **Don't reach that point. It can be avoided through education, tracking, and consultation.**

## Recent Buzz Related to OSS Licenses

**“Linux beats legal threat from one of its own developers...**

*McHardy has been accused of seeking his own financial gain by approaching numerous companies in German courts.”*

<https://www.zdnet.com/article/linux-beats-internal-legal-threat/>

**“Facebook relicenses React in the face of open-source dev backlash”**

<https://www.zdnet.com/article/facebook-relicenses-react-in-the-face-of-open-source-dev-backlash/>

# Copyright & Licensing Basics

# Copyright Concepts in Software

- Basic rule: copyright protects creative works
- Copyright generally applies to literary works, such as books, movies, pictures, music, maps
- Software is protected by copyright
  - Not the functionality (that's protected by patents) but the expression (creativity in implementation details)
  - Includes Binary Code and Source Code
- The copyright owner only has control over the work that he or she created, not someone else's independent creation
- Infringement may occur if copying without the permission of the author

# Licenses

- A license is the way a copyright or patent holder gives permission or rights to someone else
- The license can be limited to:
  - Types of use allowed (commercial / non-commercial, distribution, derivative works)
  - Exclusive or non-exclusive terms
  - Geographical scope
  - Perpetual or time limited duration
- The license can have conditions on the grants, meaning you only get the license if you comply with certain obligations
  - E.G. provide attribution, or give a reciprocal license



# Open Source Licenses

**Hundreds of FOSS licenses exist,  
but only ~80 are approved by OSI**

## Open Source Initiative

*“We are the stewards of the [Open Source Definition \(OSD\)](#) and the community-recognized body for reviewing and approving licenses as OSD-conformant.” – Open Source Initiative (OSI)*

- OSD lists 10 criteria that must be met to be considered open source
- 83 approved licenses listed on [opensource.org](https://opensource.org/licenses/) as of April 2018
  - *What about the rest of the hundreds?*
  - *It's a good idea to use an OSI-approved license rather than create yet another one*

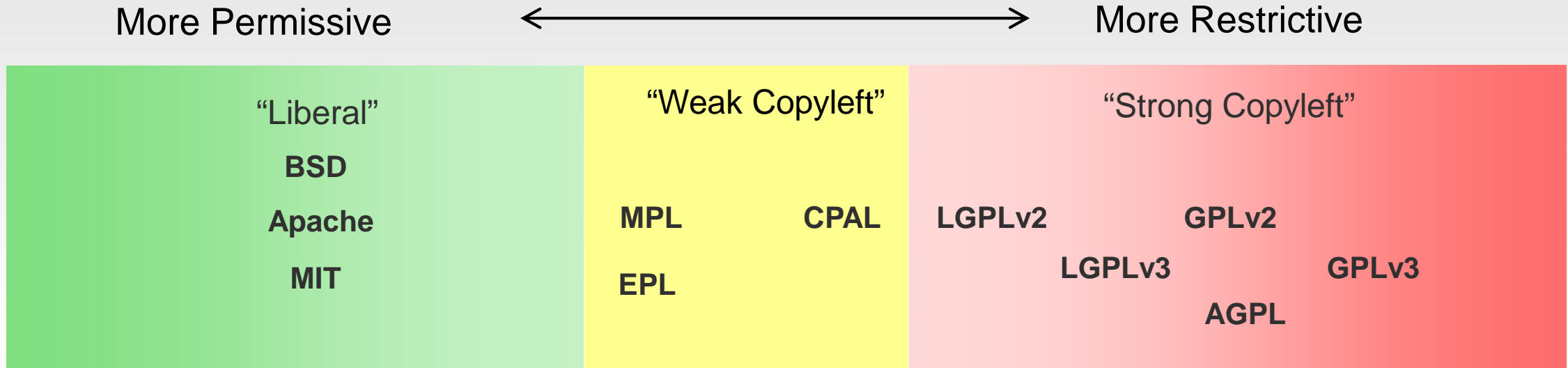
# Permissive Open Source Licenses

- Permissive OS license: a term used often to describe minimally restrictive FOSS licenses
- Example: BSD-3-Clause
  - The BSD license is an example of a permissive license that allows unlimited redistribution for any purpose in source or object code form as long as its copyright notices and the license's disclaimers of warranty are maintained
  - The license contains a clause restricting use of the names of contributors for endorsement of a derived work without specific permission
- Other examples: MIT, Apache-2.0

# License Reciprocity & Copyleft Licenses

- Some licenses require that if derivative works (or software in the same file, same program or other boundary) are distributed, the distribution is under the same terms as the original work
- This is referred to as a “copyleft” or “reciprocal” effect
- Example of license reciprocity from the GPL version 2.0:  
*You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed [...] under the terms of this License.*
- Licenses that include reciprocity or Copyleft clauses include all versions of the GPL, LGPL, AGPL, MPL and CDDL

# Spectrum of OS licenses



- Some are liberal; others are more restrictive
- Each comes with certain obligations
- Not all are compatible with each other

# License Compatibility

- Not all Open Source licenses are compatible
- All permissive licenses are compatible with each other
- Other common scenarios:

		Bringing this license:			
		MIT	Apache 2.0	GPLv2	GPLv3
Into this code:	MIT	✓	✓	✗	✗
	Apache 2.0	✓	✓	✗	✗
	GPLv2	✓	✗	✓	✗**
	GPLv3	✓	✓	✗**	✓

**\*\*Exception:** “If code is released under GPL “version 2 or later,” that is compatible with GPLv3 because GPLv3 is one of the options it permits.” per <https://www.gnu.org/licenses/gpl-faq.html#v2v3Compatibility>

# Public Domain

- The term **public domain** refers to software not protected by law and therefore usable by the public without requiring a license
- Developers may include a *public domain declaration* with their software
  - E. g., “All of the code and documentation in this software has been dedicated to the public domain by the authors.”
  - The public domain declaration is not the same as a FOSS license



# Distribution & Attribution

## Obligations kick in with distribution

**What is “distribution”?** -- Transferring a copy of a copyrighted work (such as software) from one legal person to another

Because “legal person” includes a corporation, there is no distribution if software is merely transferred between employees of the same company  
→ think, a company’s internal-only tools and code

The Affero GPL (AGPL) license is one exception since its requirements are triggered once software is modified and made available for use and interaction over a network

→ websites would count; have to be cautious of this one

# Notices

- **Copyright notice** – an identifier placed on copies of the work to inform the world of copyright ownership. Example: Copyright © A. Person (2016).
- **License notice** – a notice that specifies and acknowledges the license terms and conditions of the FOSS included in the product.
- **Attribution notice** – a notice included in the product release that acknowledges the identity of the original authors and / or sponsors of the FOSS included in the product.
- **Modification notice** – a notice that you have made modifications to the source code of a file, such as adding your copyright notice to the top of the file.

# Notices within GitHub Repos

- For Apache 2.0-licensed projects, you may see a NOTICE file
- Example: <https://github.com/Comcast/Comcast.github.io/blob/master/NOTICE>

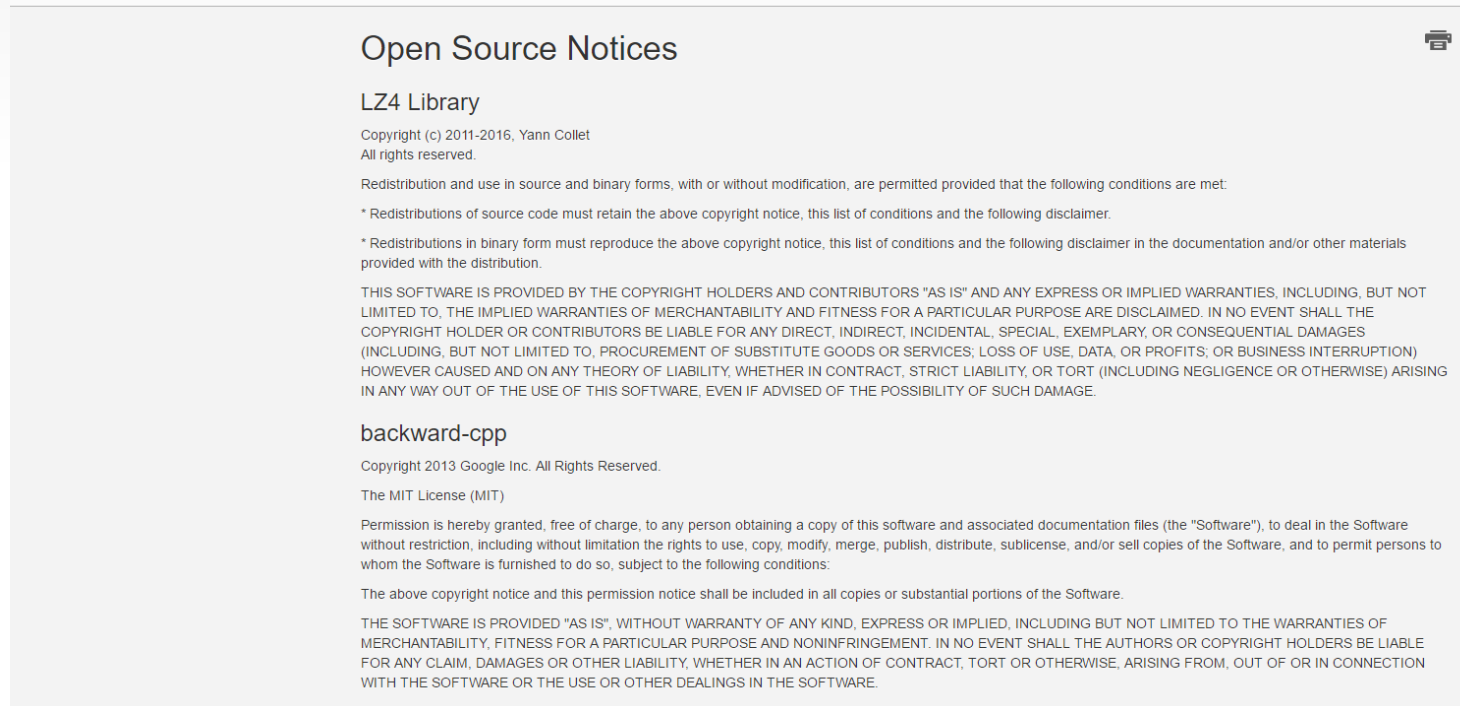
```
17 lines (12 sloc) | 680 Bytes

1 Comcast.github.io
2 Copyright 2017 Comcast Cable Communications Management, LLC
3
4 Licensed under the Apache License, Version 2.0 (the "License");
5 you may not use this file except in compliance with the License.
6 You may obtain a copy of the License at
7
8 http://www.apache.org/licenses/LICENSE-2.0
9
10 Unless required by applicable law or agreed to in writing, software
11 distributed under the License is distributed on an "AS IS" BASIS,
12 WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
13 See the License for the specific language governing permissions and
14 limitations under the License.
15
16 This product includes software developed at Comcast (http://www.comcast.com/).
```

# Open Source Notices for Products/Apps

- **When companies use OSS in software and products that is distributed – they post attribution notices online or in-app.**
- Example: Netflix Open Source Notices: <https://help.netflix.com/legal/notices>

**NETFLIX**



The screenshot shows a webpage titled "Open Source Notices" with a hamburger menu icon in the top right corner. The page lists two open-source libraries: LZ4 Library and backward-cpp. Each entry includes the library name, copyright information, and a summary of the license terms.

## Open Source Notices

### LZ4 Library

Copyright (c) 2011-2016, Yann Collet  
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### backward-cpp

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# Resources

- Choose a License help: <https://choosealicense.com/>
- TL;DR Legal: <https://tldrlegal.com/>
- License scanning tools
  - LicenseFinder: <https://github.com/pivotal-legacy/LicenseFinder>
  - FOSSology: <https://github.com/fossology/fossology>
- Publications and webinars from The Linux Foundation:  
<https://www.linuxfoundation.org/?s=compliance>
  - Including some free courses like ‘Compliance Basics for Developers’:  
<https://training.linuxfoundation.org/linux-courses/open-source-compliance-courses/compliance-basics-for-developers>

## Takeaways

- When creating a new work, use an OSI-approved license.
- Always track OSS and know what's in your code.
  - Use a scanning tool if possible.

# Q&A

Thank you for your time!