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Open Source Readiness

Understanding Copyleft

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What is a **copyleft** license?

An open source software license requiring that if you **distribute** a **derivative work** of the software, you must provide the **corresponding source code** for the derivative work to the recipient under the terms of the **same license**.

Strong copyleft versus “weak” or “library” copyleft

Strong copyleft licenses require you to provide source code for the complete derivative work, under the same license.

Examples: GNU GPL and AGPL, CC By-SA

Weak or library copyleft licenses (usually) require you to provide source code only for the modified open source library.

Examples: GNU LGPL, Mozilla Public License, Eclipse Public License, CDDL

Weak copyleft variants

LGPL only requires modifications to the library itself to be made open source, so long as you enable the recipient to further modify and re-link the library (see Section 6).

MPL (Mozilla) only requires modifications to the source code of the library to be made open source; does not affect other derivative works.

EPL (Eclipse) is typically interpreted similarly to MPL, with “separate modules of software” unaffected, but can be interpreted as nearly as broad as the GPL.

What is a **derivative work**?

U.S. Copyright Act definition:

A “derivative work” is **a work based upon one or more preexisting works**, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, **or any other form in which a work may be recast, transformed, or adapted**. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a “derivative work”.

-17 U.S.C. § 101

What is a **derivative work** of **software**?

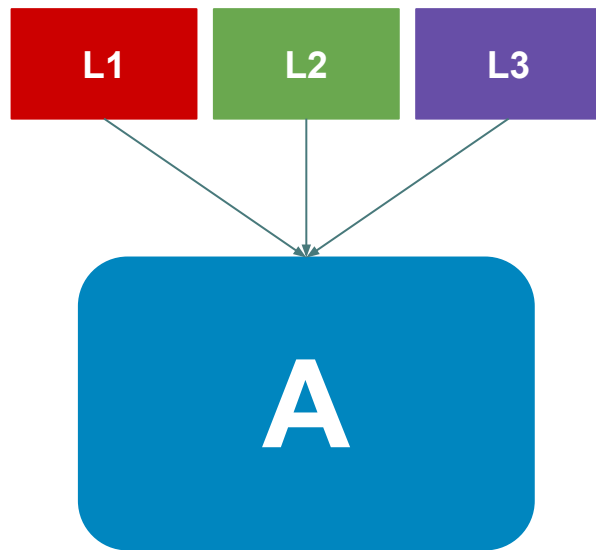
According to courts:

- Modifying proprietary source code files (EyePartner, Inc. v. Kor Media Group LLC, No. 4:13-10072 (S.D. Fla. July 15, 2013))
- Translation of a program to another architecture (SAS Inst., Inc. v. S&H Computer Systems, Inc., 605 F. Supp. 816)
- Replacing an operating system bootloader and kernel extensions (Apple v. Psystar, 673 F. Supp. 2d 931)

What about open source libraries?

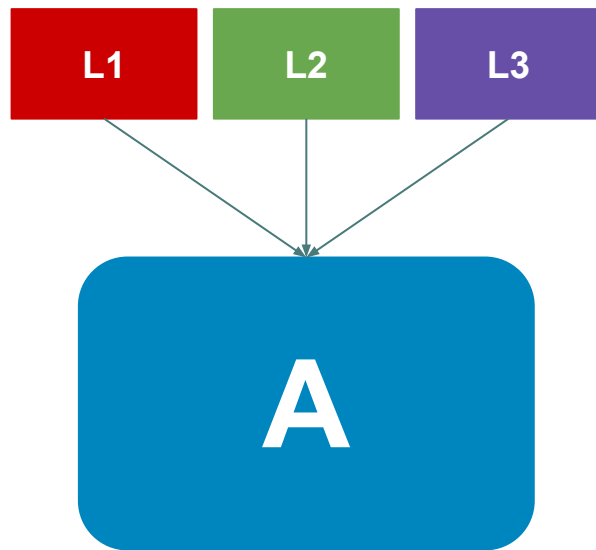
Consider a custom application A that depends upon open source libraries L1 (GPLv2), L2 (LGPLv2) and L3 (Apache v2). Is A a derivative work of L1, L2, and L3?

Courts have not answered this specifically in the open source context.



Various alternative interpretations

1. A is derivative of L1-L3 if it doesn't work without them
2. A is derivative of L1-L3 if it contains literal code from them (including headers from dynamic linking)
3. A is derivative if it is compiled with L1-L3 into a single binary
4. A, L1, L2, and L3 form a "collective work"



The safe bet: don't get cute

Micro Star v. Formgen, Inc., 154 F.3d 1107, 1110 (9th Cir.1998)

Formgen's Duke Nukem 3D allowed users to create their own maps/levels. Micro Star sold CD-ROM of user-created maps. Microstar sued for infringement.

- Micro Star: map files contained no copyrighted content, only instructed game where to place objects
- Court: By referencing protected content, Micro Star infringes game's "story" and Formgen's right to create sequels

Don't get cute: linking edition

Dun & Bradstreet Software Servs., Inc. v. Grace Consulting, Inc., 307 F.3d 197, 208 (3d Cir. 2002)

Grace offered alternative W-2 processing software that allowed D&B's customers to avoid upgrading. Grace's software interfaced with D&B's via "Call and Copy" commands (i.e. copied them into memory and accessed their functionality).

- Grace: programs remain separate in memory and D&B code is unchanged.
- Court: "Sophistry." Accessing D&B code is infringement.

Don't get cute: kernel modules edition

Apple, Inc. v. Psystar Corp., 673 F. Supp. 2d 931 (N.D. Cal. 2009)

Psystar made desktop computers from commodity hardware and modified Apple's OS X to run on them. It bought individual OS X licenses for each computer. Apple sued for infringement.

- Psystar: we didn't copy or modify Apple code, just replaced the bootloader and kernel modules to run on other hardware.
- Court: "The inclusion of the copyrighted Mac OS X with the above-described additions and modifications makes Psystar's product an infringing, derivative work."

What is **distribution** of software?

- Under the Copyright Act, copyright owners have an exclusive right to **distribute copies** of their copyrighted works, but distribution is not defined.
- Copyleft terms (except AGPL's) apply only upon distribution of the software (as source or object code).
- Distribution becomes an issue when:
 - Hiring third-party contractors to modify GPL software
 - Determining when copyleft should be used in SaaS
- See: Heather Meeker, [*The Gift that Keeps on Giving — Distribution and Copyleft in Open Source Software Licenses*](#) in JOLTS

What is **distribution** of software?

Definitely Distribution	Definitely Not Distribution
<ul style="list-style-type: none">● Providing copies of open source software in executable or source code form to customers, partners, etc.● Delivering open source software as part of on-customer-premises SaaS offering● Incorporating open source software into client-side javascript of SaaS offering (downloaded by user's browser)	<ul style="list-style-type: none">● Providing copies of open source software to different employees within the same company● Using open source library on server side of company-hosted SaaS offering

What is **distribution** of software?

Probably Distribution	Probably Not Distribution
<ul style="list-style-type: none">● Providing copies of open source software to affiliates or minority-owned subsidiaries● Acquisition of modified open source software as part of a merger	<ul style="list-style-type: none">● Providing copies of open source software to wholly- or majority-owned subsidiaries

Distribution and independent contractors

- Distribution to an independent contractor — individual or company, on- or off-site — may be “distribution”. *But...*
 - FSF (GPL’s author) appears to apply only to off-site distribution ([link](#))
 - “distribution” may not include limited, private distribution (see [Meeker](#))
- Distribution requires that recipient receive OSS license and source code, **not** that source code be published
- GPLv2 gives recipient right to redistribute, but doesn’t preclude professional consequences
- GPLv3 specifically exempts distribution to contractors for private modification (Section 2)

Incompatibility issues with copyleft licenses

- License compatibility is only an issue when a copyleft license is involved
 - Copyleft license requires distribution under the same terms (read: no additional restrictions)
 - Other license contains restriction that does not appear in copyleft license

GPLv2 incompatibilities

- Other copyleft licenses (MPL v1.1, EPL v1 & 2, CDDL): incompatible copyleft terms
- L/GPLv3 unless GPLv2 software includes “or later version” designation
- Apache v2: patent license termination provision
- OpenSSL License (pre-relicensing): anti-copyleft provision

What changed in GPLv3

New Restrictions

- May not forbid circumvention of DRM to exercise rights under the license (§3)
- Must include “installation information” for GPLv3 software embedded in “user product” (§6)
- Cannot limit license of target in corporate acquisition & must provide source (§10)

Other New Terms

- May convey to contractors to modify or run exclusively for you (§2)
- May provide source code from internet location or peer-to-peer network (§6)
- May include certain supplementary terms (§7)
- If license terminated for non-compliance, opportunity for automatic reinstatement (§8)

GPLv3 compatibility notes

- **Look for “GPLv2 or later” or “GPLv2+”**
- Specifically permits certain (limited) restrictions, e.g. requiring “appropriate legal notices”
- Compatible with Apache v2 (includes similar defensive patent termination provision)
- Specifically includes one-way compatibility with Affero GPL software (combination is licensed under Affero, the stronger copyleft)



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