



Licenses and Copyright

Free and Open Source Software (FOSS) Licenses

15 - 17 November 2022 | Guido Trenschi (JSC, Simulation & Data Lab Neuroscience)



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Motivation

Terminology

Free and Open Source Software (FOSS) License Types

How to chose a License

Copyright and License Notice

Good Practice

DISCLAIMER

I am not a lawyer.

Motivation

Terminology

FOSS License Types

How to chose a License

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Good Practice

License and copyright issues are a complicated matter and usually only an afterthought for software developers.

Motivation

- An important part of the scientific process is to make your source code and software available to others.
- (Unlicensed code is closed code.)
- Without a license agreement, software may be left in a state of legal uncertainty.
- Potential users may not know which limitations owners may want to enforce.
- Owners may leave themselves vulnerable to legal claims or have difficulty controlling how their work is used.

Any license is better than none!

Motivation

Terminology

Licenses

How to chose a License

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Good Practice

Free and Open Source Software (FOSS) licenses terminology explained:

- *Copyright*
- *Copyleft*
- *Copyleft-type license*
- *Strong copyleft, weak and none copyleft*
- *Permissive, BSD-style license*
- *Viral license*

Copyright

- Protects the “*fixed form*” of an idea, not the idea itself.
- It comes into existence when the work is “*fixed*”.
- Gives the author(s) exclusive economic rights over the copyrighted material, i.e.:
 - Making copies
 - Issuing copies to the public
 - Adapting the work
- Copyrights are considered territorial rights and vary by country.

[Rowan Wilson (OSS Watch) (2009), “Copyright in Software and Open Source Licensing”
<http://de.slideshare.net/crmwilson/copyright-in-software-and-open-source-licensing>]

Copyleft

- Copyleft is a concept of using of the copyright and plays on the word “*copyright*”.
- It **doesn't** mean abandoning the copyright!
- To “*copyleft*” source codes or software it is first stated that it is copyrighted.
- Distribution terms are added, that gives everyone the rights to use, modify, and redistribute the program's code, or any program derived from it, but only if the distribution terms are unchanged.

[GNU Operating System, “What is copyleft?”
<https://www.gnu.org/licenses/copyleft.en.html>]

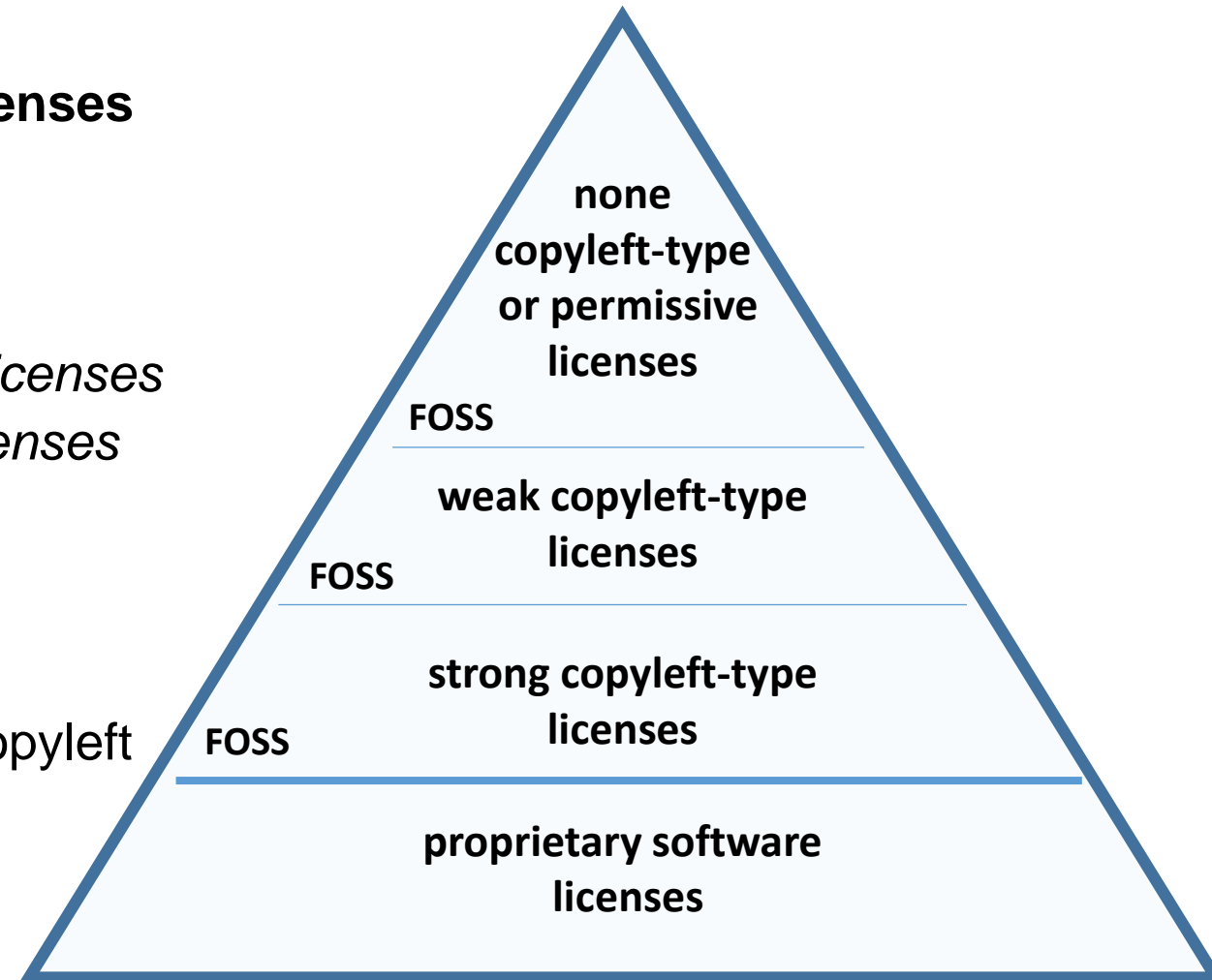
Copyleft-type Licenses

- Copyleft-type licenses are a use of existing copyright law to ensure a work remains freely available.
- The ‘GNU General Public License’ (GPL), originally written by Richard Stallman, was the first software copyleft license to see extensive use.

[Wikipedia, “Copyleft”
<https://en.wikipedia.org/wiki/Copyleft>]

Strong, Weak and None Copyleft-type Licenses

- “Copyleft” distinguishes between:
 - *Strong copyleft & strong copyleft-type licenses*
 - *Weak copyleft & weak copyleft-type licenses*
 - *None copyleft & none copyleft-type or permissive licenses*
- This **represents a spectrum** where the copyleft gets weaker.



[Software Freedom Law Center, “Copyleft and the GNU General Public License: A Comprehensive Tutorial and Guide”
<https://copyleft.org/guide/comprehensive-gpl-guide.pdf>]

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FOSS License Types

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FOSS License Types

Strong Copyleft-type Licenses

- Anything which is “*work*” or a “*work based on a work*” licensed under a strong copyleft is subject to its requirements.
- They are viral.

Also known as the “*copyleft effect*”.

- The most popular strong copyleft-type licenses are:
 - *GNU General Public License Version 2 (GPLv2)*
 - *GNU General Public License Version 3 (GPLv3)*
 - *Eclipse Public License Version 1.0 (EPL)*

[Software Freedom Law Center, “Copyleft and the GNU General Public License: A Comprehensive Tutorial and Guide”
<https://copyleft.org/guide/comprehensive-gpl-guide.pdf>]

FOSS License Types

Weak Copyleft-type Licenses

- In particular situations full copyleft may not best serve.

An example is free software which should be combined with code under a non-free license. The Lesser General Public License would allow this and is sometimes used in that fashion.

- The most popular weak copyleft-type licenses are:
 - *GNU Lesser General Public License Version 2 (LGPLv2)*
 - *GNU Lesser General Public License Version 3 (LGPLv3)*
 - *Mozilla Public License 2.0 (MPLv2)*

[Software Freedom Law Center, “Copyleft and the GNU General Public License: A Comprehensive Tutorial and Guide”
<https://copyleft.org/guide/comprehensive-gpl-guide.pdf>]

FOSS License Types

None Copyleft-type Licenses

- They are **permissive** licenses and do not have a copyleft.
 - *Most of them allow sub-licensing.*
 - *The creation and distribution of derivative works without restrictions.*
 - *They are very convenient for developers and cause no license compatibility issues.*
 - *Derivative works **can become proprietary**.*
- The most popular none copyleft-type licenses are:
 - *Apache License 2.0*
 - *MIT License*
 - *BSD 2-Clause and BSD 3-Clause License*
 - *Python License Version 2.0 (Python 2.0)*

[FOSS Lawyers, “non copyleft licenses”
<http://fosslawyers.org/permissive-foss-licenses-bsd-apache-mit/>]

Motivation

Terminology

FOSS License Types

How to chose a License

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Good Practice

How to chose a License

Contributing to an existing project

- Release your modified versions under the same license as the original work.
- Using a different license for your modifications often makes that cooperation difficult.
- You should only chose a different license when there is a strong reason to justify it.

One case where using a different license can be justified is when you make major changes to a work under a non-copyleft, permissive license. If the version you've created is considerably more useful than the original, then it's worth copylefting your work.

[GNU, "How to choose a license for your own work"
<https://www.gnu.org/licenses/license-recommendations.html>]

How to chose a License

Contributing to an existing project

- If you have chosen a different license:
 - *Make sure that the original license allows use of the material under your chosen license.*
 - *For honesty's sake, show explicitly which parts of the work are under which license.*

[GNU, "How to choose a license for your own work"
<https://www.gnu.org/licenses/license-recommendations.html>]

How to chose a License

Setting up a new project

- Depending on the software's purpose, different licenses might be appropriate.

Depending on the software's purpose, different licenses may be appropriate.

The strong copyleft of the GNU General Public License (GPL) is often appropriate for all kinds of software, and includes numerous protections for users' freedom.

[GNU, "How to choose a license for your own work"
<https://www.gnu.org/licenses/license-recommendations.html>]

How to chose a License

Small Programs

- It is not worth the trouble to use copyleft for most small programs.

300 lines is a good benchmark: when a software package's source code is shorter than that, the benefits provided by copyleft are usually too small to justify the inconvenience of making sure a copy of the license always accompanies the software.

- *For small programs a non-copyleft, permissive, e.g. Apache License 2.0, is a good choice.*

It has terms to prevent contributors and distributors from suing for patent infringement. This doesn't make the software immune to threats from patents (a software license can't do that), but it does prevent patent holders from setting up a “bait and switch” where they release the software under free terms then require recipients to agree to non-free terms in a patent license.

[GNU, “How to choose a license for your own work”
<https://www.gnu.org/licenses/license-recommendations.html>]

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Copyright and License Notice

- Every nontrivial file needs a copyright notice as well as the license notice.

Any file more than ten lines long is nontrivial for this purpose.

- Copyright notices should look like this:

```
Copyright (C) year_1, year_2, year_3 copyright-holder
```

```
Copyright (C) year_1 - year_n copyright-holder
```

- The word “*Copyright*” must always be in English, by international convention.

[GNU, “Copyright notices”
https://www.gnu.org/prep/maintain/html_node/Copyright-Notices.html]

Copyright and License Notice

- The license notice depends on the license chosen.

Example: GPL license notice:

This file is part of Foobar.

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[GNU, "How to use GNU licenses for your own software"
<https://www.gnu.org/licenses/gpl-howto.en.html>]

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Good Paractice

- Always license your code!
 - Depending on the software's purpose different licenses might be appropriate.
 - Every non-trivial file needs a copyright notice.
- Strongly consider to obtain contributor license agreements.
- Keep track of contributions.
 - Version control system.
- Keep track of your inbound licenses.
 - May cause compatibility issues!