

Licensing of Open Source projects

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- Rules for inclusion in Debian (main)
 - Free redistribution.
 - Inclusion of source code.
 - Allowing for modifications and derived works.
 - No discrimination against persons or groups.
 - No discrimination against fields of endeavor, like commercial use.
 - The license needs to apply to all to whom the program is redistributed.
 - License must not be specific to Debian.
- Debian also has a non-free section
 - Needs to be enables separately
 - Less supported by Debian infrastructure (QA, builds, ...) and developers

Example: BSD-2-Clause

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" [...]

Example: GPL 2

3. You may copy and distribute the Program (or a work based on it, [...]) in object code or executable form [...] provided that you also do one of the following:

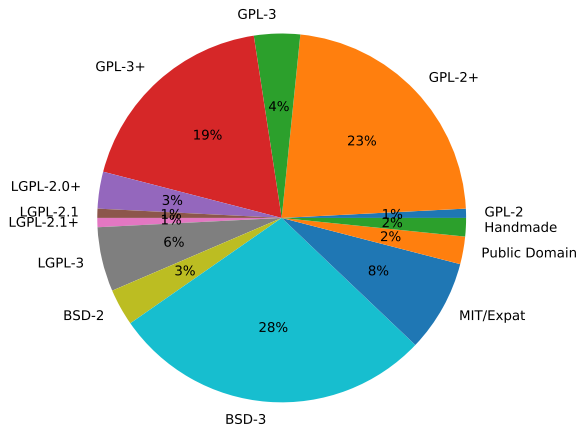
- Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy [...]
- Accompany it with the information you received as to the offer to distribute corresponding source code.
[...]

License types: Public Domain

- Not a license
- Author holds absolutely no rights on the work
- May not applicable with national law (f.e. Germany)
- Fallback license: CC0: waives rights as much as legally possible:

[...] 3. Public License Fallback. Should any part of the Waiver for any reason be judged legally invalid or ineffective under applicable law, then the Waiver shall be preserved to the maximum extent permitted taking into account Affirmer's express Statement of Purpose.

Licenses used in Debin Astro



- Copyleft: 56%
- Permissive licenses: 40%
- No non-free packages anymore

Problem: No license

- Code offered without any license
- By default: No permission at all
- → code unusable for others
- Always assign a license to your code

Problem: Custom License Text

- Self-formulated licenses are often unclear
- Only rights are granted that are in the license
- Parts tend to be forgotten: f.e. modification rights
- Citation requirements are problematic
- Easily incompatible with Open Sources
- Will create problems when code shall be re-used
- After years, license changes are really hard

Don't do it. Use a well-known license

Problem: Stolen code

```
/* This file is part of the ESO SINFONI Pipeline
 * Copyright (C) 2004,2005 European Southern Observatory */
[...]
sinfo_fit_amoeba(double**p, double y[], int ndim, double ftol,
                 double (*funkt)(double[]),int* nfunkt)
{
```

(Code taken from Numerical Recipes in C, pp. 172f)

```
}
```

Never do that. This is software piracy.

- Always properly indicate the copyright of the code
- Document third party licenses

Problem: Numerical Recipes

- Text book for students
- Bad reputation by mathematicians
- code is **not free to use** (unless you have the book, or an institutional license)
- code is **not free to distribute**

[...] This license lets you personally use Numerical Recipes code ("the code") on any number of computers, but only one computer at a time. You are not permitted to allow anyone else to access or use the code.

Problem: Non-free parts

- Incompatible with GPL: Resulting work non-distributable
- Blocks inclusion in many Linux Distributions (Debian, Fedora)
- Use replacement:
 - PGPLOT: **GIZA** (GPL2), <http://giza.sourceforge.net>
 - IAU SOFA: **ERFA** (BSD), <https://github.com/liberfa/erfa>
 - IDL: **GNU Data Language** (GPL2),
<http://gnudatalanguage.sourceforge.net>

Problem: Incompatible licenses

- Main cause GPL version 2 vs. GPL version 3:
 - GPLv2 requires that all is under GPL version 2
 - GPLv3 requires that all is under GPL version 3
- If using GPL, always use the phrase “or any later version”

Hints to choose a license

- Always license your code
- Use a well-known license
- Choose a GPL compatible license.
 - You can use other's (GPL) code
- Use a permissive license (BSD, MIT or similar).
 - Other can use your code in their project
- Think carefully. Later changes can be very hard (retired/unavailable copyright holders)

And Data?

- Generally data is not copyrightable
- Copyrightable are:
 - databases (*only* if arranged or selected in a certain creative way)
 - photographs (but probably not FITS files)
- Use CC0 to be on the safe side

Thank you!