

# Licenses: not just a lawyer thing

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# About Armijn

- ▶ using Open Source software since 1994
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# Subjects

- ▶ a few examples of suboptimal licensing
- ▶ examples of good licensing
- ▶ recommendations to prevent suboptimal licensing in *your* code

Please note: I am not a lawyer, and this is not legal advise.

This talk is about encouraging better use of licensing information to make it easier for people to (re)use free software with confidence and prevent confusion.

# Licensing “smells”

In a lot of free software code there are unclarities about the license of code:

- ▶ no license information
- ▶ wrong relicensing
- ▶ easier

This does not (per se) indicate a legal risk, but I think we can (and should!) do better.

Let's look at some “smells” .

## Example: no license reference, just copyright notice

Linux kernel is littered with examples (mostly old code, but also more recent code):

*Copyright (C) 1991, 1992 Linus Torvalds*

(source: Linux kernel `fs/minix/dir.c`)

But it is not just Linus:

*Copyright IBM Corp. 2007-2010 Mel Gorman  
<mel@csn.ul.ie>*

(source: Linux kernel `mm/compaction.c`)

Some code even comes without a copyright notice and you would need to do some effort (using `git`) to find out who wrote the code.

Of course, chances that people will sue if you distribute under GPLv2 are zero.

## Example: Linux kernel is not GPLv2

*This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, version 1*

(source: Linux kernel  
drivers/net/ethernet/cirrus/cs89x0.h)

This header file might not be copyrightable and is already relicensed in U-Boot.

## License text variants (1)

*This file may be redistributed under the terms of the GNU General Public License version 2 or at your discretion any later version.*

(source: e2fsprogs e2fsck/journal.c)

Variant wording could lead to a different meaning and needs review to eliminate doubts.

## License text variants (2)

*This library is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation version 2.0*

(source: KDE kdelibs kioslave/metainfo/metainfo.cpp)



## License text variants (3)

*Copyright (C) 2000 Ximian, Inc.*

*This program is free software; you can redistribute it and/or modify it under the terms of version 2 of the GNU General Public published by the Free Software Foundation; either version 2 of the License as published by the Free Software Foundation.*

(source: many files in Evolution)

## Incomplete relicensing: GPLv2+ to LGPLv2+

*This program is free software; you can redistribute it and/or modify it under the terms of the GNU Library General Public License as published by the Free Software Foundation; either version 2, or (at your option) any later version.*

*This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.*

(source: many files in KDE and GNOME)

## Referring to another file

Many files refer to other source code files, or to a COPYING or LICENSE file:

*see flexcop.c for copyright information*

(source: Linux kernel  
drivers/media/dvb/b2c2/flexcop-dma.c)

This is technically correct, but only as long as these files are distributed together.

## Why care?

- ▶ license texts in a file better indicate the license of the code. If code is copied around to code bases with different LICENSE or COPYING files (or no license files!) it is easy to lose the correct license information.
- ▶ less risk of license information getting lost if a single file is copied. Example: Linux kernel code in bootloaders (Realtek bootloader, Vivi bootloader)
- ▶ code without licensing information embedded is often falsely seen as “public domain”. A license text in the file itself works as a reminder to people.
- ▶ People look at other code in a repository for “best practices”. Having correct headers encourages correct use.

# What a more correct header looks like

Ideally, a header would have:

- ▶ list of copyright holder(s)
- ▶ clear license statement
- ▶ (optionally) name of the file or program

## FSF licensing example

```
/* error.c – Functions for handling errors. */  
/* Copyright (C) 1993-2009 Free Software Foundation,  
Inc.
```

*This file is part of GNU Bash, the Bourne Again SHell. Bash is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.*

*Bash is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.*

*You should have received a copy of the GNU General Public License along with Bash. If not, see <<http://www.gnu.org/licenses/>>. \*/*

## Checklist for using more correct headers

1. add a (compatible) license text to each individual file that is copyrightable, using a standard text. Non-standard texts make license scanners report false positives and will need review.
2. optionally, add the file name to better indicate origin of the file
3. use a license scanner (Ninka, FOSSology, proprietary tool) to verify license text correctness
4. (if possible) try to encourage upstream maintainers be more correct as well

# Conclusion

There are quite a few license smells in free software code, which could be problematic if the code is reused.

Using just a little bit more effort we all can improve the situation and avoid confusion and also lower legal risks for everyone.



# Questions