

FSEM 1111 Computer Security – from a Free Software Perspective

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Copyright

Copyright is a set of exclusive rights regulating the use of a particular expression of an idea or information.

- Copyright does not include the right to reproduce – for example, other copyrights may conflict!
- Copyright generally allows the owner to prohibit reproduction of the covered work
- A copyright license is a contract by which a copyright owner permits reproduction (under certain conditions)

What can be Copyrighted?

- Almost any information: text, sound, pictures
- Work must be fixed (written or recorded) and “original” work created by “mental labor”
- Exceptions: facts, numbers, individual words
- Corner-cases: typeface designs, databases¹

¹Facts cannot be copyrighted, but some US courts think that the compilation is copyrightable.

Derived Works

- Copyright includes rights adaptations of a work
- Copyright covers a specific expression of an idea
- Alternative expressions of the same idea are not covered
- If there are only a few ways to express an idea, those ways are not copyrightable.

Who owns the Copyright?

- Initially the author or his employer automatically have copyright
- The owner can sell the copyright
- Unlike patents and trademarks, copyright does not have to be registered (but can be, which strengthens the author's legal position)

First-sale doctrine

- Copyright law does not restrict the owner of a legitimately obtained copy from reselling the copy
- The copyright industry dislikes this very much

Fair-use doctrine

Sometimes, unauthorized copying is ok. What consists “fair use” differs between countries.

- What is the purpose of the use? Caching a WWW-page in your browser is an optimization.
- What is the nature of the copyrighted work? Copying software from disk to computer memory is obviously required for execution.
- How much of the work was copied? Citing a sentence of a paragraph from a larger text is ok.
- What is the effect on the value of the copyrighted work? Canada permits copying for personal use without restrictions.

Compulsory Licensing

For certain works and uses (for example, musical works in the US and Europe), no specific licensing agreement is required:

- Making a copy does not require permission from the owner
- Instead, making a copy requires filing notice and paying a set fee
- Fees are collected by collecting societies and redistributed to authors

Duration of Protections

- Patents: usually 20 years
- Copyright: life of the author plus 50 or 70 years
- Trademarks: as long as used and enforced

Social Justification

- Society recognizes that works are hard to create but easy to replicate
- Incentive / reward for authors
- Payment and profits for editors and publishers

Critique

- Copyright terms are excessively long
- Copyright comes at an economic and social cost
- How much of an incentive is required?
- Would works truly not be published otherwise?

The Public Domain

- Once copyright expires (if ever), works end up in the public domain
- Anyone can do anything with works in the public domain
- Copyright owners can place works explicitly into the public domain if they want
- Works derived from the public domain can be again copyrighted

Copyleft

Key ideas:

- use copyright to get rid of copyright
- instead of putting work into the public domain, license it freely
- add a requirement to the license that derived works must also be licensed freely

⇒ A gift that keeps on giving

The GNU Public License

- The original Copyleft license
- Originally written by Richard Stallman for GNU software
- Can be applied to works outside of the software domain
- Various variations (GPL, GFDL, AGPL, LGPL) exist

Key GPL Requirements

- Anyone can copy, use and distribute the work freely
- Any recipient must obtain a copy of the source code
- Derived works must be licensed under the GPL as well
- Patents must not be used to circumvent free distribution
- Anyone can charge for making a copy, but not restrict the recipient from making more copies

What is “source code”?

- The GPL defines “source code” as the preferred format for making modifications
- This specifically excludes data that can be generated with commonly available tools (i.e. compilers)
- Source code specifically includes the build system (code to drive the generation process)

What is a “Derived Work”?

- Derived works are defined using the common definition of copyright – whatever copyright requires a license for
- For software, this specifically includes all binaries linking against the GPL-ed code
- The Free Software Foundation (FSF) does not consider different programs executing on the same computer to be linked in this sense
- The distinction follows intuition but is technically an extremely thin line

The Lesser GNU Public License

- Only makes sense for (certain) software
- Identical to the GPL in key points
- Always permits the user to choose to alternatively use the GPL (dual-licensing)
- Allows linking against non-(L)GPL'ed code
- Essentially draws the line between derived works (that must again be LGPL'ed) and unrelated works at a different point

The GNU Free Documentation License

- Intended for Documentation
- Allows the author to restrict modifications (“derived work must not delete this paragraph”)
- Such invariant sections are usually attributions
- Debian considers GFDL to be not free enough (the licensee has fewer rights than the author)

The Affero GNU Public License

- The GPL requires making the source code available with a derived work
- It does not require making the source code available if a derived work is not provided (private modifications)
- For applications that run on WWW servers, users can (indirectly) use GPL'ed software without being given a derived work – or the source code
- Affero GPL is GPL with the restriction that a link to the source code – if present in the original work – must not be removed

Other Common Licenses

- Original BSD License
- Modified BSD License
- Common Public License and Eclipse Public License
- Apache License

Case Study

A family sued after their teenaged daughter's photo was used in an ad campaign for Virgin Mobile. The photo had been taken by the girl's youth counselor, who put it online and chose a copyleft license, which allows for commercial use.

Virgin did, in fact, fulfill the terms of the license, but the family is still suing Virgin Mobile. The family accused the companies of libel and invasion of Chang's privacy. The suit seeks unspecified damages for Chang.

Model Release

- Copyright alone may not be sufficient for publication
- Privacy rights limit publication of photographs and video
- A **model release** is a legal document granting permission to publish (waiving requirements from privacy law)

Questions



Homework

- Should Science “push copyright aside”?
- Does Information want to be valuable?
- Does free online availability increase a paper’s impact?
- Should science publishers be forced to give free access to publications?