Software Licenses

Software Engineering 2008
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Disclaimer

“The following information is provided as a general overview about the topic. It tries to be as correct as possible, but if you want to make sure, consult your local lawyer.”

I am a software engineer, not a law student, you know?
Why such a topic in a course on Software Engineering?

- (Nearly) no software is written without
  - building on existing software (OS, drivers, etc.)
  - recombining existing software (libraries, modules)
  - extending ideas of existing software
- Selection of software for reuse always depends on the license governing the software.
- As a software developer, you should know the rights that you have on your creations.
Intellectual Property Rights

*Umbrella term of a number of laws that all govern creations of the mind*

- Register rights
  - Patent
  - Trademark
  - Design
- Copyright (Urheberrecht)
- Trade secret
Intellectual Property Rights (cont.)

- Temporal Monopoly
- Enforced by the state
- Reason:
  - Incentive to share the idea
  - Allow commercial exploitation
  - Protection from defacement
- Different from “material property”
Register Rights

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<th>Patent</th>
<th>Trademark</th>
<th>Design</th>
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- Monopoly for the economic use (production, use, distribution, import/export)
- Needs to be **registered**
- Valid only in the country of registration
- Can be contested in court (prior art)
Copyright / Urheberrecht

• The creator of some work has control over:
  – Reproduction
  – Distribution
  – Exhibition
  – Public Display
  – Modification
  – Protection of Disfiguration

• In principle, copyright only governs the work, not the idea underlying the work.
Copyright case?

Steinberg v. Columbia Pictures Industries, Inc.
When do you get copyright?

• Creation must show a minimum level of creativity.
• Is the following logo protected by copyright?

ARD

• What about the jingle? (6 tones)
“Anglo-American” vs. “Roman” tradition

Needed to be claimed (©) (until 1989)

Granted automatically

Can change ownership

Can not change ownership

Can be rejected

Can not be rejected
Time limits

Inventor 70 years
50 years (for software)
Interpreter 50 years
Media producer 50 years
Broadcaster 50 years

(In Switzerland, after the death of the last copyright holder or after providing the service)
Public Domain ("Gemeinfrei")

- US: If the copyright is not claimed (until 1989) or explicitly rejected, software is "public domain".

- Switzerland: software becomes public domain only 50 years after the death of the (last) copyright holder.

"Public Domain" software is not governed by copyright law. Impossible to violate copyright law.
Derived/modified Work

Original work

Modification

Original copyright holder
- Still holds the full copyright on his work.
- Must give permission to the modification

Modifier
- Holds the copyright to the modification
- Must be a creative invention by itself
Open Source

- Terms used: Open Source / Copyleft / FLOSS
- Publish the source code to allow modifications
- Uses the copyright laws:
  
  Public Domain ≠ Open Source

- Basis for many software projects on the internet.
Early “open source”

- “Free software communities” at universities in '60 - '80
- Early open source software:
  - SPICE (Berkeley)
  - TeX (Donald E. Knuth)
  - X Window System (MIT)
- Manifesto of the GNU project in 1983
- First version of the GPL in 1989
MIT X11 License

Copyright (c) <year> <copyright holders>

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[... SOME BOLD TEXT ABOUT WARRENTY ...]
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GNU General Public License

Four freedoms as defined by the FSF:

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbor (freedom 2).
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this.
GNU General Public License (cont.)

- GPL Version 1: 1989
  - LGPL (Lesser (old: Library) GPL)
- GPL Version 3: 2007
GPL and LGPL

Does compilation create a derived/modified work?

GPL: No  
LGPL: No

Does dynamic linking create a derived work?

GPL: Yes  
LGPL: No

Does static linking create a derived/modified work?

GPL: Yes  
LGPL: Yes
GPL Version 3

- Concern: *TiVoization*
Upgrade from GPL v2 to GPL v3?

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.
Do I allow others to be less noble than I am?

**GPL:**
If you create a derived work, you give me the same rights as I have given you.

**BSD:**
You can do with it whatever you want, as long as you don't claim you did the original work.
[Companies] pull the *BSD code in, and some of the best BSD developers, and write a proprietary derivative. [...] 

In contrast, the GPL has enforced a consortia-like arrangement on any major commercial companies that want to use it. [...] 

So while the BSDs have lost energy every time a company gets involved, the GPL'ed programs gain every time a company gets involved. And that explains it all.”

David Wheeler: GPL, BSD, and NetBSD - why the GPL rocketed Linux to success
Other licenses

- Many other licenses exist
- Open Source Initiative certifies open source licenses: http://www.opensource.org/
- Three categories:
  - BSD style
  - GPL style
  - Commercially restricted
- Many licenses give access to the source, but restrict the freedoms (example: MS shared source).
License compatibility

- Software licenses must be compatible to join the code:
  - BSD 4-clause was not compatible with GPL v2
  - ZFS cannot be integrated into Linux: CDDL incompatible with GPL
Dual licensing

Using the “viral effect” of the GPL to force companies to buy the non-GPL version
Creative Commons: non-software open source
Links

- Eidgenössisches Institut für Gestiges Eigentum
  http://www.ige.ch/

- Exploitation Guidelines ETH

- Creative Commons
  http://www.creativecommons.org/

- Open Source Institute
  http://www.opensource.org/

- Free Software Foundation
  http://www.fsf.org/