CS499 - Open Source software development

Lecture #06: Licenses

Dr. Igor Steinmacher

e-mail: Igor.Steinmacher@nau.edu

Twitter: @igorsteinmacher

NAU NORTHERN ARIZONA UNIVERSITY

Before Anything

- I am not a lawyer, so, this is not a legal advice

  - Actually, far from it

Basics

- Copyright
  - Copies
  - Derivative work

- Patent law
  - New and useful process, machine, manufacture, composition of matter, or any new and useful improvement thereof
  - Ownership

- Licenses
  - permission to use a copyrighted work
  - Can impose other restrictions
  - Do not transfer ownership

Open Source Software

- Software that is subject to an open source license
- The author decides (it is copyright, right?)
- Give the licensee **certain** rights

Open Source Licenses

- Developers vs. legal background?

- Who would have know-how to write a license from scratch?

- Open source = sharing
  - What about common licenses and building upon them?
  - 100+ licenses commonly used!!!

Open Source Licenses

- Broader classification:

  - Copyleft or "strong reciprocal"
    - GPL, AGPL, and family

  - "Weak copyleft"
    - LGPL, MPL, etc.

  - Permissive
    - Apache, BSD, etc.

Copyleft Licenses

- Four Freedoms are guaranteed
- Any changes you make must also be licensed under the same license.
  - You have to give everyone else the same rights as you got
- **Related work** must be licensed in some way under the same license as the original work
- The most common is the GNU General Public License (GPL)
  - GPLv3:

Permissions	Conditions	Limitations
🟢 Commercial use	🔵 Disclose source	🔴 Liability
🟢 Distribution	🔵 License and copyright notice	🔴 Warranty
🟢 Modification	🔵 Same license	
🟢 Patent use	🔵 State changes	
🟢 Private use		

https://choosealicense.com/licenses/gpl-3.0/

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Weak Copyleft Licenses

- The code and modifications that are directly related must also be licensed under the same license

- Licensee may include unmodified code in an independent work without being required to license the work under any OSS license
  - I can use a function! Libraries usually use these licenses
- Lesser General Public License (LGPL), **Mozilla Public License,** Eclipse Public License

Permissions	Conditions	Limitations
Commercial use	Disclose source	Liability
Distribution	License and copyright notice	Trademark use
Modification	Same license (file)	Warranty
Patent use		
Private use		

https://choosealicense.com/licenses/mpl-2.0/

Permissive Licenses

- Few restrictions

- No requirement to allow copies of the work or modified work
  - It is possible to create closed source derivatives

- Berkeley Software Distribution (BSD), Apache 2.0, **MIT License**

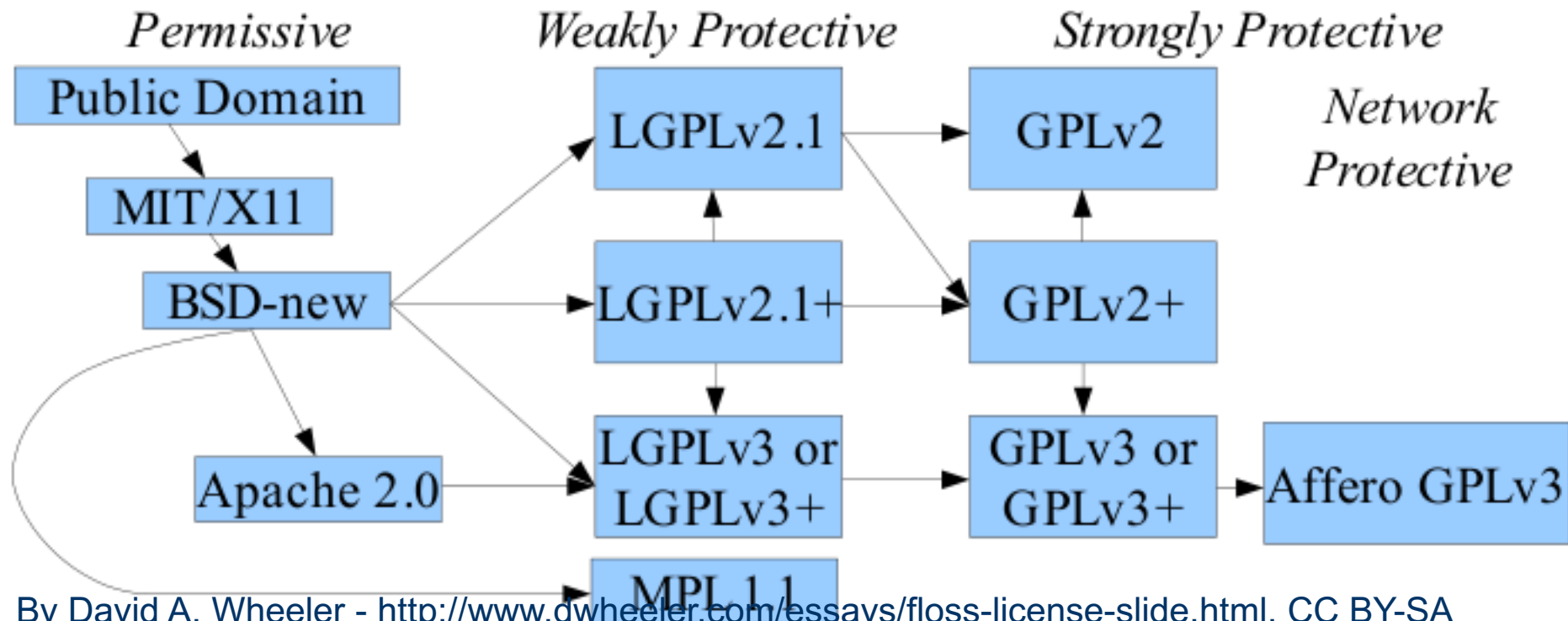| Permissions	Conditions	Limitations
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https://choosealicense.com/licenses/mit/

Comparison

Software licenses and rights granted in context of the copyright according to Mark Webbink.[1] Expanded by freeware and

Rights granted	Public domain	Permissive FOSS license (e.g. BSD license)	Copyleft FOSS license (e.g. GPL)	Freeware/Shareware/Freemium	Proprietary license
Copyright retained	No	Yes	Yes	Yes	Yes
Right to perform	Yes	Yes	Yes	Yes	Yes
Right to display	Yes	Yes	Yes	Yes	Yes
Right to copy	Yes	Yes	Yes	Often	No
Right to modify	Yes	Yes	Yes	No	No
Right to distribute	Yes	Yes, under same license	Yes, under same license	Often	No
Right to sublicense	Yes	Yes	No	No	No
Example software	SQLite, ImageJ	Apache web server, ToyBox	Linux kernel, GIMP, OBS	Irfanview, Winamp, *League of Legends*	Windows, *Half-Life* series, Spotify, xSplit

https://en.wikipedia.org/wiki/Software_license#Proprietary_software_licenses

License Compatibility

By David A. Wheeler - http://www.dwheeler.com/essays/floss-license-slide.html, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=41060008

Changing licenses

- **It's complicated**
  - Copyright holders?
    - If it is only you or your company... no problems
    - Someone who contributed as part of their paid job?
    - All of them need to agree ☹
  - Determine compatibility and compliance
    - if license A is compatible with B, you'll comply with the terms of A while complying with B
    - with a permissive license the copyright holders have given permission in advance to change licenses
    - If you are in a non-permissive license (or no license)... It's MORE complicated
  - Switching for new releases is different from relicensing all existing releases.
  - Consider the impact on new contributors and users.

How to choose

- Tips here and there:

    - https://choosealicense.com/

    - http://oss-watch.ac.uk/apps/licdiff/