

# **Mineure OSS @ EPITA**

## **Session 6**

# Cette session

- Préparation visite OSXP
- Licences du logiciel libre (suites et fin)
- Comment animer un projet de logiciel libre (deck 6.5)

# **Les conférences open source**

# Qu'est-ce qu'une conférence ?

- Un événement, localisé dans le temps et l'espace, où des personnes se réunissent pour échanger sur un sujet donné.
- Un (ou plusieurs) organisateurs qui préparent l'événement, s'occupent de la communication, de la logistique, la commercialisation, etc.
- Business de plateforme triface:
  - Visiteurs (participants)
  - Speakers (intervenants)
  - Sponsors / exposants

# Typologie

- Modèle économique
  - Profit / non profit / hybrid
  - Modèle de revenu (payant / gratuit, mais pour qui ?)
  - Conférence / Workshop / Salon / Rencontre d'affaires...
  - Généralistes / spécifiques (sur 1 métier, 1 techno, 1 domaine, 1 produit...)
  - Standalone / dans un événement plus large ("embedded")
  - Audiences (regionale, nationale, internationale)
  - Lieu (fixe / tournant / en ligne / hybride)
  - Typologie des speakers (pros/amateurs, stars/anonymes, payés/défrayés/pas payés/payants)
  - Cas des formations ?

# OSXP

- 1998: "village open source" au milieu du salon "Interop"
- 1998-2005: Linux Expo
- 2006-2010: Solutions Linux
- 2010-2014: Open World Forum (OWF)
- 2015-2019: Paris Open Source Summit
- 2021-...: Open Source Experience (OSXP)

# "Mission OSXP"

- Participe de l'évaluation de la mineure OSS (35% de la note finale)
- Prévoir une visite de l'OSXP le 8 novembre (ou à un autre moment)
- A minima:
  - Visiter le salon
  - Assister à 3 talks (minimum), au choix
- Restitution par écrit (15 nov. -> [sf@fermigier.com](mailto:sf@fermigier.com))
  - "Rapport d'étonnement" (1 page)
    - "Gap analysis" (la réalité du salon vs. les concepts vus en cours)
  - CR synthétique de 3 talks (mini):
    - Modèle: <https://reinout.vanrees.org/weblog/2022/06/16/rotterdam-meetup.html> et autres (<https://reinout.vanrees.org/weblog/tags/python.html>)

# PROGRAMME DES CONFÉRENCES

# MARDI 08 NOVEMBRE



#### LÉGENDES TRACKS

- IOT, embedded edge et open hardware, makers
- Stratégies industrielles
- Modèles ouverts (open data, science, éducation...)
- Modèles économiques, pérennité des communautés et financement
- Numérique responsable
- Enjeux, stratégies et souveraineté numérique
- Cloud, multicloud & vendor free, DevOps
- Gouvernance et OSPO
- Europe

SALLE 202/203

SALLE 224/225

#### IOT, embedded edge et open hardware, makers

- |       |   |
|-------|---|
| 11:00 | 11:10 > 11:30 COMMENT APPORTER DES CAPACITÉS VOCALES ET VIDÉO AUX SOLUTIONS D'INTERCOM À L'AIDE D'UN LOGICIEL BASÉ SUR LE PROTOCOLE SIP |
|       | 11:30 > 11:50 LA PREMIÈRE MONTRE SANTÉ IOT OPEN SOURCE EN PYTHON. IOMT POST COVID   |

- |       |  |
|-------|--|
| 12:00 | 12:10 > 12:30 BRISER LE STATU QUO DANS LE DOMAINE DE L'IDO ET DE LA PÉRIPHÉRIE : LE PROJET ECLIPSE ONIRO |
|       | 12:30 > 12:50 IMPACT ÉNERGÉTIQUE DES SYSTÈMES EMBARQUÉS, CONSTAT ET SOLUTIONS                            |

- |       |                          |
|-------|--------------------------|
| 13:00 | Stratégies industrielles |
|-------|--------------------------|

- |       |  |
|-------|--|
| 14:00 | 14:00 > 14:45 COMMENT L'OPEN SOURCE « GAIA X » PERMET LE DÉVELOPPEMENT DE NOUVEAUX MARCHÉS ? |
|-------|--|

- |       |   |
|-------|---|
| 15:00 | 15:00 > 15:20 L'INNER SOURCE CHEZ THALES : POURQUOI C'EST IMPORTANT ET COMMENT ON S'Y PREND |
|       | 15:20 > 15:40 COMMENT ÉVALUER LE DEGRÉ DE LIBERTÉ D'UN PROJET LIBRE                         |

- |       |  |
|-------|--|
| 16:00 | 16:00 > 16:45 LES BÉNÉFICES DE L'OUVERTURE AU SEIN D'UN ÉCOSYSTÈME INDUSTRIEL : THÉORIE ET RETOURS D'EXPÉRIENCES |
|-------|--|

- |       |   |
|-------|---|
| 17:00 | 17:00 > 17:45 SPONSOR : L'OPEN SOURCE BOOSTE LA TRANSFORMATION NUMÉRIQUE DANS LE SECTEUR AUTOMOBILE ! |
|-------|---|

#### Modèles ouverts (open data, science, éducation...)

- |       |  |
|-------|--|
| 11:00 | 11:10 > 11:30 LES ENJEUX DE L'OPEN SOURCE DANS LES SCIENCES  |
|       | 11:30 > 11:50 ATLAS DES SYNERGIES PRODUCTIVES : UNE INDUSTRIE PLUS RÉSILIENTE GRÂCE À L'IA ET À L'OPEN SCIENCE ? |

- |       |  |
|-------|--|
| 12:00 | 12:10 > 12:30 LES COMMONS DANS LA MOBILITÉ                               |
|       | 12:30 > 12:50 DECIDIM, UN LOGICIEL LIBRE POUR LA PARTICIPATION CITOYENNE |

#### Modèles économiques, pérennité des communautés et financement

- |       |   |
|-------|---|
| 14:00 | 14:00 > 14:20 L'OPEN SOURCE, LES COLLECTIVITÉS TERRITORIALES ET L'OPTIMISATION DE LA DÉPENSE PUBLIQUE |
|       | 14:20 > 14:40 DÉMARCHE SIMPLIFIÉES DANS LES COLLECTIVITÉS   |

- |       |   |
|-------|---|
| 15:00 | 15:00 > 15:20 COMMONS NUMÉRIQUES ET STRUCTURES DE L'ÉCONOMIE SOCIALE ET SOLIDAIRE |
|       | 15:20 > 15:40 LE LOGICIEL LIBRE : MEILLEUR ALLIÉ DE LA SOUVERAINETÉ NUMÉRIQUE     |

- |       |  |
|-------|--|
| 16:00 | 16:00 > 16:20 SOUVERAINETÉ NUMÉRIQUE ET OPEN SOURCE: PRÉSENTATION DU EUROPEAN SOVEREIGNTY SOFTWARE INDEX |
|       | 16:20 > 16:40 SOUVERAINETÉ DES INFRASTRUCTURES VIRTUELLES  |

#### souveraineté numérique

- |       |  |
|-------|--|
| 17:00 | 17:00 > 17:20 LOGICIELS LIBRES ET STANDARDS OUVERTS POUR LA SOUVERAINETÉ NUMÉRIQUE |
|       | 17:20 > 17:40 REX : LIBÉRER, DÉLIVRER LES RESTOS DU COEUR !                        |

SALLE 241	SALLE 242A	SALLE 242B	SALLE 243
<b>Cloud, multicloud &amp; vendor free, DevOps</b>	<b>Modèles économiques, pérennité des communautés et financement</b>	<b>Gouvernance et OSPO</b>	<b>Modèles économiques, pérennité des communautés et financement</b>
11:00 11:10 > 11:30 DÉPLOIEMENT MULTI-CLOUD SÉCURISÉ	11:10 > 11:55 SPONSOR : LES CONTRIBUTIONS AU LOGICIEL LIBRE SONT-ELLES UNIQUEMENT DESTINÉES À DES FINS HUMANISTES ?	11:10 > 11:55 DÉVELOPPER DES OSPO AVEC L'INITIATIVE DE BONNE GOUVERNANCE	11:10 > 11:55 OPEN SOURCE BUSINESS LAB #6 : DIFFÉRENTES STRATÉGIES POUR ÉDITER UN LOGICIEL EN OPEN SOURCE
12:00 12:10 > 12:30 CHÈRIE, J'AI RÉTRÉCI LES COÛTS D'HÉBERGEMENT 12:30 > 12:50 UN CLOUD PRIVÉ OPEN SOURCE, UNE ALTERNATIVE LIBRE AUX GÉANTS	12:10 > 12:30 SPONSOR : TOWARDS DIGITAL AUTONOMY - FROM DEVICE TO CLOUD 12:30 > 13:15 AVANT-PREMIÈRE PRÉSENTATION DE L'ÉTUDE 2022 SUR LE MARCHÉ DE L'OPEN SOURCE EN FRANCE ET EN EUROPE	12:10 > 12:30 CATALYSER DES CONTRIBUTIONS : REX CRÉDIT AGRICOLE SUR L'ENRICHISSEMENT D'ECOCODE 12:30 > 12:50 OPEN SOURCE AND OSPO MEETS BIG COMPANIES	12:10 > 12:30 ÉTENDRE LES MODÈLES DE CONTRIBUTION EN TANT QU'ENTREPRISE DU LOGICIEL LIBRE 12:30 > 12:50 LA CONTRIBUTION AUX COMMUNS NUMÉRIQUES
13:00 13:15 > 13:45 REMISE DES PRIX DES ACTEURS DU LIBRE DU CNLL			
14:00 14:00 > 14:20 BASES DE DONNÉES SUR KUBERNETES 101 - 10 CHOSES À SAVOIR 14:20 > 14:40 POSTGRESQL DANS LE MONDE DU PAAS	14:00 > 14:45 LE MONDE NUMÉRIQUE « LIBRE » PEUT-IL ÊTRE INCLUSIF SANS LES FEMMES ?	14:00 > 14:45 ADOPTION, CONTRIBUTION, OSPO ? CINQ APPROCHES ET TÉMOIGNAGES DE GRANDES ENTREPRISES (TOSIT)	14:00 > 14:45 L'AVENIR DES ENTREPRISES EUROPÉENNES DE L'OPEN SOURCE
	<b>Numérique responsable</b>		
15:00 15:00 > 15:20 TEST DE PERFORMANCE DE BOUT EN BOUT, PROFILAGE ET ANALYSE À REDIS 15:20 > 15:40 MANAGING, GROWING, AND SCALING OPEN SOURCE DATABASES AT SAAS SCALE	15:00 > 15:20 SPONSOR : PRÉSENTATION DE LA STRATÉGIE NUMÉRIQUE RESPONSABLE DU GROUPE SMILE 15:20 > 15:40 ECOCONCEPTION DES SERVICES NUMÉRIQUES, PASSONS À L'ÉCHELLE	15:00 > 15:20 RETOUR D'EXPÉRIENCE : BPCE SUR LA DÉMARCHE DE REVERSEMENT COMMUNAUTAIRE 15:20 > 15:40 DÉMARCHE POUR GÉNÉRALISER L'UTILISATION DE LOGICIELS OPEN SOURCE COMMUNAUTAIRE EXISTANTS	15:00 > 14:45 SPONSOR : RÔLE ET IMPORTANCE DE L'OPEN SOURCE EN EUROPE
16:00 16:00 > 16:20 COMMENT METTRE UN ÉLÉPHANT SUR UN PORTE-CONTENEUR EN 3 MOUVEMENTS ? 16:20 > 16:40 SPONSOR : WEBSSO : KEYCLOAK OU LEMONLDAP::NG, QUE CHOISIR ?	16:00 > 16:20 LESS IS MORE » OU COMMENT REPRENDRE LE CONTRÔLE DE SES SYSTÈMES 16:20 > 16:40 GREENOPS SUR LES CLOUD PUBLIC	16:00 > 16:20 ÉDUCATION ET OPEN SOURCE EN FRANCE 16:20 > 16:40 COMMENT DEVENIR ÉDITEUR OPEN-SOURCE	16:00 > 18:30 OPEN CIO SUMMIT
17:00 17:00 > 17:45 INNOVATION CLOUD VS OPEN SOURCE	17:00 > 17:20 L'ÉCO-CONCEPTION, C'EST BIEN, MAIS SI ON PARLAIT UN PEU DU BACKEND ? 17:20 > 17:40 DURABILITÉ PLANIFIÉE VS OBSOLESCENCE PROGRAMMÉE	17:00 > 18:00 REMISE DES LABELS TERRITOIRE NUMÉRIQUE LIBRE 2022	

# **Retour aux licences**

# Historique des principales licences libres

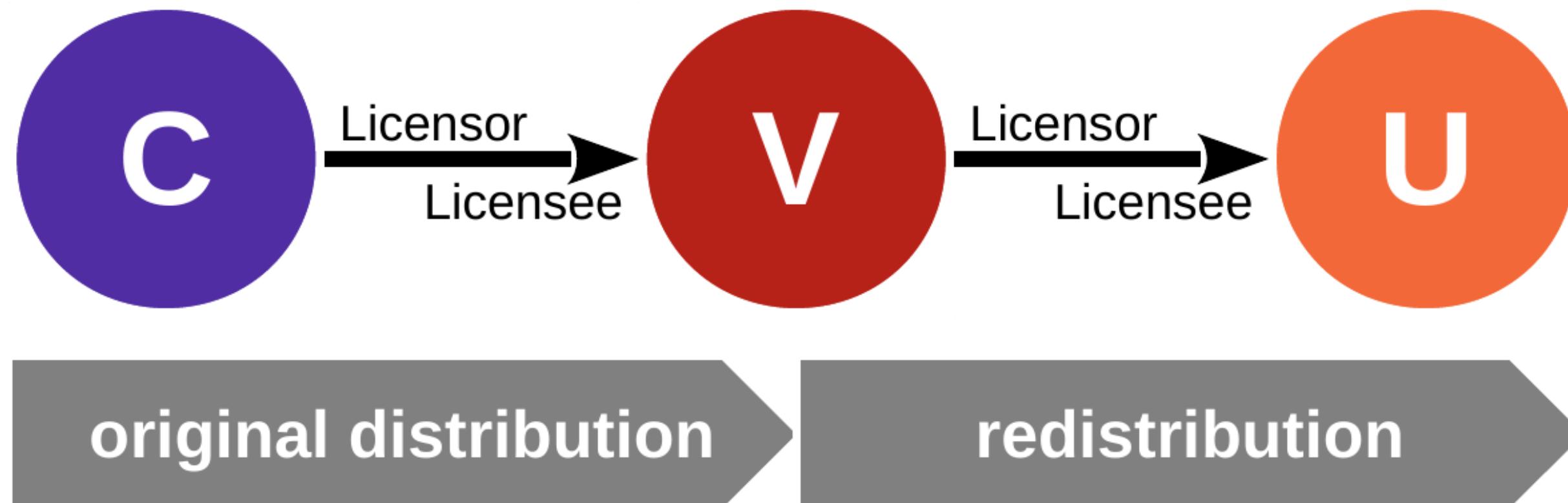
OSI: "The following OSI-approved licenses are popular, widely used, or have strong communities:"

- 1987: MIT
- 1988: (proto-)BSD
- 1989: GPL v1
- 1990: BSD "4-clause"
- 1991: GPL v2, LGPL ("v2")
- 1998: Mozilla Public License 1.0
- 1999: BSD "3-clause" et "2-clause"
- 2004: Apache 2.0
- 2004: CDDL
- 2007: GPL v3, LGPL v2.1
- 2012: Mozilla Public License 2.0
- 2017: Eclipse Public License 2.0

# **Les points clefs**

# Copyleft (“Reciprocal”) License

- Copyleft is a copyright-based strategy to ensure original rights cannot be curtailed when passed from licensor to licensee
- The licensee of copyleft-licensed software will have to use the same copyleft license (or later) when passing on the software



# Quiz: Charging for Copyleft Code

- Can you charge someone before you give them access to copyleft-licensed software?
  - Yes
  - No

# Free as in Freedom, not as in Beer

```
/*
* -----
* "THE BEER-WARE LICENSE" (Revision 42):
* <phk@FreeBSD.ORG> wrote this file. As long as you retain this notice you
* can do whatever you want with this stuff. If we meet some day, and you think
* this stuff is worth it, you can buy me a beer in return Poul-Henning Kamp
* -----
*/
```

- 1. License File**
- 2. File Header**
- 3. More ...**

# Example License in File Header

```
/*
 * Copyright (c) 200X-200X by Humpty Dumpty
 *
 * This file is part of the Humpty Dumpty application.
 *
 * This program is free software: you can redistribute it and/or modify
 * it under the terms of the GNU Affero General Public License as
 * published by the Free Software Foundation, either version 3 of the
 * License, 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 Affero General Public License for more details.
 *
 * You should have received a copy of the GNU Affero General Public
 * License along with this program. If not, see
 * <http://www.gnu.org/licenses/>.
 */

package com.firm.model;
...
```

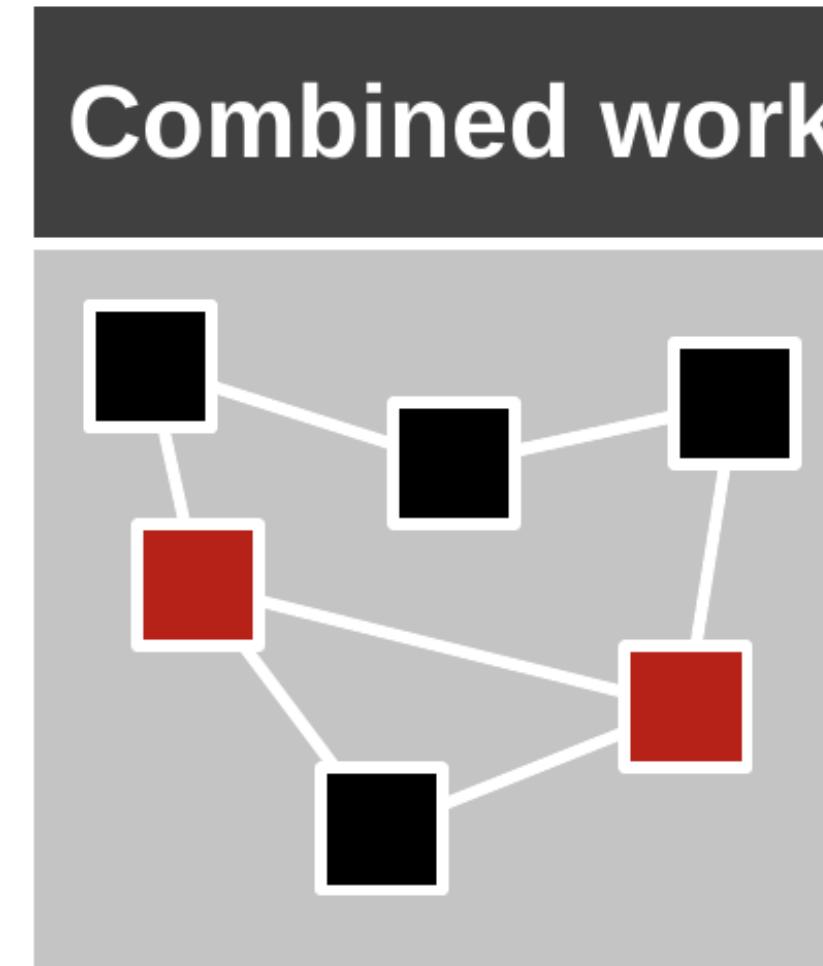
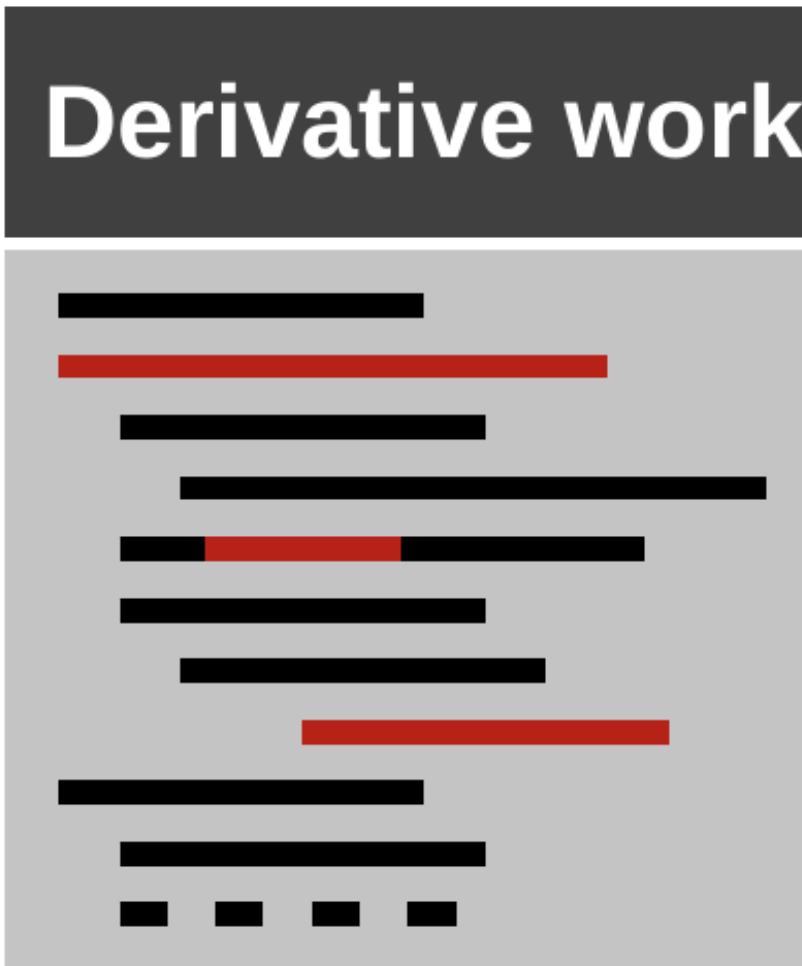
# Freedom vs. Freedom

- Copyleft freedom
  - Freedom for the software, primarily
- Permissive freedom
  - Freedom for the developer, primarily

# Collective vs. Derivative Work

- In U.S. copyright law,
  - A “collective work” is a work, such as a periodical issue, anthology, or encyclopedia, in which a number of contributions, constituting separate and **independent works in themselves, are assembled into a collective whole.**
  - A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement . . . art reproduction, abridgement, condensation, or any other form in which a work may be recast, transformed, or adapted. A **work consisting of editorial revisions, annotations, elaborations, or other modifications** which, as a whole, represent an original work of authorship, **is a “derivative work.”**
- Copyleft effect only applicable to derivative, not collective works

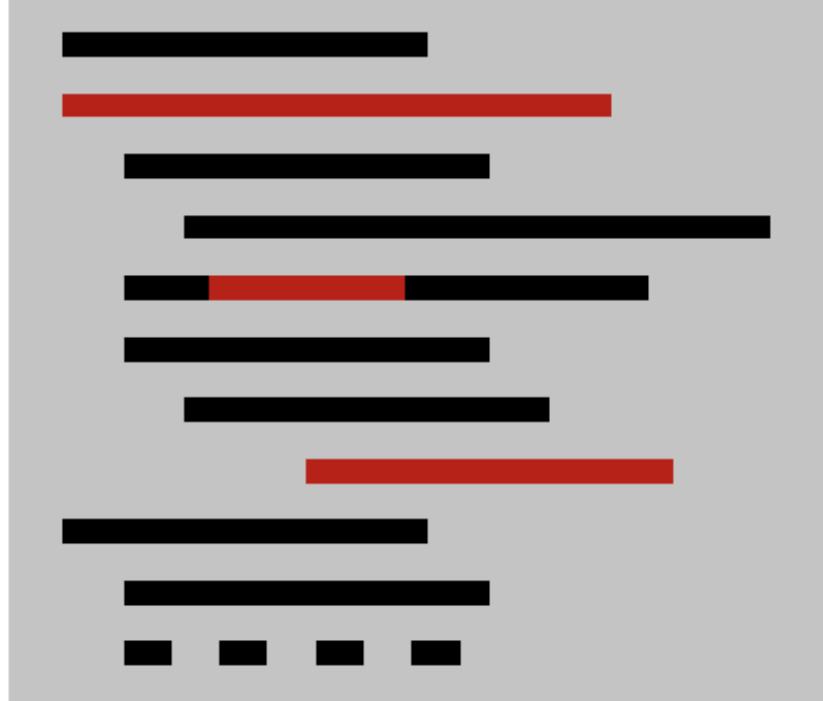
# Derivative, Combined, and Collective Work



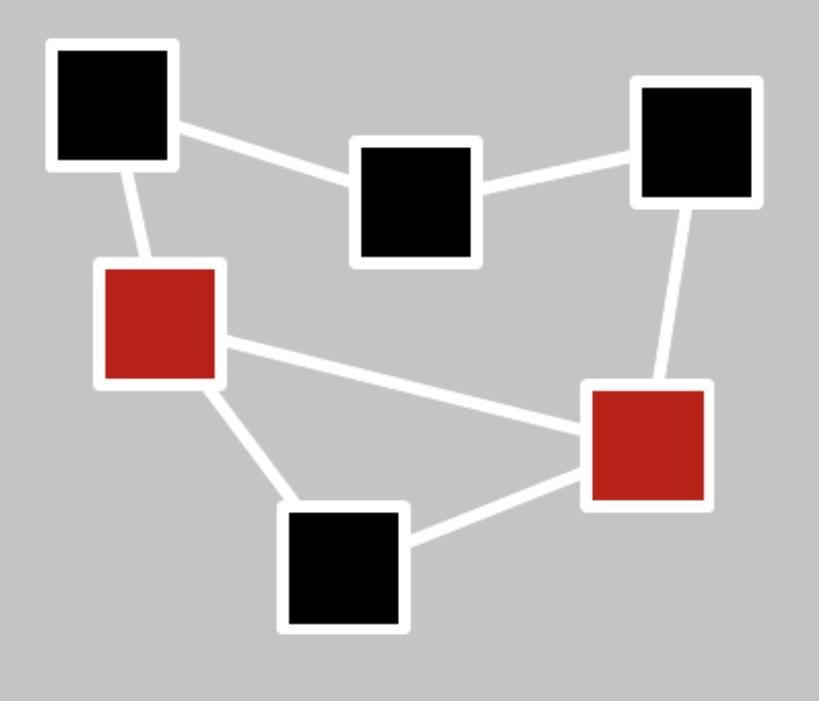
# Copyleft Effect and Derivative Work

Licensor perspective on copyleft effect  
Freedom of code for receiver of redistribution

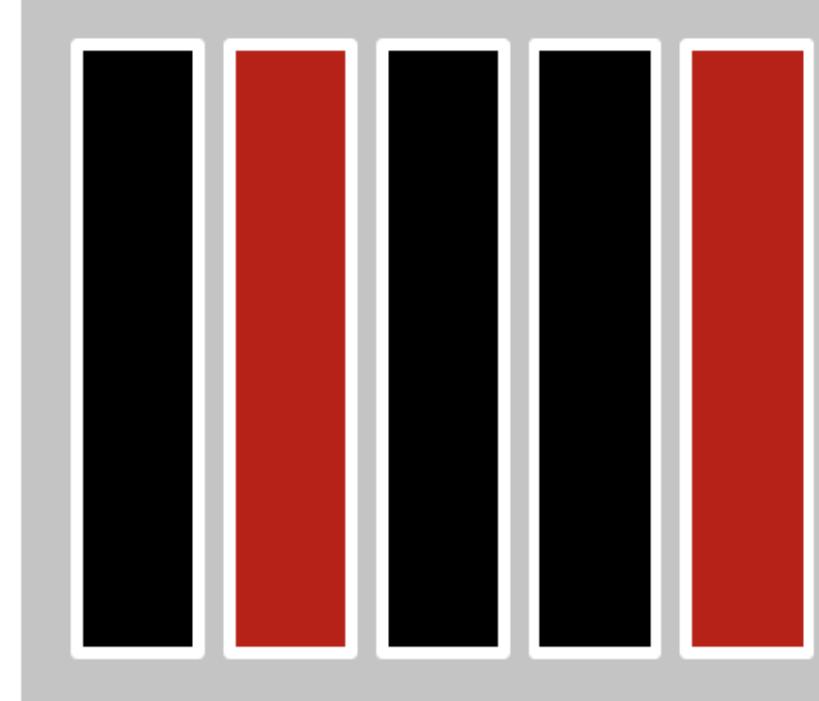
## Derivative work



## Combined work



## Collective work



Licensee perspective on non-copyleft effect  
Freedom of choice for licensor how to redistribute

# Reciprocal vs. Permissive License

- GNU Public License v2
  - It permits
    - Use of the software
  - It requires
    - **Open sourcing of modifications upon redistribution**
    - Proper attribution
    - Inclusion of license in distribution
  - It forbids
    - Claims of endorsement
    - Use of FSF trademarks
- Apache License 2.0
  - It permits
    - Use of the software
    - **Redistribution of modification without open sourcing**
  - It requires
    - Proper attribution
    - Inclusion of license in distribution
  - It forbids
    - Claims of endorsement
    - Use of ASF trademarks

# Critical License (Design) Issues

- **Triggers for having to open source**
  - **Definition of collective vs. derivative work**
  - **Definition of redistribution**
- Other obligations put on redistributions
  - Display of attribution, copyright notice
  - How to treat source code, provision of license files
- Other considerations
  - Provision of exceptions to standard license
  - Also, jurisdiction matters, no single global legal system

# Quiz: Collective or Derivative Work?

- In a project, you use file X which is GPLv2 licensed
  - You change file X to become X'
    - Is file X' a collective or derivative work?
  - You create a class A in file Y which subclasses a class from file X
    - Is file Y a collective or a derivative work?
  - You create code in file Z which uses code from file X
    - Is file Z a collective or a derivative work?
  - You statically link file X and file Y into file A
    - Is file A a collective or a derivative work?
  - You dynamically link file Z with file X and deliver the files to your customer
    - Is file Z a collective or a derivative work?
  - You create file B, code of which makes a web service call to file X
    - Is file B a collective or a derivative work?

# Decoupling Components Using Shims



# Shims ?

"Cales" en français. Aussi appelés "wrappers", "proxies", "adapters", etc.

"In computer programming, a shim is a library that transparently intercepts API calls and changes the arguments passed, handles the operation itself or redirects the operation elsewhere. Shims can be used to support an old API in a newer environment, or a new API in an older environment. Shims can also be used for running programs on different software platforms than they were developed for."

Question ouverte: quelle solution *technique* pour résoudre ce problème *juridique* ?

# The GPL License Family

Use Case	LGPLv1	LGPLv2	LGPLv3
	GPLv1	GPLv2	GPLv3
	-	-	AGPLv3
v1	LGPLv1	LGPLv2	LGPLv3
v2	GPLv1	GPLv2	GPLv3
v3	-	-	AGPLv3
Major Release			

# New in the GPLv3 License Family

- Introduction of new use case “web service”
  - Affero GPLv3 license considers use of web service licensing of software
- Introduction of patent clauses, in particular patent retaliation
  - An attempt to stem the tide of (mostly) non-sensical software patents
- Increased compatibility with other open source licenses

# Patents and Open Source Licenses

- Patent rights grant
  - §3 of the Apache License 2.0:
    - “Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted.”
- So-called patent retaliation clause
  - §3 of the Apache License 2.0 continued:
    - “If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.”

# Contributor License Agreement

- A contributor license agreement
  - Is a contract that legally clarifies any contributions you make to a project
  - Needs to be signed by the owner of the rights (company or developer)
- At least two variants of the contributor agreement
  - **Copyright transfer:** The developer transfers all relevant rights
  - **Relicensing rights grant:** The developer grants relicensing rights
- The (stalled) Harmony project tried to unify these agreements
  - Apparently, unification of contributor agreements wasn't that important
  - Some argue that the open source license is enough

# Developer Certificate of Origin [T08]

## Developer's Certificate of Origin 1.1

By making a contribution to this project, I certify that:

- (a) The contribution was created in whole or in part by me and I have the right to submit it under the open source license indicated in the file; or
- (b) The contribution is based upon previous work that, to the best of my knowledge, is covered under an appropriate open source license and I have the right under that license to submit that work with modifications, whether created in whole or in part by me, under the same open source license (unless I am permitted to submit under a different license), as indicated in the file; or
- (c) The contribution was provided directly to me by some other person who certified (a), (b) or (c) and I have not modified it.
- (d) I understand and agree that this project and the contribution are public and that a record of the contribution (including all personal information I submit with it, including my sign-off) is maintained indefinitely and may be redistributed consistent with this project or the open source license(s) involved.

Signed-off-by: Random J Developer <random@developer.example.org>  
[lucky@maintainer.example.org: struct foo moved from foo.c to foo.h]  
Signed-off-by: Lucky K Maintainer <lucky@maintainer.example.org>

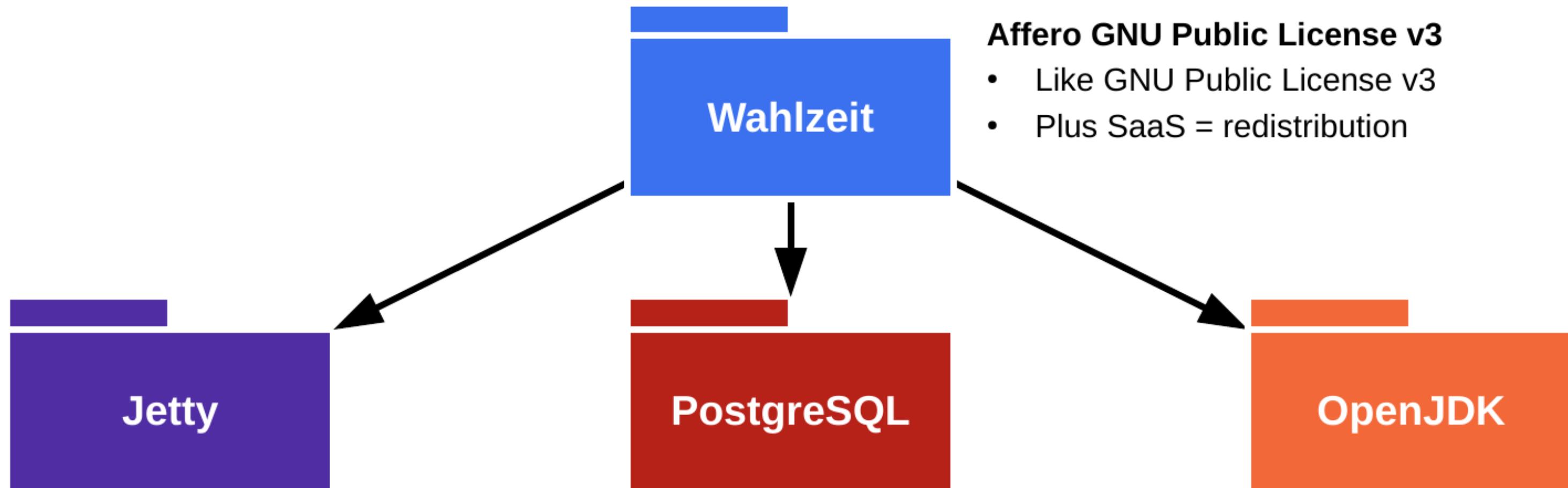
# License Evolution

- Licenses often evolve over several versions (GPLv1, v2, v3, ...)
  - Licenses often allow for their replacement by a later version
  - This allows the copyright holder of the license to fix problems
- This allowed Wikipedia to move from the GFDL to CC-BY-SA
  - The FSF and CreativeCommons created special licenses for Wikipedia
  - By evolving through these “later” licenses, Wikipedia switched to CC

# Dual and Multiple Licensing

- Some software source code has multiple licenses
- Users can choose the license they like best for their purposes
- Dual-licensed software can act as a shim between two components

# Example Package Structure



## Apache 2.0 License

- Copyright license [1]
- Patent license [1]
- Provide license, notice
- Provide attribution

## PostgreSQL License

- Not reciprocal wrt source
- Requires copyright display
- No implied endorsement

## GNU Public License v2

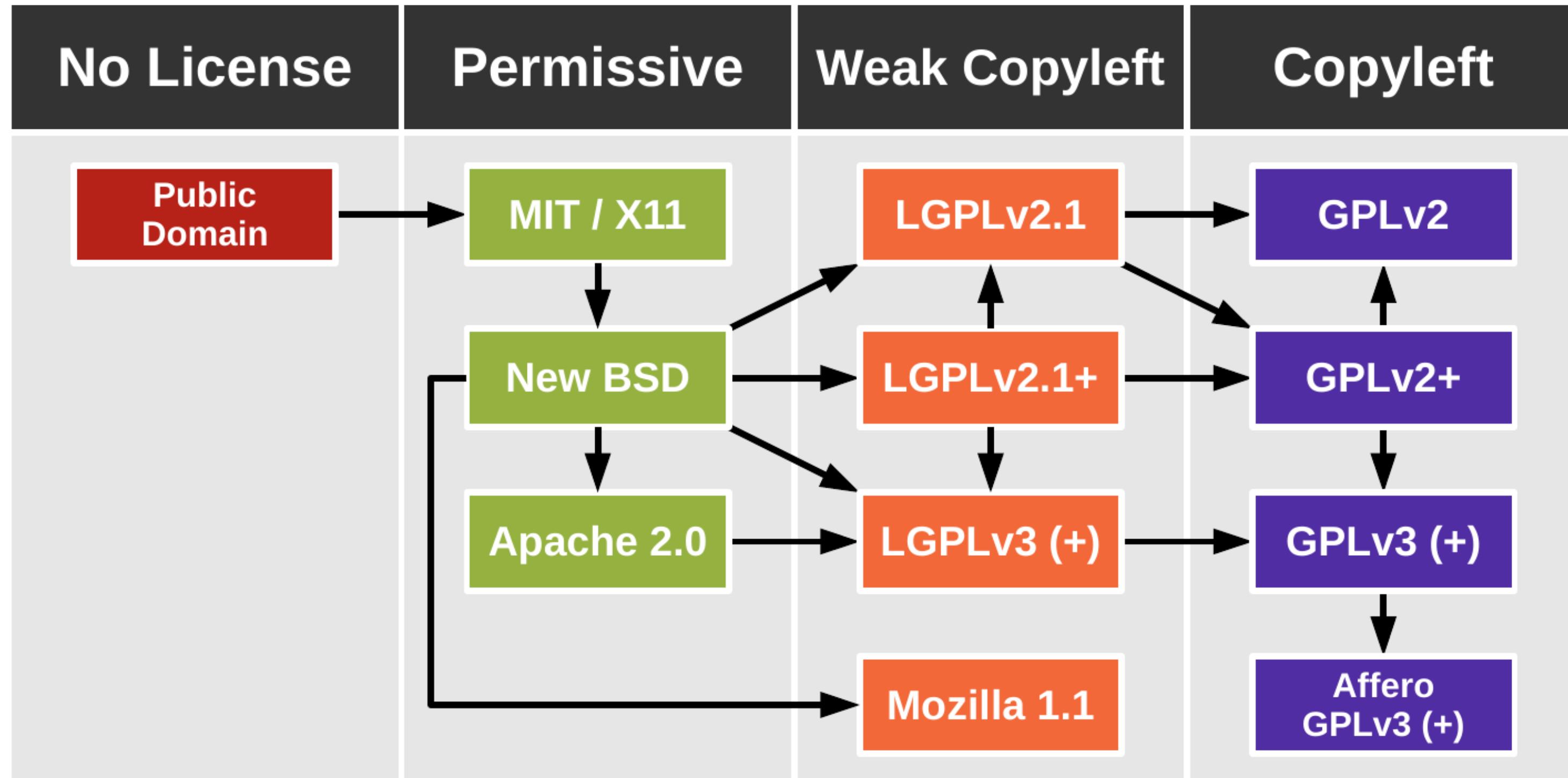
- Reciprocal: Provide source

## With Class Path Exception

- Java linking = collective work

[1] Perpetual, worldwide, non-exclusive, royalty-free, irrevocable

# The License Compatibility Circus [W09]



# **Outillage**

# Quelques spécifications

- SPDX: Software Package Data Exchange (<https://spdx.dev/>)  
"An open standard for communicating software bill of material information, including provenance, license, security, and other related information. SPDX reduces redundant work by providing common formats for organizations and communities to share important data, thereby streamlining and improving compliance, security, and dependability. Recognized as the international open standard for security, license compliance, and other software supply chain artifacts as ISO/IEC 5962:2021."
- REUSE (<https://reuse.software/>)  
A set of recommendations to make licensing your Free Software projects easier + to check compliance

# Et quelques outils (Software composition analysis tools)

- Open source:
    - FOSSology (open source)
    - Hermine (<https://hermine-foss.org/>)
    - ScanCode
    - Reuse
  - Propriétaires (périmètres plus large que juste les licences):
    - Black Duck
    - Snyk
    - ...
- Plus: ([https://owasp.org/www-community/Component\\_Analysis](https://owasp.org/www-community/Component_Analysis))

# Focus: Prolifération des licences

- <https://spdx.org/licenses/>
- <https://www.gnu.org/licenses/license-list.html>
- <https://opensource.org/licenses>
- [https://en.wikipedia.org/wiki/Comparison\\_of\\_free\\_and\\_open-source\\_software\\_licenses](https://en.wikipedia.org/wiki/Comparison_of_free_and_open-source_software_licenses)
- <https://www.numerique.gouv.fr/publications/politique-logiciel-libre/ouverture/>
- <https://www.data.gouv.fr/fr/pages/legal/licences/>

# Should I write my own license?

# Should I write my own license?

**NO.**

## Bad *ad-hoc* licensing example: ipfilter (2000)

```
/*
 * Copyright (C) 1993–2000 by Darren Reed.
 *
 * The author accepts no responsibility for the use of this software
 * and provides it on an ‘‘as is’’ basis without express or implied
 * warranty.
 *
 * Redistribution and use in source and binary forms are permitted
 * provided that this notice is preserved and due credit is given
 * to the original author and the contributors.
 *
 * 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.
 *
 * I hate legalese, don't you?
 */
```

# ipfilter license “clarification” (2001)

```
/*
 * Copyright (C) 1993–2000 by Darren Reed.
 *
 * The author accepts no responsibility for the use of this software
 * and provides it on an ‘‘as is’’ basis without express or implied
 * warranty.
 *
 * Redistribution and use in source and binary forms are permitted
 * provided that this notice is preserved and due credit is given
 * to the original author and the contributors.
 *
 * Yes, this means that derivative or modified works are not
 * permitted without the author’s prior consent.
 *
 * 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.
 *
 * I hate legalese, don’t you ?
 */
```

# Theo de Raadt announces ipfilter replacement

Date: Tue, 29 May 2001 19:13:11 -0600  
From: Theo de Raadt <derraadt@cvs.openbsd.org>  
Subject: ipf

sometime in the next 20 hours, i will be removing ipf from the source tree since it does not meet our freedom requirements, as have been outlined in policy.html and goals.html since the start of our project.

we will have to work on an alternative.

<https://groups.google.com/d/msg/fa.openbsd.tech/q3b--naHTF0/iERRvuKkTFEJ>

- The real problem is that code with a non-free license was incorporated into the core of a free operating system
- Carelessness with licenses invites trouble

# Why you should not write your own license

Many people have attempted to write their own FOSS licenses, especially in the early days, but:

- You will probably get it wrong (e.g., Artistic License 1.0)
- Your license will not immediately be approved or recognized by FOSS license gatekeepers—OSI, FSF, Debian—limiting adoption (of both the license and *your code*)
- You will contribute to **license proliferation**

# License proliferation

- Vanity licenses: known problem in the community in the early years
- A growing number of licenses increases quadratically the possible combinations and interactions
- That, in turn, makes difficult to merge code from diverse sources, both for incompatibility issues and unacceptable clauses
- It introduces juridical uncertainty requiring lawyers, which is what “public” licenses were trying to avoid in the first place
- It favors FUD (Fear, Uncertainty, Doubt) about FOSS complexity

See: Open Source Initiative, “*The License Proliferation Report*”, 2006,  
<http://opensource.org/proliferation>

# Which license should I choose then?

Two main situations: contributing to an existing FOSS project  
v. creating a new one from scratch

- a) If you **contribute to an existing FOSS project**: just use the current license of the project for your contributions (often you don't get to choose anyhow).
  
- b) If you **create a new FOSS project**: choose a license that is
  - ① **approved by both OSI<sup>2</sup> and FSF<sup>3</sup>**, and
  - ② **popular**, and
  - ③ matches the target community/**strategy** of the project

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2. OSI license list: <https://opensource.org/licenses>

3. FSF license list: <https://www.gnu.org/licenses/license-list.en.html>

# **Focus: politique de licences de l'Etat**

# Autorisation par défaut de contribuer à des projets sous licence FSF ou OSI

Les licences validées par les organismes Free Software Foundation et Open Source Initiative et recensées sur leurs pages respectives :

- ▶ FSF : <https://www.gnu.org/licenses/license-list.fr.html> (en excluant les licences non libres présentées comme telles) ;
- ▶ OSI : <https://opensource.org/licenses/alphabetical>.

À l'inverse les licences non retenues par ces organismes (comme la *Beerware*) ne rentrent pas dans le cadre de l'autorisation par défaut. Un tableau consolidé des licences validées par l'un ou l'autre organisme est maintenu sur le site <https://spdx.org/licenses/>

# **Autorisation par défaut de contribuer un nouveau projet avec les licences du décret**

L'État n'a pas vocation à être éditeur de logiciels. En dehors des trois exceptions prévues à la loi pour une République numérique pour lesquelles vous pouvez contacter l'adresse électronique de support en cas de question, il n'y a pas d'autorisation préalable à demander auprès de la DINUM. Pour autant, veuillez vous référer à votre supérieur hiérarchique avant la publication d'un nouveau projet dans le compte de votre organisation.

Pour rappel, les licences à utiliser sont disponibles par décret sur le site :  
<http://www.data.gouv.fr/fr/licences>.

# Éléments à considérer dans le choix de la licence libre

Pour les cas où l'administration a des raisons de garantir que les modifications apportées par un tiers au logiciel libre qu'elle publie sont accessibles sous les mêmes conditions, elle envisagera une licence à réciprocité. En particulier, s'il s'agit d'un logiciel qui est à la base d'un service en ligne pour lequel elle souhaite se prémunir de toute réappropriation, elle pourra considérer la licence GNU Affero General Public License. Dans les autres cas, elle considérera les licences permissives.

Le choix de la licence d'un projet devra également prendre en compte celles des composants Open Source tiers constituant son cadre technique, selon les modalités de leurs relations techniques.

L'écosystème où s'insère le projet pourra aussi aiguiller le choix de la licence, dans la limite de la latitude laissée par les critères précédents.

À noter que les solutions logicielles sont souvent modulaires et que la question de la licence peut se poser à plusieurs niveaux. Par exemple, pour une solution de site web, les modules de l'interface web pourront être publiés sous une licence différente de celle qui couvre le code source côté serveur.

## Les licences pouvant être utilisées par les administrations

### Les licences applicables aux « informations publiques » :

Licence établie par le Gouvernement	identifiant SPDX
<a href="#">Licence Ouverte version 2.0</a>	etalab-2.0
Licence avec obligation de partage à l'identique	identifiant SPDX
<a href="#">ODC Open Database License (ODbL) version 1.0</a>	ODbL-1.0

### Les licences applicables spécifiquement aux codes source de logiciels :

Licences permissives	identifiant SPDX
<a href="#">Apache License 2.0</a>	Apache-2.0
<a href="#">BSD 2-Clause "Simplified" License</a>	BSD-2-Clause
<a href="#">BSD 3-Clause "New" or "Revised" License</a>	BSD-3-Clause
<a href="#">CeCILL-B Free Software License Agreement</a>	CECILL-B
<a href="#">MIT License</a>	MIT

Licences avec obligation de réciprocité	identifiant SPDX
<a href="#">CeCILL Free Software License Agreement v2.1</a>	CECILL-2.1
<a href="#">CeCILL-C Free Software License Agreement</a>	CECILL-C
<a href="#">GNU General Public License v3.0 or later</a>	GPL-3.0-or-later
<a href="#">GNU Lesser General Public License v3.0 or later</a>	LGPL-3.0-or-later
<a href="#">GNU Affero General Public License v3.0 or later</a>	AGPL-3.0-or-later
<a href="#">Mozilla Public License 2.0</a>	MPL-2.0
<a href="#">Eclipse Public License 2.0</a>	EPL-2.0
<a href="#">European Union Public License 1.2</a>	EUPL-1.2

# **Le bestiaire des licences**

- 1 Free Software licensing
- 2 License bestiary
  - Lax permissive licenses
  - Public domain
  - Scope-limited reciprocal licenses
  - Reciprocal licenses
- 3 Selected licensing topics
  - GPL v. linking
  - CAA/CLA
  - License popularity
  - Free riding in the “cloud”

# Popular and noteworthy licenses

- **Lax permissive** (AKA “permissive”)
  - ▶ BSD 3-Clause “New” or “Revised” license
  - ▶ BSD 2-Clause “Simplified” or “FreeBSD” license
  - ▶ Apache License 2.0
  - ▶ MIT license
  - ▶ ISC License
- **Scope-limited reciprocal** (AKA “weak copyleft”)
  - ▶ GNU Lesser General Public License (LGPL), versions 2.1 and 3
  - ▶ Mozilla Public License (MPL), version 2.0
- **Reciprocal** (AKA “strong copyleft”)
  - ▶ GNU General Public License (GPL), versions 2 and 3
  - ▶ GNU Affero General Public License (AGPL), version 3

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- **BSD** (Berkeley Software Distribution) is a Unix flavor developed by University of Berkeley (CA).
- BSD Unix was released under the terms of a “minimalistic” license, which permits both source and binary redistribution, with or without modifications, without any other restriction.
- Historical origin of the most **liberal tradition in FOSS**, opposing the use of copyleft as a strategy to liberate more software
  - ▶ intuition: favor “**developers’ freedoms**” over “**users’ freedoms**”
- Several revisions of the license exist
- Each revision is in fact a **template**, where copyright notices should be properly instantiated

- Descendants of the original BSD license
- Very popular (BSD userland, PF, TCP/IP, OpenSSH, TCL/Tk...)
- You may redistribute the work, in any form (source or binary), as long as you preserve [copyright notices](#)
- Includes “as is” and “no warranty” clauses
- “Liberal (= libertarian) license”: no control over software evolution

## BSD License — advantages

- BSD places minimal restrictions on developers and future software evolutions
- This allows BSD code to remain FOSS or become integrated into proprietary solutions
- Little legal complexity (unlike the \*GPL family of licenses)
- It allows developers and companies to spend their time creating and promoting good code rather than worrying about license violations

# Prior BSD License (1988)

*Copyright (c) <year> <copyright holder>. All rights reserved.*

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- *de facto* obsolete
- approved by: FSF, Debian
- not approved by: OSI (because better recent alternatives exist)
- GPL compatible

## Digression — warranty and disclaimer

- Software by itself is not a consumer product
- When software is (combined into) a consumer product, disclaimers are ineffective
- “As Is”: you are accepting item in the actual state **with all its faults**

## Example — BSD warranty disclaimer

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(yes: it's all ALL CAPS)

# 4-clause / Original BSD license (1990)

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modification, are permitted provided that the following conditions are met:*

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- 2. 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.*
- 3. All advertising materials mentioning features or use of this software  
must display the following acknowledgement:  
This product includes software developed by the <organization>.*
- 4. Neither the name of the <organization> nor the  
names of its contributors may be used to endorse or promote products  
derived from this software without specific prior written permission.*

*[ as-is + no warranty disclaimer ]*

- infamous **advertisement clause** (AKA: “badgeware”)
  - ▶ advertisement notices escalation, up to 70 in NetBSD
  - ▶ further restriction
- *de facto* obsolete
- approved by: FSF, Debian
- not approved by: OSI
- GPL incompatible

# 3-clause / Revised / New BSD License (1999)

*Copyright (c) <year>, <copyright holder>  
All rights reserved.*

*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  
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 documentation and/or other materials provided with the distribution.*
- \*  *Neither the name of the <organization> nor the names of its  
 contributors may be used to endorse or promote products derived  
 from this software without specific prior written permission.*

*[ as-is + no warranty disclaimer ]*

- intuition: 4-clause without advertisement clause
- popular permissive license
- approved by: FSF, OSI, Debian
- GPL compatible

# 2-clause / FreeBSD / Simplified BSD License

*Copyright (c) <YEAR>, <OWNER>  
All rights reserved.*

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

- 1. Redistributions of source code must retain the above copyright  
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*The views and conclusions contained in the software and documentation  
are those of the authors and should not be interpreted as representing  
official policies, either expressed or implied, of the FreeBSD Project.*

- intuition: 3-clause without the non-endorsement clause
- used by the FreeBSD project
- approved by: FSF, OSI, Debian
- GPL compatible

# Popular BSD-like licenses

- ISC
- MIT

# ISC: the shortest FOSS license

Copyright (c) 4-digit year, Company or Person's Name

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- Functionally similar to the 2-clause BSD
- Language made “unnecessary” by Berne Convention removed.<sup>4</sup>
- BIND, DHCP, and preferred license by the OpenBSD project
- approved by: FSF, OSI, Debian
- GPL compatible

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4. according to <http://www.openbsd.org/policy.html>

# The MIT License

The MIT License (MIT)

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[ as-is + no warranty disclaimer ]*

- Functionally similar to the 2-clause BSD.
- It doesn't contain an explicit notice prohibiting the use of the name of the copyright holder in promotion
- It states more explicitly the rights given to the end-user
- Very popular: originally X.org, now web frameworks (e.g., Node), 45% of GitHub projects (2015)
- approved by: FSF, OSI, Debian
- GPL compatible

- Old versions: 1.0 (original) and 1.1 (ASF, 2000)
  - ▶ <https://www.apache.org/licenses/LICENSE-1.0>
- An extension of the 3-clause BSD license
- Permits integration into closed source projects
- Apache License 2.0 (January 2004): permissive license.
  - ▶ Make the license easier for non-ASF projects to use
  - ▶ Explicitly grants patent rights where necessary to operate, modify and distribute the software (§3)
  - ▶ Patent retaliation (terminating the license upon the initiation of a lawsuit)

<https://www.apache.org/licenses/LICENSE-2.0>

- popular license
  - ▶ ≈150 projects hosted by the Apache Software Foundation (2015)
  - ▶ over 8'000 non-ASF projects located at SourceForge are available under Apache License (2012)
  - ▶ 25% of Google Code projects, including Android user space (2008); 11% of GitHub (2015)
- approved by: FSF, OSI, Debian
- compatible with GPLv3
- incompatible with GPLv2

## §3. *Grant of Patent License*

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## §3. *Grant of Patent License*

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1 Free Software licensing

2 License bestiary

- Lax permissive licenses
- **Public domain**
- Scope-limited reciprocal licenses
- Reciprocal licenses

3 Selected licensing topics

- GPL v. linking
- CAA/CLA
- License popularity
- Free riding in the “cloud”

How far can we go with liberal licensing?

i.e., maximizing user freedoms and minimizing constraints

## An example: WTFPL License

*DO WHAT THE FUCK YOU WANT TO PUBLIC LICENSE  
Version 2, December 2004*

*Copyright (C) 2004 Sam Hocevar <sam@hocevar.net>*

*Everyone is permitted to copy and distribute verbatim or modified copies of this license document, and changing it is allowed as long as the name is changed.*

*DO WHAT THE FUCK YOU WANT TO PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION*

*0. You just DO WHAT THE FUCK YOU WANT TO.*

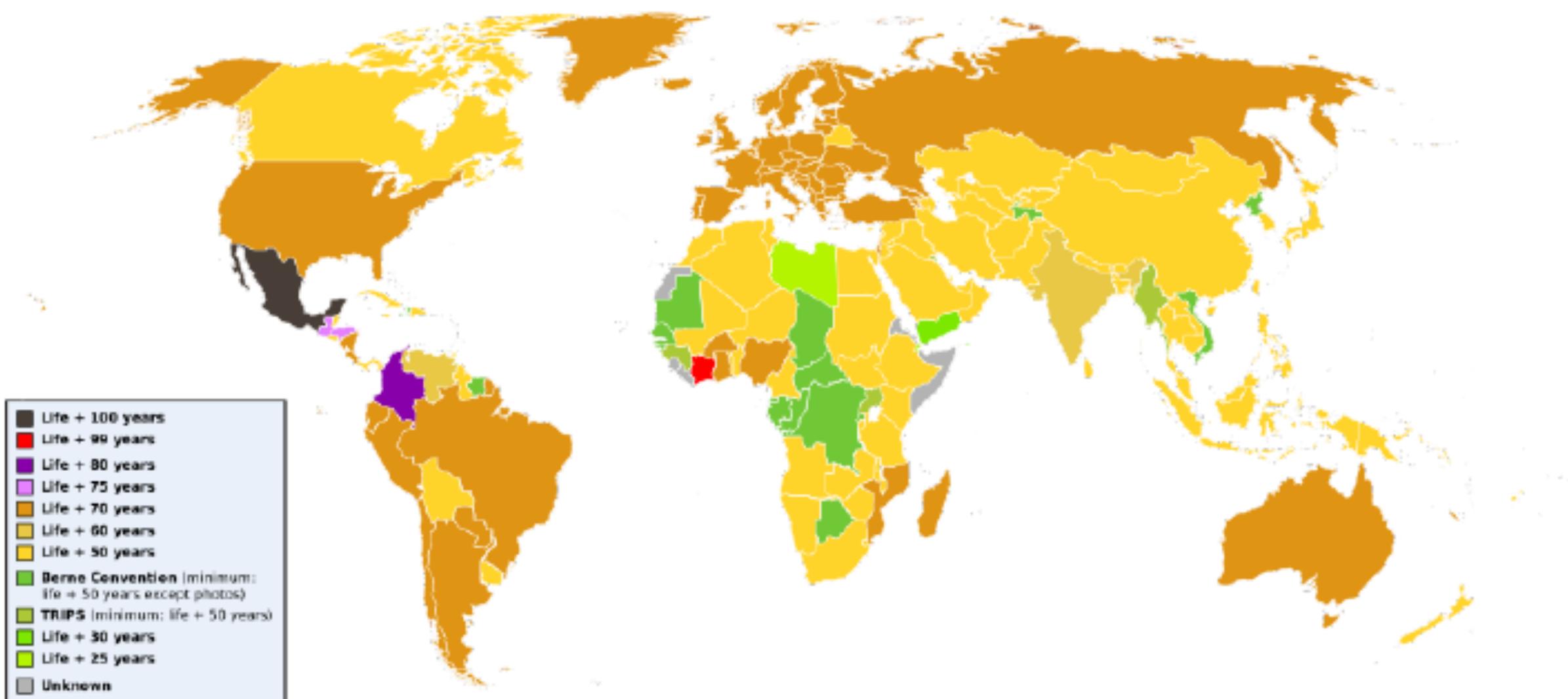
- Irreverent text, on purpose
- Licensees are encouraged to do what the @\*%#!#\* they want to
- Not very popular, not a good choice for software
- Approved by: FSF, Debian
- Not approved by: OSI

Works in the **public domain** are those works for which copyright rights have expired, forfeited, or not applicable.

There are thus various ways for copyrightable works to **enter the public domain**:

- ① copyright is **not applicable** to this kind of works (facts, theories, short snippets, ...)
- ② the copyright has **expired**
  - ▶ copyright expired *tout court*
    - \* see Public Domain Day, January 1st each year
  - ▶ the copyright owner failed to follow copyright renewal rules, where/when applicable (e.g., the novel *Anthem* by Ayn Rand)
- ③ the copyright owner **deliberately places** it in the public domain

# World copyright terms



[https://commons.wikimedia.org/wiki/File:World\\_copyright\\_terms.svg](https://commons.wikimedia.org/wiki/File:World_copyright_terms.svg)

# Public domain dedication I

To deliberately put a work in the public domain, authors should use a **public domain dedication**, e.g.:

*The person or persons who have associated work with this document (the "Dedicator" or "Certifier") hereby either (a) certifies that, to the best of his knowledge, the work of authorship identified is in the public domain of the country from which the work is published, or (b) hereby dedicates whatever copyright the dedicators holds in the work of authorship identified below (the "Work") to the public domain. A certifier, moreover, dedicates any copyright interest he may have in the associated work, and for these purposes, is described as a "dedicator" below.*

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<http://creativecommons.org/licenses/publicdomain/>

- Is it actually possible *before* copyright expiration?

# Public domain applicability

- Is it actually possible *before* copyright expiration?
- Several legal systems (and most notably in Europe) effectively prohibit any attempt by the owners to surrender copyright rights automatically conferred by law
  - ▶ Particularly moral rights (perpetual, unwaivable, inalienable)
- A solution: the CC0 license by Creative Commons—waive all copyright rights **to the fullest extent allowed** by law

[...]

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[...]

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- 1 Free Software licensing
- 2 License bestiary
  - Lax permissive licenses
  - Public domain
  - **Scope-limited reciprocal licenses**
  - Reciprocal licenses
- 3 Selected licensing topics
  - GPL v. linking
  - CAA/CLA
  - License popularity
  - Free riding in the “cloud”

1998 version 1.0, as a successor of the NPL (Netscape Public License)

1999 version 1.1 by Mozilla Organization

- public feedback/review process on how to improve version 1.0
- allow for dual-/multi-licensing

2012 version 2.0

- public process again
- GPL-compatible

# Mozilla Public License (MPL) 2.0

- weak (or partial) copyleft license, with file-based boundaries on the reach of copyleft requirements
- separation between covered software and larger work

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## Mozilla Public License (MPL) 2.0 (cont.)

- Patent provisions: patent license + patent retaliation (similar to Apache2)
- approved by: FSF, OSI, Debian
- version 2.0 of the license is compatible with the GPL
- version 1.1 is *incompatible* with the GPL
  - ▶ A module covered by the GPL and a module covered by the MPL version 1.1 cannot be linked together.
  - ▶ For this reason, Firefox has been relicensed under multiple licenses (MPL, GPL, LGPL).
  - ▶ MPL 1.1 can be specifically amended to allow combining with GPL and others (§13, “Multiple-licensed code”).

- The Common Development and Distribution License (CDDL) is based on the MPL, version 1.1
- Produced by Sun Microsystems for the OpenSolaris projects (kernel, userland, ZFS, DTrace, NetBeans, GlassFish, ...)
- approved by: FSF, OSI, Debian
- It tries to amend GPL-incompatibility issues in the MPL 1.1
  - ▶ without succeeding (according to FSF and Debian)
- Some non-compliance issues with European law system in the MPL have been corrected in the CDDL
- approved by: FSF, OSI, Debian
- GPL-incompatible

1991 GNU *Library General Public License*, version 2 (for uniformity with GPL version)

1999 GNU *Lesser General Public License*, version 2.1

- name change to emphasize that it is inferior (from a copyleft POV) to the GPL, rather than the recommended variant of the GPL for software libraries

2007 GNU LGPL, version 3

- reimplemented as GPLv3 + additional permissions
- very popular license for libraries (and more)
- approved by: FSF, OSI, Debian
- GPL compatible

- §4. You may copy and distribute *the Library* (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, [...]

- §4. You may copy and distribute *the Library* (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, [...]
- §5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “*work that uses the Library*”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

Note the lack of explicit file boundaries (contrary to, e.g., MPL)

- §4. You may copy and distribute *the Library* (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, [...]
- §5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “*work that uses the Library*”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

Note the lack of explicit file boundaries (contrary to, e.g., MPL)

- §3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library [...] This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

- A “*Combined Work*” is a work produced by combining or linking an *Application* with the *Library*. The particular version of the *Library* with which the *Combined Work* was made is also called the “*Linked Version*”.
- The “*Minimal Corresponding Source*” for a *Combined Work* means the *Corresponding Source* for the *Combined Work*, excluding any source code for portions of the *Combined Work* that, considered in isolation, are based on the *Application*, and not on the *Linked Version*
- The object code form of an *Application* may incorporate material from a *header file* that is part of the *Library*.

- You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering [...]
- [provided that] you do one of the following:
  - Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version [...]
  - Use a suitable shared library mechanism for linking with the Library. [...]

things start to get quite technical for a legal document...

Intuition: enable users to enjoy the 4 freedoms on the “library”.  
Technically, that means being able to replace the library with a modified version of it.

- 1 Free Software licensing
- 2 License bestiary
  - Lax permissive licenses
  - Public domain
  - Scope-limited reciprocal licenses
  - Reciprocal licenses
- 3 Selected licensing topics
  - GPL v. linking
  - CAA/CLA
  - License popularity
  - Free riding in the “cloud”

# GNU General Public License (GPL)

- considered to be the most popular Free Software license
- approved by: FSF, Debian, OSI

1989 version 1 (by RMS), as a generalization (hence the name) of licenses already used by the GNU project for: Emacs, GDB, GCC

1991 version 2 (by RMS)

- “liberty or death”; early ex. of defense against patents and similar threats to user freedoms

2007 version 3 (by RMS with counsel from E. Moglen/SFLC)

- public review process
- software patents clauses
- DRM clauses (anti “tivoization”)
- license compatibility provision
- internationalization
- self-defense against further restrictions

What makes the GPL so special?

- First implementation of copyleft
- Highly influential on all subsequent copyleft/share-alike licenses, including Creative Commons
- Without the GPL, copyleft would have been just an abstract idea
- Designed to prevent proprietary relicensing of Free Software code
- Popularity

*§3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:*

- a) 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, [...]*

§3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) 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, [...]

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable.

§3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

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However, as a special exception,<sup>5</sup> the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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5. the so called “system library exception”

§2. You may *modify* your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties *under the terms of this License*.
- derived works fall under the terms of the GPL themselves, hence *their* source code must be distributed as well
  - (a) is a local requirement
  - (b) only triggers upon distribution

*§5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.*

*§5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.*

How about permission to use the Program?

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How about permission to use the Program?

**§0.** [...] Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, [...]

Recommended way to apply the GPL to source code:

*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; either version 2 of the License, or (at your option) any later version.*

- part of the copyright/license notices, not of the license itself
- individual software authors *can* leave the “or later” clause out
- other licenses include implicit “or later” requirements in the license text itself (e.g., MPL)

For best practices on how to manage copyright/license notices see:  
Software Freedom Law Center, *Managing copyright information within a free software project*

<https://softwarefreedom.org/resources/2012/ManagingCopyrightInformation.html>

Why you shouldn't use the Lesser GPL for your next library  
<https://www.gnu.org/licenses/why-not-lGPL.html>

*The GNU Project has two principal licenses to use for libraries. One is the GNU Lesser GPL; the other is the ordinary GNU GPL. [...] using the Lesser GPL permits [use of the library in proprietary programs](#); using the ordinary GPL for a library makes it available only for free programs.*  
[...]

*Which license is best for a given library is [a matter of strategy](#) [...]. [...] Free software developers need to make advantages for each other. Using the ordinary GPL for a library gives free software developers an advantage over proprietary developers: a library that they can use, while proprietary developers cannot use it.*  
[...]

*There are reasons that can make it better to use the Lesser GPL in certain cases. The most common case is [when a free library's features are readily available for proprietary software through other alternative libraries](#). In that case, the library cannot give free software any particular advantage, so it is better to use the Lesser GPL for that library.*

- Written by Richard Stallman and the FSF, published in 1991.
- The most popular Free Software license: estimated to cover 50-70 % of all Free Software projects (at the time)
- It's more than a software license: it is a social contract, imposing that all players have the same rights and obligations

Why update it?

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Why update it?

After 15 years, needed updating in order to remain effective against [new threats](#) to user freedoms.

Intuition: the GPL is a mean to an end. It is an implementation that might have bugs (or grow them over time), which need to be fixed in further releases of the license.

Public consultation process:

- very relevant and the social responsible thing to do: given the abundance of “or later” software, the effects of the release of GPLv3 might be huge
- It lasted 18 months: from January 16, 2006 (first draft) to June 29, 2007 (final version)
- Invited participants from high-profile Free Software projects
- 4 drafts
- 5 International Conferences (Boston, Porto Alegre, Barcelona, Tokyo and Brussels)

### §3. Protecting Users' Legal Rights From Anti-Circumvention Law.

[...]

*When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.*

- does not *forbid* to implement DRM & co. in software
- but allows to write interoperable software and bypass restrictions
- neutralize laws that get in the way of user freedoms (e.g., DMCA, EUCD)

- Together with

### **§6. Conveying Non-Source Forms.**

[...]

*“Installation Information” for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source.*

it also neutralizes “tivoization”, i.e., the circumvention of the GPL by using cryptography to disallow the installation/execution of modified versions of a GPL’d program

Protection against patent threats is implemented by GPLv2 only in the “**Liberty or Death**” clause:

*§7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all.*

[...]

*It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. [...]*

GPLv3 adds (i.e., “liberty or death” remains) stronger protection against patent threats through legal-engineering:

### **§11. Patents.**

[...] *Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.*

### **§10. Automatic Licensing of Downstream Recipients.**

[...] *you may not initiate litigation (including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.*

### §7. Additional Terms.

*“Additional permissions” are terms that supplement the terms of this License by making exceptions from one or more of its conditions. [...]*

*When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. [...]*

*All other non-permissive additional terms are considered “further restrictions” [...] If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term.*

- **§7. Additional Terms.**

[...] for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms: [...]

  - e) Declining to grant rights under [trademark](#) law for use of some trade names, trademarks, or service marks; or  
(and other similar permissions for adding warranties/“as is” disclaimers, limiting the use for publicity purposes, etc.)
- *Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU [Afferro General Public License](#) into a single combined work, and to convey the resulting work.*

## *§15. Disclaimer of Warranty.*

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

## *§16. Limitation of Liability.*

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

# The Application Service Provider (ASP) loophole

## Exercise

- ① *obtain a copy of some GPL'd program*
- ② *modify it*
- ③ *offer remote access to your modified version over the Net (e.g., web app, remote API, etc.)*

*Does the GPL force you to redistribute the code of your modified version?*

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*Does the GPL force you to redistribute the code of your modified version? No.*

- GPL (both v2 and v3) copyleft clauses trigger upon distribution of the modified copy, in either source or binary form
- if you do not do any of that, copyleft does not kick in
- from copyleft POV, this is very problematic for web/network apps  
*“GPL is the BSD of Web applications”* — Bradley Kuhn
- but in an increasingly more connected world, the problem is more general

- Based on the GPL
- Pioneered by Affero, Inc. (version 1, 2002)
- Published by the Free Software Foundation (version 3, 2007)
- It contains the extra **Affero clause** that requires distribution of modified source code of applications to users **interacting remotely** over the network with the program
- The clause has initially been considered for inclusion in GPLv3, but then relegated to a separate license
- approved by: FSF, Debian, OSI
- GPL compatible (explicitly so)

### §13. *Remote Network Interaction* [...]

*if you modify the Program, your modified version must prominently offer all users interacting with it remotely through a computer network (if your version supports such interaction) an opportunity to receive the Corresponding Source of your version by providing access to the Corresponding Source from a network server at no charge, through some standard or customary means of facilitating copying of software.*

# Bonus slides

# Outline

## 1 Free Software licensing

## 2 License bestiary

- Lax permissive licenses
- Public domain
- Scope-limited reciprocal licenses
- Reciprocal licenses

## 3 Selected licensing topics

- **GPL v. linking**
- CAA/CLA
- License popularity
- Free riding in the “cloud”

# Derivative works and the GPL

GPL copyleft propagation applies to (GPLv2 language):

*a “work based on the Program” means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language.*

## Exercise (linking and the GPL)

*Can you link a GPL program/library with a non-GPL program/library, without applying the GPL to the obtained binary?*

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Answer:<sup>6</sup>

- FSF (and popular) answer: no; the GPL applies
- some corporate lawyers’ answer: yes; the GPL doesn’t apply
- court cases/tribunal answer: none (yet)

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6. according to some, the *actual* answer is thus “we don’t know”

# Derivative or collective works?

[US law language]

- a **derivative work** is a “work based upon one or more preexisting works”, which requires some transformation or adaption of the original
- a **collective work** is created when a person brings together “preexisting materials... in such a way that the resulting work as a whole constitutes an original work of authorship”
  - ▶ individual parts remain under their individual licenses
  - ▶ a separate license apply to the collection

Does linking create a derivative or a collective work (or both)?

# Linking and the GPL — FSF position

License text (redux):

*a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language.*

From the GPL FAQ:<sup>7</sup>

Q: Does the GPL have different requirements for statically vs dynamically linked modules with a covered work?

A: No. Linking a GPL covered work statically or dynamically with other modules is making a combined work based on the GPL covered work. Thus, the terms and conditions of the GNU General Public License cover the whole combination. [...]

Q: Can I release a non-free program that's designed to load a GPL-covered plug-in?

A: [...] Using shared memory to communicate with complex data structures is pretty much equivalent to dynamic linking

## Linking and the GPL — arguments

- dynamically linked executables contains “annotations and elaborations” on a base binary
  - ▶ does a Linux **kernel module** contains annotations and elaborations on the base expression of the kernel?
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  - ▶ how about **user programs** that run on Linux?
  - ▶ according to Linus and kernel developers:<sup>8</sup>

*NOTE! This copyright does \*not\* cover user programs that use kernel services by normal system calls - this is merely considered normal use of the kernel, and does \*not\* fall under the heading of “derived work”.*

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- ... but are they right?
- the legal principle of **usage of trade** might play a role too

## Linking and the GPL — arguments (cont.)

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- **header files** might also play a role
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### Exercise (LGPL header files v. linking)

*Is header inclusion a potential issue for LGPL'd programs too?  
Why?*

## Linking and the GPL — arguments (cont.)

- there are also other types of “linking”: RPC, RMI, REST API, etc.  
When do they constitute “linking” in a sense that would trigger strong copyleft requirements?
  - ▶ no consensus yet
  - ▶ legal folklore seems to suggest that:
    - \* loosely coupled and/or popular and/or standardized APIs with several alternative implementations should not trigger the GPL
    - \* tightly coupled and/or ad-hoc and/or single-implementation APIs should trigger the GPL
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Ultimately, this GPL linking dilemma is problematic only for those who want to somehow circumvent one of the main goals of the GPL which, *per se*, is very clear.

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  - Reciprocal licenses
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  - GPL v. linking
  - **CAA/CLA**
  - License popularity
  - Free riding in the “cloud”

**Copyright Assignment Agreement (CAA)** cession agreement where a copyright holder surrender all their copyright sanctioned rights on some work to another party

**Contribution License Agreement (CLA)** agreement where a copyright holder gives a license (usually non-revocable, possibly exclusive) to enforce specific copyright sanctioned rights to another party

- on paper, CAA are more powerful than CLA; but they only go as far as the legal system allows them
  - ▶ e.g., in most of Europe moral rights cannot be surrendered
- CLAs can be so broad to be *de facto* equivalent to CAAs
- key copyright right for policy reasons: the **ability to relicense**

If a vendor participating in a FOSS project has, alone, the ability to relicense, strategy considerations based solely on the chosen FOSS license are completely moot.

# Not all CAAs/CLAs are born equal

- set of rights surrendered
  - ▶ e.g., enforcement-only agreements
- mandatory vs optional agreements
- to (public benefit) nonprofit vs for profit entities
- safe guards
  - ▶ e.g., “we can relicense, but we will pick within this set of licenses”
    - \* common choice: OSI-approved  $\cap$  FSF-approved licenses
- alternatives (within limits)
  - ▶ “or later” clauses
    - \* possibly with license proxy (e.g., GPLv3, §14)
  - ▶ will

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## Warning

Due to the [free circulation](#) of Free Software, it is very difficult to get hard number about software—and therefore license—popularity.

Nonetheless, many actors of the FOSS ecosystem publish [statistics](#) about those facts. Unfortunately, most of them do so in rather [unscientific](#) ways: without disclosing the details about the dataset they are using, and without liberating the software they use to compile their statistics.

Use [caution](#) in interpreting the data.

# Blackduck: “Top 20 Open Source Licenses”

GPL 2.0	25%
MIT	19%
Apache License 2.0	16%
GPL 3.0	10%
BSD 3-clause	7%
Artistic (Perl)	5%
LGPL 2.1	5%
LGPL 3.0	2%
MS-PL	2%
EPL	2%
Code Project Open License	1%
MPL 1.1, BSD 2-clause, CDDL 1.0, GPL, Microsoft Reciprocal License, Sun GPL w/ classpath exc., CDDL 1.1, zlib/libpng, CPL	<1% <sup>9</sup>

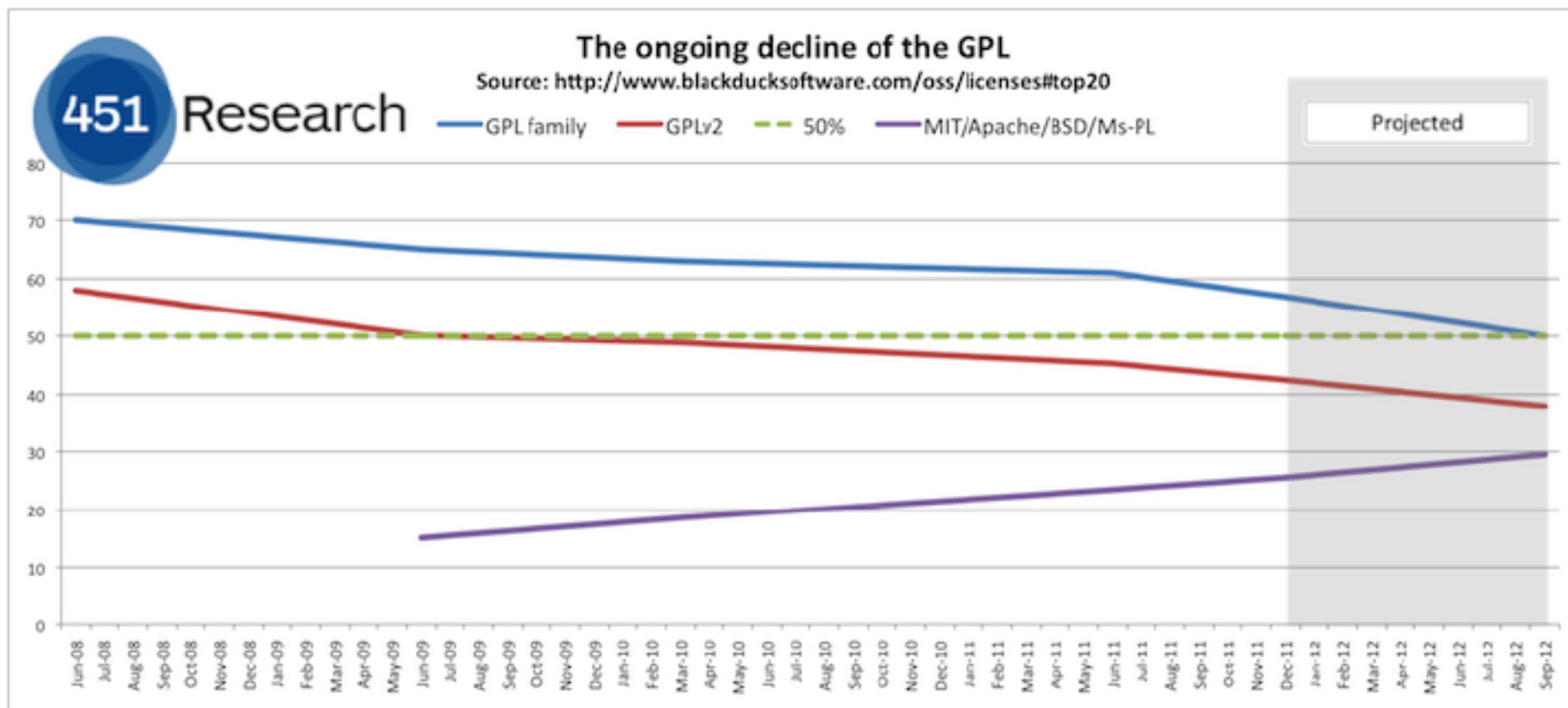
<https://www.blackducksoftware.com/resources/data/top-20-open-source-licenses>

February 2015

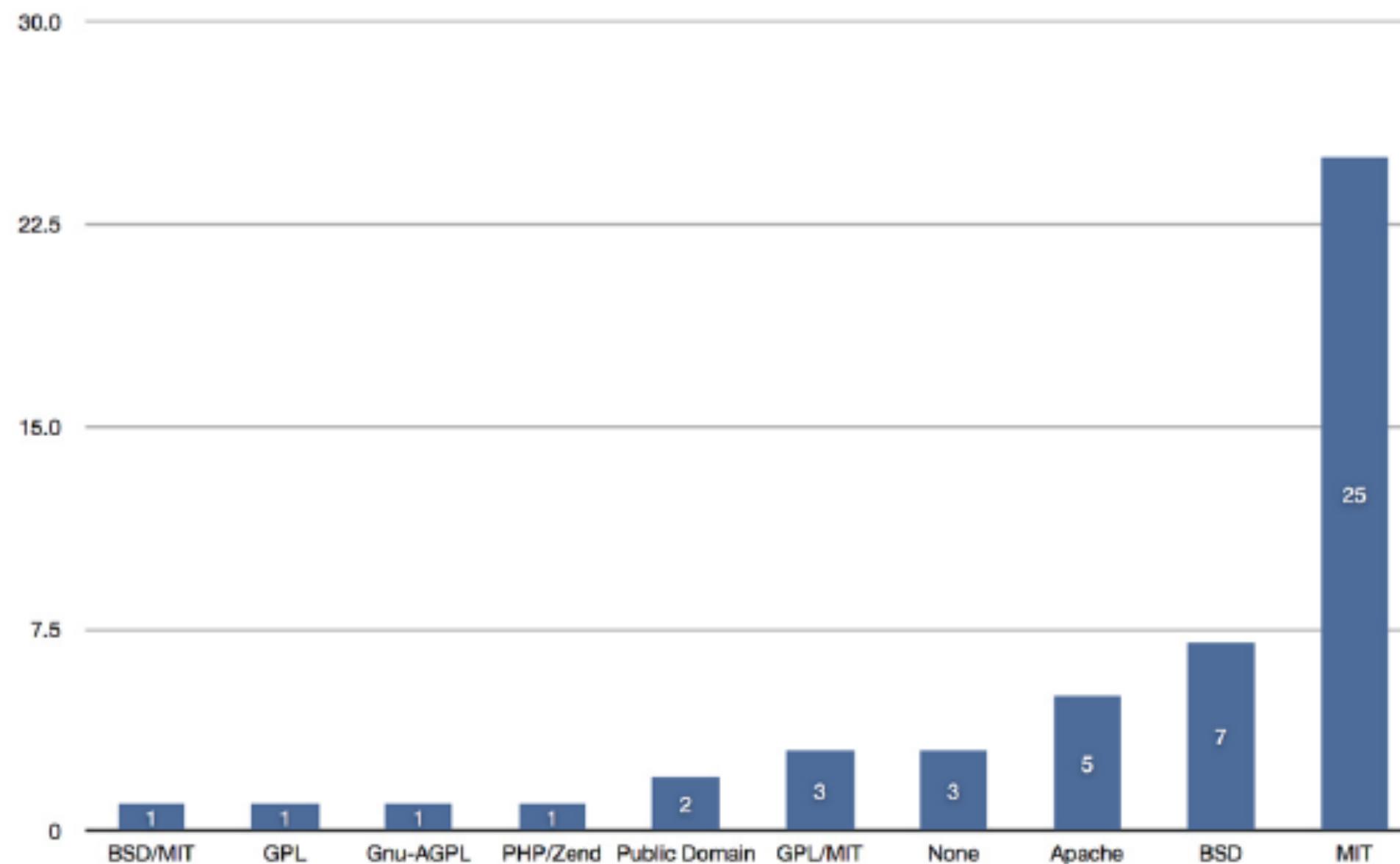
9. each license

# Blackduck: the (alleged) decline of the GPL

According to Blackduck, in recent years the GPL is losing ground to permissive licenses:



# GitHub: top licenses



<http://ostatic.com/blog/the-top-licenses-on-github>

February 2012

## GitHub — a bit more complex than that

- 2013 analysis of GitHub by Aaron Williamson “Licensing of Software on Github: A Quantitative Analysis”<sup>10</sup>
- only 14.9% have a top-level license file
- only 3.6% mention a license in README
- for the remaining projects, the breakdown is largely confirmed
- POSS (“Post Open Source Software” debate)

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10. http:

//www.softwarefreedom.org/resources/2013/lcs-slides-aaronw/

# License popularity in Debian over time



Matthieu Caneill, Daniel M. Germán, Stefano Zacchiroli

The Debsources Dataset: Two Decades of Free and Open Source Software.  
Empirical Software Engineering, Vol. 22, 2017.

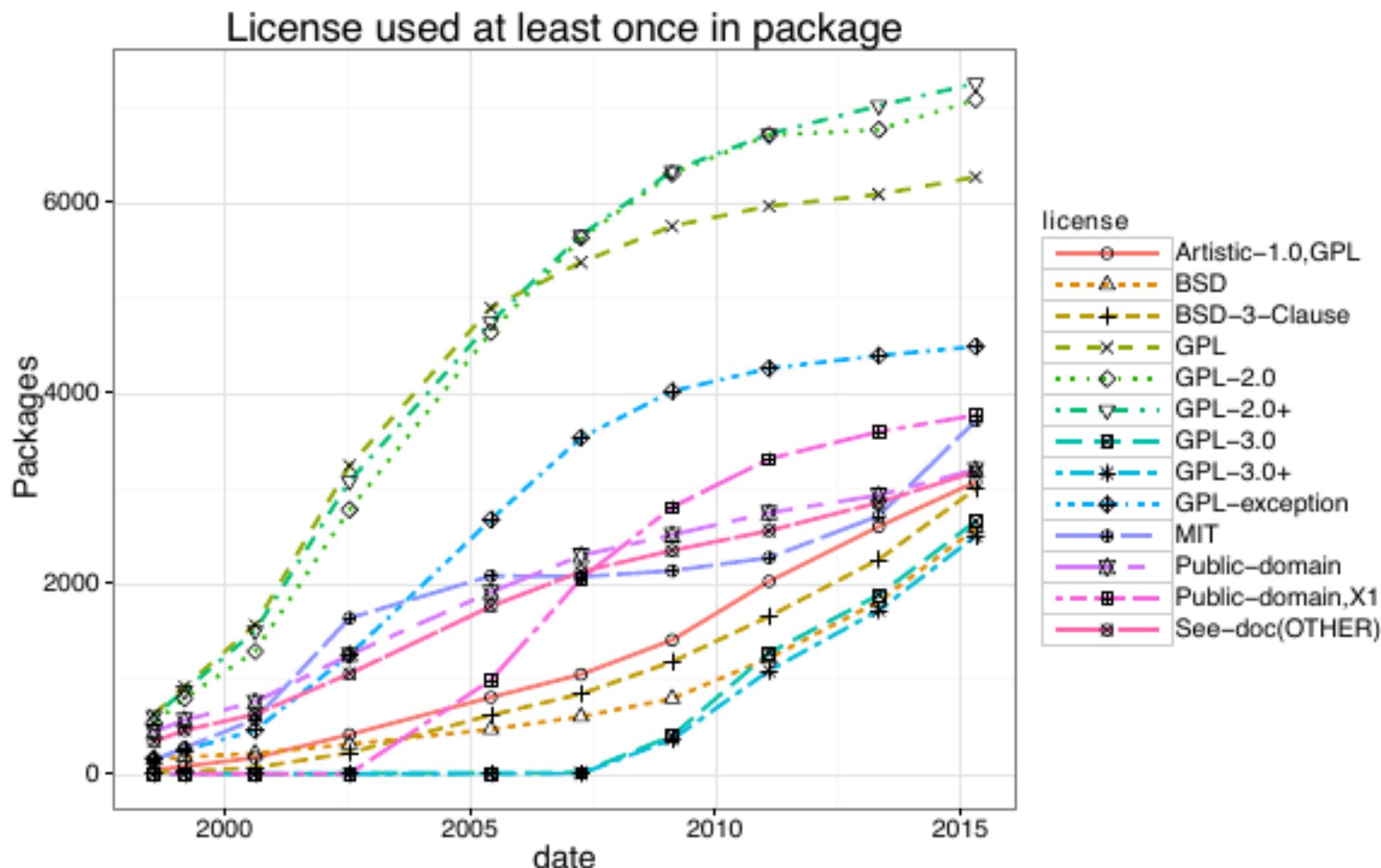


# License popularity in Debian over time (cont.)



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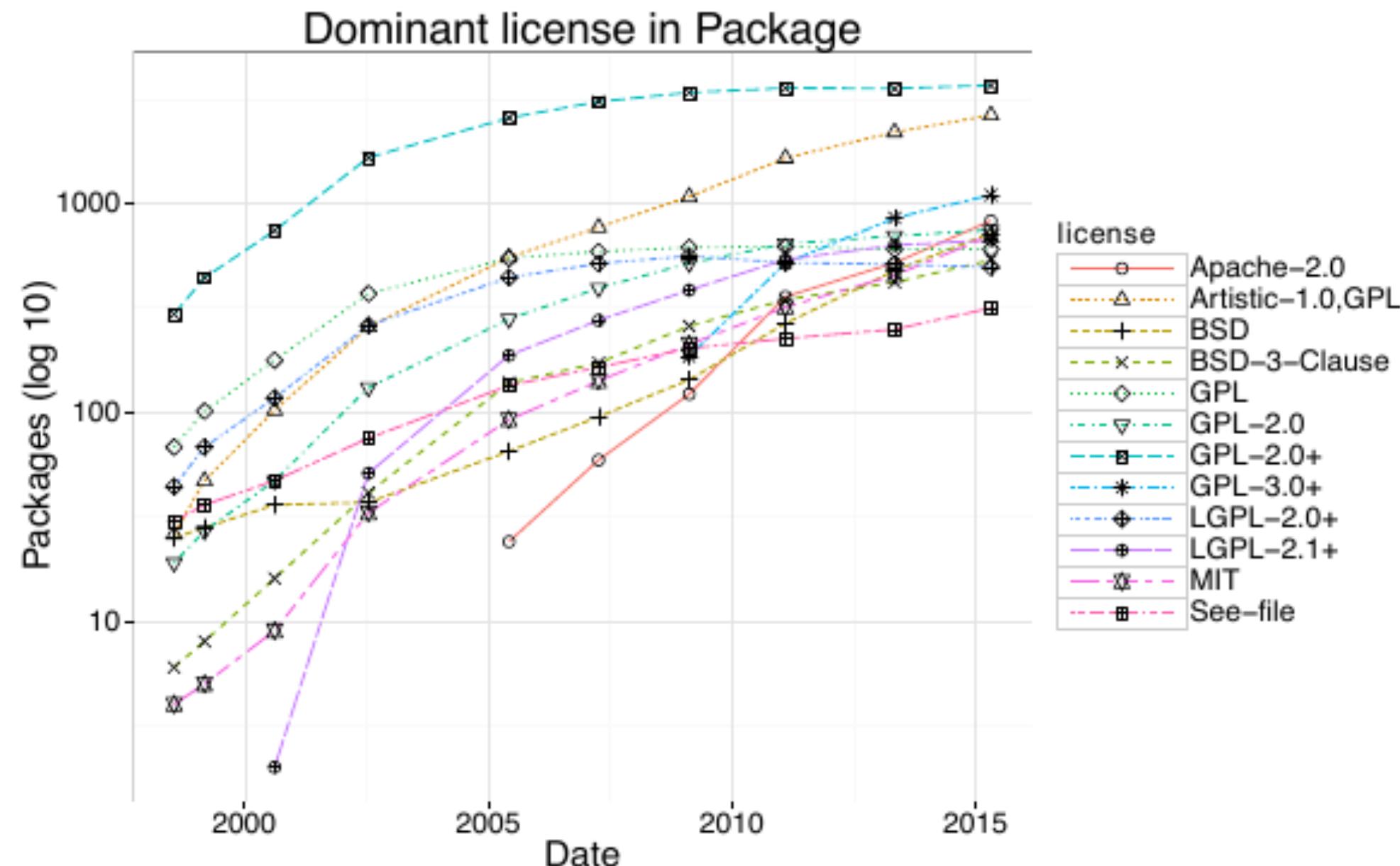


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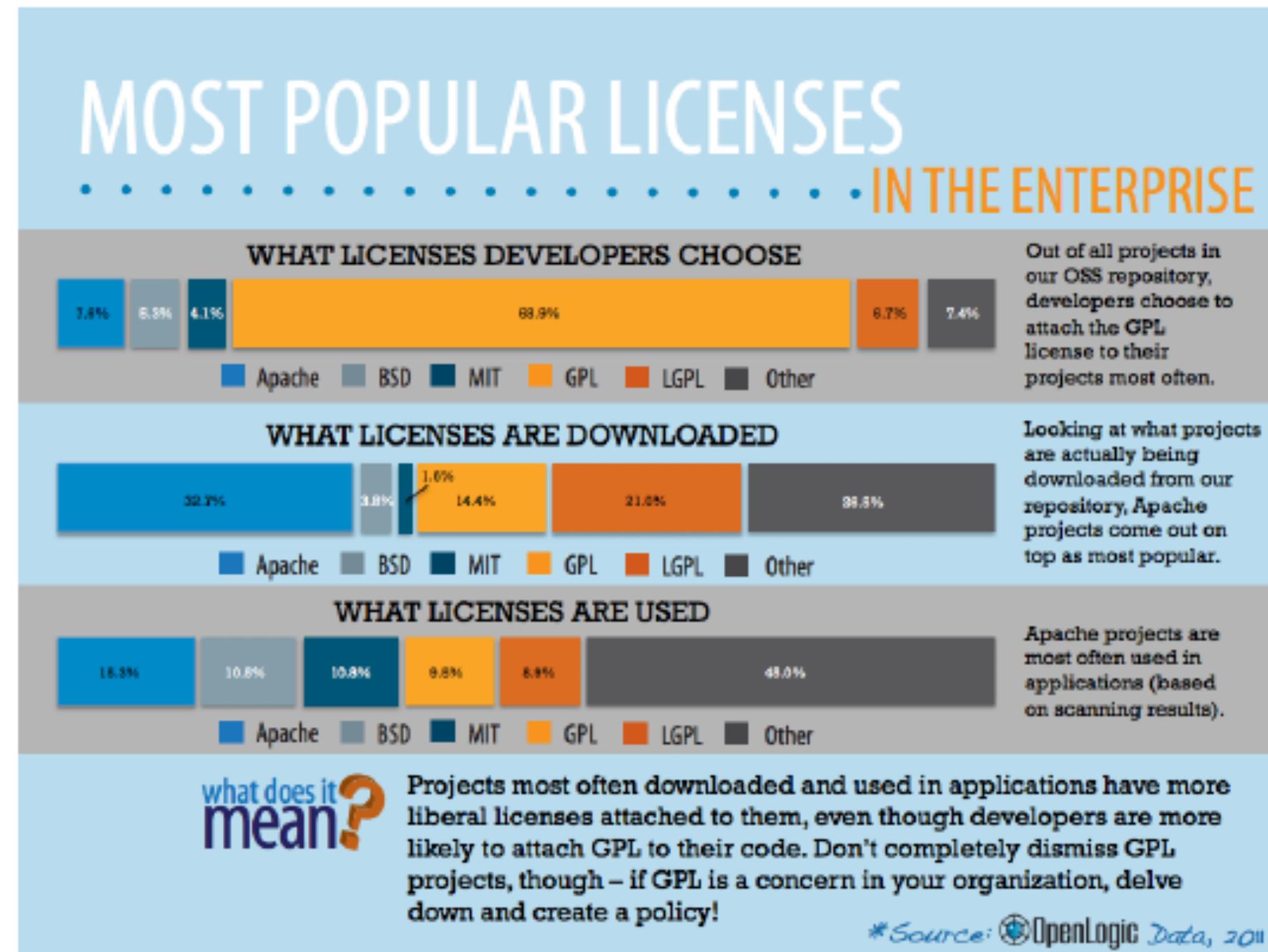


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# OpenLogic: most popular licenses in the enterprises



<http://www.openlogic.com/blog/bid/197148/open-source-software-101-understanding-compliance>

July 2012

## Discussion: GPL vs BSD

- “BSD code is free, but GPL code stays free”
- copyleft: (non) business friendly?

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  - **Free riding in the “cloud”**

## Definition (Free-rider problem)

The **free-rider problem** occurs when those who benefit from resources, public goods, or services do not pay for them, which results in an underprovision of those goods or services

FOSS is at risk of free-riding, in particular when developers are not sufficiently funded and not enough users contribute back to address developers need.

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Large “cloud” providers are prone to FOSS free riding, e.g.:

- take an existing FOSS component, e.g., a server-side DB
- integrate it so that cloud users can automatically deploy it, e.g., in a VM
- charge cloud users for the use of the service and/or the VM, e.g., by uptime, no. of requests, etc.

## Anti free-riding licenses

A number of anti free-riding licenses are being experimented with to address the problem.

The balance between addressing the issue and retaining FOSS freedoms (and in particular freedom 0) is hard to achieve though.

To date, no such license has been recognized as free software and/or open source.

## Commons Clause

*Without limiting other conditions in the License, the grant of rights under the License will not include, and the License does not grant to you, the right to Sell the Software.*

*[...] “Sell” means practicing any or all of the rights granted to you under the License to provide to third parties, for a fee or other consideration (including without limitation fees for hosting or consulting/support services related to the Software), a product or service whose value derives, entirely or substantially, from the functionality of the Software.*

— <https://commonsclause.com>

- clause meant to be added to other licenses, in particular (but not only) Apache
- does not claim to be FOSS; from the FAQ: “Q: is this open source?” “A: No.”
- adoption: extensions for Redis, see  
<https://redislabs.com/community/licenses/>

# Server-Side Public License I

Based on AGPL, replacing §13 with the following:

## *§13. Offering the Program as a Service.*

*If you make the functionality of the Program or a modified version available to third parties as a service, you must make the Service Source Code available via network download to everyone at no charge, under the terms of this License. Making the functionality of the Program or modified version available to third parties as a service includes, without limitation, enabling third parties to interact with the functionality of the Program or modified version remotely through a computer network, offering a service the value of which entirely or primarily derives from the value of the Program or modified version, or offering a service that accomplishes for users the primary purpose of the Program or modified version.*

*“Service Source Code” means the Corresponding Source for the Program or the modified version, and the Corresponding Source for all programs that you use to make the Program or modified version available as a service, including, without limitation, management software, user interfaces, application program interfaces, automation software, monitoring software, backup software, storage software and hosting software, all such that a user could run an instance of the service using the Service Source Code you make available.*

- <https://www.mongodb.com/licensing/server-side-public-license>
- adoption: MongoDB
- license submitted to OSI for approval, not accepted yet, mostly negative feedback thus far (February 2018)

# Crédits

# Logiciel Libre

## Cours 4 — Licenses

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URL <https://upsilon.cc/zack/teaching/1920/loglib/>  
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