Considerations on software licenses for the ABP group

Myriam Ayass (KT), R. De Maria (ABP), Nick Ziogas (KT)

Introduction and content

It is complex subject!

Licenses not well handled can put the Organization at legal risk!

Internal procedures are not fully regulated!

Content:

- Rules and definitions, mostly copied from official documents.
- Overview of major risks
- Practical aspects

CERN Rules and Definitions

[1] <u>Intellectual property</u> shall mean all intellectual creations including know-how, in particular drawings, models, inventions, software, reports, procedures and protocols.

[2] All rights in intellectual property that results from, or is substantially based on, a member of the personnel's activities within the Organization or on its behalf shall be automatically vested in the Organization, except as may be otherwise stipulated by the Organization in its agreements and Memoranda of Understanding.

[3] members of the personnel who have created intellectual property shall immediately: a) declare it to their Head of Department; b) disclose and forward to their Head of Department all information relating to it.

Definitions:

<u>Author</u> is the creator of the work.

<u>Copyright</u> is the legal entitlement provided to the copyright owner to exercise a 'bundle' of rights for an original written intellectual property such as: distribute the work, copy the work, display the work, perform the work, and create derivative works based upon the original work.

<u>Copyright owner</u> owns the rights of the copyright.

<u>License</u>: is a permission granted by the copyright owner to exercise one of the copyright rights.

<u>Patent</u>: is a different bundle of right for a protecting an invention. Certain software may be protected by copyright (source code) and patent (functionality) in the US, but in not in Europe. Differently from copyright, patents need to be requested.

[1] S I 5.01, [2] S I 5.02, [3] R I 5.01 of <u>Staff Rules and Regulations</u>

Other rules and definitions

[1] Although not strictly a prerequisite to the existence of the copyright, a copyright notice should be included in all technical documentations and software produced by CERN members of personnel (*© CERN [year of first publication]*). The copyright notice serves to assert CERN's ownership of the work, and to notify third parties that the work is protected by copyright, and who the owner of the copyright is.

[2] For software developments that are owned in whole or in part by CERN, CERN favours the open source [3] approach.

Exceptions can be made where there is good reason not to apply the open source approach at a given time. Alternatively, a dual licensing scheme can always be considered. The specifics of the software dissemination strategy are set out in a dedicated policy document. [POLICY ON SOFTWARE DISSEMINATION 2017 written by Knowledge Transfer KT]

Open source initiative means, among other: free redistribution; allow distribution in source code as well as compiled form; allow modifications and derived work; allow them to be distributed under the same terms as the license of the original software; explicitly permit distribution of software built from modified source code.

In addition: Many permissive licences allow to distribute the code under any licence, even to close it and sell it under another name.

[1] Section 2.3.2, [2] Section 4.1.5, POLICY ON THE MANAGEMENT OF INTELLECTUAL PROPERTY IN KNOWLEDGE TRANSFER ACTIVITIES AT CERN
[3] see next slide

Policy for software distributions

I. As stated in the CERN Staff Rules and Regulations , all Intellectual property rights generated from work by CERN Personnel are vested in CERN unless specified otherwise…

II. Any dissemination action engages the Organization's responsibility and reputation and should be undertaken on a sound legal basis and with the best interest of the Organization in mind.

III. The contributions of individuals or groups of individuals should be acknowledged according to the standard practices of the software industry/community;

IV. The opinion, perspective and expectations regarding the evolution of the technology, as expressed by the individuals, or groups of individuals, who developed the software technology, play a major role in choosing its dissemination course;

The Knowledge Transfer Group is responsible for facilitating the transfer of CERN technology for public use and benefit. Its mandate is to evaluate, obtain protection for, negotiate licensing and contractual agreements, provide legal advice, and promote CERN technologies.

Although indeed at CERN we privilege OS, but it does not imply an automatic decision and certainly not a decision taken by the Author(s) only. According to the Software dissemination policy an assessment of the software's transfer potential is essential as well as a discussion to decide on the most appropriate licence.

POLICY ON SOFTWARE DISSEMINATION, Knowledge Transfer Group

Risks when choosing or not choosing a license

Diverging opinions in case of shared ownership.

Licence or copyright violations due to:

- license incompatibilities

- missing due diligence

- implicit condition acceptance when using services such as github.com to distribute software

Shared ownership

- No license means no rights for anybody (including authors when they are not the copyright owners) except for all copyright owners.
- License can be changed only if all copyright owners agrees. An issue when multiple institutes are copyright holders.
- CERN authors are not copyright owners unless explicitly allowed by the DG.

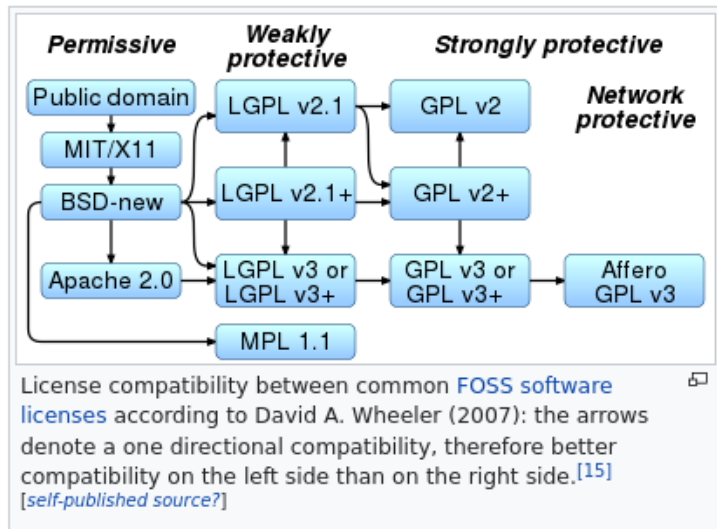Before accepting a contribution:

- make sure the software has an appropriate license for the work, discussed with hierarchy and KT
- asks non-CERN authors of the contribution who is the copyright owners
- ask if the owner accepts to transfer copyright to CERN (many universities and institutes do not allow this)
- If not:
  - add the owner in the copyright notice with the year of contribution
  - add the author to the author list (in the main file if exists, or the file of the contribution of the repository)

KT can advice to prepare a contributor license agreement or other options, which is advisable for large projects.

For existing projects in which the procedure above was not followed:

- Establish a list of contributions: author, year, affiliation at the time of the contribution, content of the contribution
- This allows KT to establish the copyright owners. Discuss with authors, KT, copyright owner for:
  - establishing a appropriate license
  - considering a collaborator agreement

Potential licence incompatibility.

License compatibility between common FOSS software licenses according to David A. Wheeler (2007): the arrows denote a one directional compatibility, therefore better compatibility on the left side than on the right side.[15] [self-published source?]

https://en.wikipedia.org/wiki/License_compatibility

Main differences from licenses:
MIT: short, simple, permissive
Apache v2: longer than MIT, but protect against patent litigations, contributors accept explicitly to release their contributions under the same license
GPL v3: cannot distribute or used in non GPL components

Example: A software licensed using Apache2 cannot use a necessary component (even if dynamically loaded) licensed using GPLv3.
Each license decision involves accepting compromises.

[Final Report of the Open Source Software Licence Task Force](#) (2012 a bit ageing) recommends:
1) GPL v3 for software developed solely by CERN and using GPL v3components
2) LGPL v3 for software libraries developed solely by CERN and using GPL v3components
3) Apache v2 for software to be used mostly as a component and not using GPL components

In the last years, many CERN projects chose MIT or Apache v2. BSD 3 clause as other possible licences could be considered. The choice of licence should reflect the aspirations of the development team and the transfer potential of the software.

Issue with Github service

Using GitHub services means accepting among other:

3. Ownership of Content, Right to Post, and License Grants

You retain ownership of and responsibility for Your Content. If you're posting anything you did not create yourself or <u>do not own the rights to</u>, you agree that you are responsible for any Content you post; that you will only submit Content that you have the right to post; and that you will fully comply with any third party licenses relating to Content you post.

CERN Authors posting on Github takes the responsibility to:

- Have checked with hierarchy and KT that they can distribute the work

- Have done due diligence to avoid copyright infringements

Examples

"""

PJLSA -- A Python wrapping of Java LSA API

Copyright (c) CERN 2015-2021

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

Authors:
R. De Maria   <riccardo.de.maria@cern.ch>
M. Hostettler   <michi.hostettler@cern.ch>
V. Baggiolini   <vito.baggiolini@cern.ch>

https://gitlab.cern.ch/scripting-tools/pjlsa/-/blob/master/pjlsa/_pjlsa.py

Project title
Copyright Notice:
- Range needs to be updated, better use initial date only

License Notice (MIT type)
- Entire license not needed, a reference to file is sufficient

Author list
- Can be specified in a separated file:
- Useful to add affiliation, time and extent of the contribution (if in separated file)

Examples

```
// -----------------------------------------------------------------
//
// Copyright (C) 2021 CERN & University of Surrey for the benefit of the
// BioDynaMo collaboration. All Rights Reserved.
//
// Licensed under the Apache License, Version 2.0 (the "License");
// you may not use this file except in compliance with the License.
//
// See the LICENSE file distributed with this work for details.
// See the NOTICE file distributed with this work for additional information
// regarding copyright ownership.
//
// Author: Moritz Grabmann (2022)
//
// -----------------------------------------------------------------
```

https://github.com/BioDynaMo/biodynamo/blob/master/demo/flocking/src/boid.cc

Project title

Copyright Notice:
- States different owners and acknowledge the collaboration

License Notice (Apache v2 type)
- Entire license not needed, used reference file

Author list
- Can be specified in a separated file:
- Useful to add affiliation, time and extent of the contribution (if in separated file)

Proposed policy for the ABP group

1. Inform supervisor about software produced before distributing it.

2. For new projects (due diligence):
   1. Add copyright notice in each file.
   2. If software is to be distributed publicly, add a license (for instance consider GPL first because it can be dual licensed later if all authors agree).
   3. If software has potential and rely on outside collaborators establish with KT and hierarchy a license.
   4. Keep updated author list with time and affiliation.
   5. Keep list of essential components used, their license and check license compatibilities.
   6. Consider use SPDX identifier.

3. For existing large project:
   1. Attempt to catch-up with the policy above knowing that:
   2. In case of shared ownership the license cannot be changed without written agreement.
   3. In case of license infringement of components either:
      1. Replace component or
      2. Change license if possible to do so
   4. Good luck, experience has shown that catching-up is a very time consuming, costly, unpleasant work.

KT can be consulted for each of these steps.