How could open licensing protect democracy?

The seven pillars of wisdom

Patrice-Emmanuel Schmitz – November 2023 – paper open to discussion – under CC-BY-SA or EUPL

The **OSOR turns 15** celebration (21 November 2023) gave speakers the opportunity to highlight the role of Digital Commons in implementing a user centric vision: supporting the rule of law, inclusion, transparency, accountability and collaboration. Ultimately four words summarize all that quite well: "**People and rights first**"!

In the OSOR framework, opening digital commons to people means providing open source software, but not only: standards and specifications, data and databases, hardware or design are equally important and should be considered according to similar sovereignty and trust principles.

The advent of the digital era served as driving force for the adoption of major EU legal instruments. After initial directives related to the specific protection of computer programs, directives related to sharing Public Sector Information and the proposed European Data Act, combined with multiple national laws on open government, directives on patients' rights, education, spatial information (Inspire) etc., Europe has adopted the General Data Protection Regulation (GDPR), the Single Digital Gateway Regulation (SDGR), is finalising the AI Act, and soon the Interoperable Europe Act, which will boost interoperability, software and data sharing across the EU and most probably abroad.

But knowing that the "open" character of digital assets results actually and legally from the applied license, it looks useful to question to what extent this open license could contribute in supporting our global approach, placing the citizen at the centre and complementing other legal instruments in reinforcing the rule of law.

After clarifying basic notions and when trying to define additional reasonable license requirements, which are named here "**7 pillars of wisdom**", our purpose is to assess how far a relatively recent license, the European Union Public Licence[1] addresses these requirements, not by adding yet another regulatory layer, but according to the principles of good governance. Why the EUPL in this context? Because it is already the default license applied to the European Commission software distributions[2] and because it is the license that all interconnected national repositories will have to propose (without exclusivity) according to the European Interoperability Act[3]. This is reason enough to improve our knowledge of its provisions.

In the framework of OSOR and making reference to all the above instruments, our comments target more specifically public sector licensing, but private business operators could take advantage of these too, since the same licensing tools are used for sharing digital commons in both interoperable

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[1] Considering here the May 2017 published EUPL-1.2 (Official Journal 19 May 2017) – except when naming or quoting the EUPL, the dominant US spelling "license" is used in this paper.

[2] Decision C(2021) 8759 final – article 5: "*the open source licence granted by the Commission shall be the EUPL*" (with exceptions, i.e. where the use of another open source license is made obligatory due to reciprocal clauses).

[3] Interoperable Europe Act - Article 8.3 :

  "*When a public sector body or an institution, body or agency of the Union provides a portal, catalogue or repository with similar functions, it shall take the necessary measures to ensure interoperability with the Interoperable Europe portal. Where such portals collect open source solutions, they shall allow for the use of the European Union Public Licence (EUPL)*".

public and private eco-systems.

Do you mean OPEN?

Before extending to data, design, hardware etc., digital common initiatives were first taken in the field of software. It is in this area that the notion of "Free Software" and later "Open Source" is born at the end of the last century, when the 1985 created Free Software Foundation (FSF) popularised the famous GPL license and – noting that other licensing models exist, established four freedoms that any free software license must provide:

- Use the software for any purpose by any user and anywhere;
- Access the source code (in order to study how it works);
- Modify, improve or re-use code according to specific needs, making derivatives;
- Share and distribute copies and derivatives.

As from 1998, these freedoms were developed in a more business-friendly philosophy by the "Open Source Initiative (OSI), changing nothing fundamental, but adding some already implicit precisions. OSI published its Open Source Definition.[4] (OSD), where 10 principles are listed, fixing for example:

- The royalty-free redistribution of derivatives;
- Precisions on the way source code can be distributed;
- Permission to require derived works to carry a different name;
- No discrimination against persons or groups;
- No discrimination against fields of endeavour;
- Independence from a specific product or technology.

Similarity between FSF freedoms and OSD principles makes that most licenses recognized as "free software" by the FSF were also awarded with the registered label "OSI-approved". The EUPL, which is compliant and recognised by OSI, FSF and by other open representative organisations, lists the above granted rights in its article 2:

> The Licensor hereby grants You a worldwide, royalty-free, non-exclusive, sublicensable licence to do the following, for the duration of copyright vested in the Original Work:
> - use the Work in any circumstance and for all usage,
> - reproduce the Work,
> - modify the Work, and make Derivative Works based upon the Work,
> - communicate to the public, including the right to make available or display the Work or copies thereof to the public and perform publicly, as the case may be, the Work,
> - distribute the Work or copies thereof,
> - lend and rent the Work or copies thereof,
> - sublicense rights in the Work or copies thereof.

Considering data and other digital common assets, open licenses deliver more or less the same freedoms and comply with the same principles as for software. But since all "free/open source" licenses provide the same freedoms and comply with the same principles, how to explain that several hundred open licenses exist?

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[4] https://opensource.org/osd/

The answer is: because provided rights are not depending on the same conditions, which are indeed important, needed and necessary to meet democracy and user centric objectives.

So what are, or should be, these additional conditions? What are these "**Wisdom Pillars**" that are not already included in the four "free software freedoms" or in the ten principles of the "Open Source Definition" and could complement both specifications?

Seven additional pillars

1) Be broad enough

As said before, the licensed material can be broader than just software code. A licensed project may include specifications, semantic assets like taxonomies, ancillary data like a documentation or users' manual, or a specific design applied. It may be that software and data or databases are closely associated or mixed. It may be also that software or data are inseparably included in some hardware device[5] which could not operate without them, at the point of dependency that such device could be considered as a derivative work of the included software or data.

Without covering all these possible figures in full details, and leaving the possibility to license each separate part distinctly when it is reasonable and possible, a complete license should be broad enough to cover composite works globally, as the case may be.

> **How does the EUPL approach this?**
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> The EUPL does not cover "software" only, but "the Work" (differentiating sometimes "the Work or software"). This covers "Derivative works" also. In article 1, it states: "This Licence does not define the extent of modification or dependence on the Original Work required in order to classify a work as a Derivative Work; this extent is determined by copyright law applicable in the country mentioned in Article 15."
> Therefore, even physical products could be considered as derivative works, provide their level of dependence on the original work is established[6].

2) Cover on-line "Communication to the public"

Traditionally, software or data distribution exists when recipients or licensees "obtain a copy" of the covered material (as it is said in the MIT license), meaning downloading and installing it on their own hardware device (PC, server etc.). Most licenses cover this mode of distribution only. This made all the Internet giants happy (the famous GAFAM), which mainly communicate online functionalities through the cloud and which therefore escape the conditions set for distribution (in particular the obligation to publish and share their source code, when the license provides it). This is called the "SaaS loophole"[7].

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[5] This has been named « Tivoisation », a barbaric term forged by the FSF after the name of the TiVo enterprise.
[6] Krzysztof Żok, Faculty of Law - University of Poznań - has analysed the voluntary vagueness of the notion of "Work" in the EUPL, in "The reference to "a work or software" as the factor determining the scope of the European union public licence (EUPL) v. 1.2 (in the [Masaryk University Journal of Law and Technology](#)).

[7] "SaaS" covers software operating « as a service », on-line or through the cloud.

How does the EUPL approach this?

Article 1 defines 'Distribution' or 'Communication' as "any act of selling, giving, lending, renting, distributing, **communicating**, **transmitting**, or otherwise making available, **online or offline**, copies of the Work **or providing access to its essential functionalities** at the disposal of any other natural or legal person.

This makes clear that providing software services or functionalities through the cloud is, according to the EUPL, a form of "communication to the public" or public performance, or distribution.

3) Rule out exclusive appropriation

All open licenses authorise redistribution of the original work, or of a modified version, for example a program that includes significant parts of the licensed original and that copyright law calls a "derivative". However, all the small, short and *permissive* licenses (the MIT or the various BSDs for example) fix few conditions for the distribution of derivatives, meaning that they could be distributed under exclusive proprietary conditions, or distributed to users as executable objects only, while access to their modified source code stay closed for them.

Preventing this issue, the FSF has forged (for its GPL) another innovative term: "*Copyleft*" (a politically stamped reversal of "Copy-right") applied to licenses that impose the distribution of derivatives to be done with access to the source code and under the original license. An alternative non-political term is "Share-Alike" (*when sharing a copy or a derivative, please apply the same license*) that was chosen for all Creative Common licenses (this is the "SA" in CC-BY-SA). Similarly, the term "Reciprocal license" looks easier to understand for a large public: "If I provide my software to you, please reciprocally share derivatives and improvements", - meaning under the same or similar open conditions.

For Public Sector in particular, where the guiding principle should be: "***public money should produce public code***", the use of a share-alike/reciprocal license should be the default or preferred option[8], while using permissive licenses like CC-0, CC-BY, Apache, MIT or BSD could be considered when the covered material is a standard commodity, is aimed to be merged/included into a great number of products, is informative or distributed without presenting serious risk of exclusive appropriation.

However, it must be acknowledged that simple and concise permissive licenses are now massively adopted by copyright holders, which makes certain notables of the free software movement say that it is a pity that hip new software isn't using "copyleft" anymore: mainly the GPL, which was quasi monopolistic before 2005, is now outclassed by permissive licenses (MIT and BSD mainly), at a point that when 1 million packages use a permissive license, fewer than 20,000 (one in fifty) use the GPL[9]. This means that many open source developers are providing their work for free to the GAFAMs and other proprietary internet giants, which may distribute it on-line in a proprietary manner and without reciprocity in their operating systems, social networks, search engines, data mining, AI, etc.

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[8] This is indeed the option selected by the European Commission in Decision C(2021) 8759.
[9] Numbers provided in April 2023 by Drew deVault. In his blog, the author is critical of the FSF and wants to reform it. Without sharing his criticism of people, we believe that some of his arguments are well-founded.

All that seems to be due, to a large amount, to the excessive complexity of the historical license (see pillar 7) and outrageous opinions regarding the overestimated risk of "virality" (see pillar 5).

How does the EUPL approach this

EUPL article 3 orders source code delivery, or reporting a repository where it is freely accessible. The license is share-alike/reciprocal: article 5 orders that copies of the works or derivative works, if distributed, will be covered by the EUPL or of a later version of it. But it works like the LGPL regarding linking, adding the coverage of SaaS/remote distribution.

The compatibility clause states that other works including material covered by the EUPL may stay distributed as derivative under their primary license, provide this license is listed in the EUPL annex of compatible licenses. This list includes only reciprocal licenses, providing protection against exclusive appropriation. The compatible license will prevail in case of conflict with the EUPL, but even when their protection may look "weaker", none of these licenses enter in conflict with the EUPL regarding i.e. the coverage of remote distribution or the obligation to give access to the source code: it may not be mandatory, but never forbidden. This ensures the persistence of fundamental EUPL provisions.

4) Grant long term transparency

Through concision, well defined terminology and a serious readability effort, a license must be written in order to be understood by all educated readers, even non-lawyers. While considering that English is the developers' lingua franca, managers and decision makers will appreciate to receive a working version in their native language. And what to say about the license steward willingness to impose developers licensing their works under "The License-X-or-later"? Is such blank check compatible with long term transparency?

How does the EUPL approach this?

As later said (pillar 7) the EUPL is 3 times shorter than the similar AGPL, including a definition of used terminology and trying to provide terse form and accessible vocabulary in multilingual versions (23) with the provision that "*All linguistic versions of this Licence, approved by the European Commission, have identical value. Parties can take advantage of the linguistic version of their choice*".

The EUPL includes a warranty that later versions will stay "open" and that licensing "under the EUPL" as it is written at the beginning of the license and which currently means "EUPL-1.2-or-later", will at least grant the same level of rights, since stating (in art 13):

> "The European Commission may publish new versions of this Licence or updated versions of the Appendix, so far this is required and reasonable, without reducing the scope of the rights granted by the Licence".

5) Be interoperable, respecting diversity

This complements and reverses pillar 3. You don't want that your work will be "appropriated" by a third party? So do not do it yourself. Do not try to "relicense" a component received under other open terms, even when this could be legally permitted. Apply your name or your open licensing

terms on your work, which may well include some lines received under permissive terms, but otherwise license every distinct component under its original terms as far as possible. Do not try to "invade" other works be imposing your name or your terms. Develop a culture of interoperability and compatibility.

Critics of the GPL license once viciously called it "viral". And curiously the current FSF itself is joining them by specifying in its FAQs "*Linking a program (under GPL) statically or dynamically with other modules is making a combined work based on this program. Thus, the terms and conditions of the GNU General Public License cover the whole combination*". Unholy alliance indeed, which has generated distrust towards all "share alike/reciprocal" type of licenses on the part of risk analysis agencies, the GAFAM of course and the great public, at a time where open licenses should allow broad interoperability and make it possible to integrate open components in a compatible manner.

How does the EUPL approach this?

Software interoperability is solved by the European law itself, which consider that interfaces, data structures or API that are needed for making two independent components interoperable may be copied and reproduced between programs without specific permission and as a copyright exception[10]. Therefore , since the EUPL (art.1) refers to the applicable law for assessing what is a "derivative", all forms of linking between independent programs (statically or dynamically, the technology does not matter) are permitted and do not produce any single "combined derivative". On this point, the EUPL is like the LGPL.

In addition, as said under pillar 3, the EUPL appendix includes a long list of compatible (or secondary) licenses, including the GPL-2.0 and 3.0, AGPL, MPL, EPL, LGPL, CC-BY-SA and others. This cannot be used to "re-license" an original work received under the EUPL, but means that another work covered by one of these compatible licenses can integrate source code covered by the EUPL and continue to be distributed under its own compatible license. Such large compatibility does not undermine the main EUPL obligations (like sharing the derivative source code even in the case of SaaS or remote communication) since while the compatible license prevails in case of conflict with the EUPL, none of the listed compatible licenses conflicts on these points.

6) Protect people

Like unauthorized posting of private photos or other sensitive personal data, software distribution can pose risks and cause damage. We think of course of viruses that someone would introduce into seemingly harmless content. But it doesn't stop there. In case someone contributes to your work by adding code that has been stolen or copied from somewhere without authorisation, this copyright infringement can globally corrupt your entire project. On the other hand, cyber criminality is growing, Artificial Intelligence and massive processing of "big data" can be used to accurately profile people, influence them with targeted and biased news, and even manipulate them to distort democratic votes.

Regarding liability, open licenses generally aim to protect the developer or the licensor only. They totally ignore the recipient of the distributed work or, even more broadly, people. To this end, almost all open licenses contain, in capital letters, clauses excluding all liability and guarantees.

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[10] Directive 2009/24/EC recitals 10 and 15.

Example, the MIT clause:

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.

This is a complete warranty exclusion even in case of copyright infringement: there is no DCO (Developer Certificate of Origin) in the MIT and all similar licenses, which leave recipients without protection in such case.

We note also the total exclusion of liability ("IN NO EVENT SHALL THE AUTORS BE LIABLE…") that in EU Member States is generally considered as invalid since product liability laws are "public order"[11] (this is considered by some non-permissive licenses, like in the MPL – section 7).

Of course, like most human works, software may contain bugs. Data may contain unintentional errors. It would hardly be thinkable to sue an open licensor for this, especially when the distribution is free of charges. However, the trend is to reinforce cyber security rules and the NIS2 Directive or the coming Cyber Resilience Act (CRA) generates new obligations, like drawing up a SBOM[12]. This targets commercial projects (which many open source project are). On the licensing side, especially if there is an intention to harm in the distribution or in online communications to the public, i.e. for manipulating people or distorting a democratic process, it is fair that – in complement of other instruments, the license provides the victims with some more legal weapons or additional protection.

How does the EUPL approach this?

The European Union Public Licence (EUPL) is one of the very rare open source licenses that includes a Developer Certificate of Origin (DCO) for both the original licensor and for all subsequent contributors. None of the permissive licenses (BSD and MIT) and few of the more elaborated popular licenses (GPL, LGPL, Apache, CPL, MPL) presents a formal warranty. The EUPL states (article 6):

- The original Licensor warrants that the copyright in the Original Work granted hereunder is owned by him/her or licensed to him/her and that he/she has the power and authority to grant the Licence.
- Each Contributor warrants that the copyright in the modifications he/she brings to the Work are owned by him/her or licensed to him/her and that he/she has the power and authority to grant the Licence.

In addition, the EUPL article 8 excludes liability "*except in the cases of wilful misconduct or damages directly caused to natural persons*". Regarding misconduct, everyone think to the voluntary introduction of a computer virus. Regarding *"direct damage to natural persons"*, everyone think to software regulating autonomous vehicles (or the automatic pilot of an aircraft). But, as already mentioned, there is more than that: cases where AI and massive processing of "big data" can be used to accurately profile people, influence them for distorting democracy. Depending on the case, this could also be considered as "wilful misconduct", not from the initial developer, but mostly from some on-line re-licensors.

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[11] As it results in all MS national laws from Directive 93/13/EEC on unfair terms in contracts, and updates.
[12] Software Bill of Material - a comprehensive list of all the software components, dependencies, and metadata associated with an application.

At the end of article 8, the EUPL warns that "Licensors will be liable under statutory product liability laws as far such laws apply to the Work", a manner to remain that in EU product liability is a matter of public order from which, contractually or not, no one can be exempted.

7) Keep it simple

Stay as short and concise as possible, express what licensees can do, possibly must do or cannot do, without inventing or "coining" new ambiguous or barbaric terms that will look abstruse, hermetic, like a gnosis reserved for initiates of a mysterious religion.

We have already mentioned "copyleft", that – according to a July 2023 OSOR workshop – is still not clearly understood by most civil servants and business managers. The most basic term "free software" is ambiguous at a point that in every general public meeting it is appropriate to remind that it does not mean "gratis", but "freedom". Many people ignore the difference between free software and copyleft, or assume that a license like the MIT is not free software because it's not viral! And what to say about distribution or communication to the public changed in "to convey" and "to propagate" or "tivoisation" just to illustrate here with some specific vocabulary, making the current GPL-3.0 a complex license of 32,000 characters long (the longest, by far) of dense and esoteric language, that some critics consider the most poorly written license ever seen and that few people understand despite the 16,000-words FAQ which supplements it[13].

How does the EUPL approach this?

Like the well-written MPL (which is listed in the EUPL list of compatible secondary licenses), the EUPL tries to provide terse form and accessible vocabulary. Additionally, the license is delivered in 23 linguistic versions and addresses points that are missing elsewhere: the coverage of remote distribution, large compatibility, reasonable exclusion of liability, a DCO and the persistence of reciprocal conditions even when a compatible license is applied to a combined derivative. All this in just over 10,000 characters.

To Conclude

To the seven pillars, I would add (I know, it makes eight, but this is NOT a condition that all license models worldwide should comply): "**be clear that the license operates under European law"** (EUPL art. 15)**.** In EU where directives and regulations progressively contribute in building EU digital sovereignty and reinforcing rule of law it is important that legal interoperability instruments, which open licenses are, make explicit reference to EU and MS law, including the possibility for judges of appealing to our sole Court of Justice of the EU to rule a preliminary question.

Initially, some even contested the opportunity for the European Commission to give itself an open license. They probably wanted to reserve this noble mission for developers' communities. This was true in the nascent Internet. When the FSF was founded. When we thought that the bazaar did not need rules to prosper naturally. When Eric Raymond wrote his book[14]. When cybercrime was still in its infancy. But everything changed shortly after the turn of the century. Big networks invaded the world, spreading vulgarity, hatred, fake news and harassment. Giants razed entire districts of the

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[13] This is again the April 2023 opinion by Drew deVault, aiming to reform the free software movement.
[14] Eric S. Raymond, "The Cathedral and the Bazaar" - 1999

bazaar to build for themselves palaces. The first comer, if he has 44 billion, can buy Twitter. AI arrived like a bolt from the blue. By 2021, cybercrime costs were estimated 5,5 trillion.[15]. Faced with the Bazaar gone mad, the European Union is rebuilding cathedrals to regulate, with multiple instruments, our digital commons, at the risk of going too far and restricting innovation. The EUPL fits into the intense effort, not as a mandatory regulation, but as a tool for good governance. As a tool, it is not perfect and in the future, the new Interoperable Europe Board may recommend evolutions. Facing this effort, the cynic or the realist may say "I have little faith in laws, they will never be flexible enough to adapt to the immense and fluid variety of facts".[16]. But even then, the law-giver emperor could not help but believe that the promulgation of a small group of wise principles might be in the interests of humanity.

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[15] Mention in the Cyber Resilience Act Proposal, COM(2022) 454 final.
[16] M. Yourcenar - *Memoirs of Hadrian, (p. 121 French NRF edition).*